

**ANALYSIS SUPPORTING THE NEWCO
PROPOSED DECISION**

February 24, 2017

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e. The applicant must discuss the availability of other sources of funding, including, but not limited to, donor restricted assets, assets of parent or subsidiary corporations, or a related foundation, which may be acquiring assets and/or producing income that is for the purpose of, or could be used for the purpose of, capital expenditure by the applicant. OAR 333-580-0060(1)(e). 50

f. Money market conditions must be discussed in terms of their impact on project financing, including interim financing, if applicable. Include the month and year in which financing is to be secured in this narrative: 50

i. The estimated rate of interest must be justified by the applicant. If debt financing is secured before or during the review process, the actual rate of interest obtained should be reported within 30 days of securing financing. OAR 333-580-0060(1)(f)(A). 50

ii. When a bond rating report is issued before or during the review period in conjunction with a proposed bond issue to fund a certificate of need proposal, the applicant must submit a copy of the report to the Division within 30 days of its issuance. OAR 333-580-0060(1)(f)(B). 50

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I. INTRODUCTION

A. Overview of applicable law

Criteria for reviewing this project are provided in OAR 333-580-0040, 333-580-0050 and 333-580-0060. The specific need methodology and standards for demonstration of need for acute inpatient beds and facilities are found in division 590 of OAR chapter 333. The specific need methodology and standards for demonstration of need for psychiatric inpatient beds are found in division 615 of OAR chapter 333. The Oregon Health Authority, Public Health Division (Division) makes findings and bases its decision on the extent to which the applicant demonstrates that these criteria and standards are met. Criteria will be considered to be met if the applicant can demonstrate that the questions posed in the criteria can be answered in the affirmative.

B. The application and review process

On January 5, 2016, NEWCO Oregon, Inc. (NEWCO) submitted an application for a 100-bed freestanding psychiatric hospital to be located at 9500 SW Day Road in Wilsonville. Project costs are estimated at \$35,834,324. NEWCO is a wholly owned subsidiary of Universal Health Services, Inc. (UHS). The application was determined to be complete on October 20, 2016, and review began on October 21, 2016. A public meeting was held on November 17, 2016.

In response to questions from the Division, the applicant has made significant changes to the project from what it proposed in the original application submitted on January 5, 2016. It originally posited that it could establish need for a facility with 50 child/adolescent beds, 25 adult beds and 25 geriatric beds. During the course of the Division's review of the application for completeness it then changed this number to 20 child/adolescent beds, 60 adult beds and 20 geriatric beds. By letter dated September 29, 2016, the Division raised concerns about the failure of the design of the hospital to provide for visual and physical separation of child and adolescent care units from each other and from adult units as required by OAR 333-535-0061(8)(d). Subsequently by letter dated October 5, 2016, the applicant wrote that: "UHS has determined that inpatient care for children, persons 5-11 old, will not be included at this time, due to space configurations and treatment modality requirements for the different age cohort groups." With that change, it now proposes that 24 beds be dedicated to adolescent care, with 52 beds for adults and 24 beds for geriatric patients.

II. APPLICABLE CRITERIA¹

¹ Only the criterion applicable to this application will be addressed in the analysis.

A. Need: OAR 333-580-0040

1. Does the service area population need the proposed project.²

The applicant must:

- Identify the service area’s need for the proposal in the past, present and future; and
- Establish the present and future need for the project.³

In determining need, the applicant must also:

- Use appropriate indicators of a population’s need (i.e. population-based use-rates, population-based “medical necessity” rates, or established productivity standards); and
- Use the standards and need methodologies specified in divisions 585 through 645 of OAR chapter 333 applicable to the services or facilities being proposed and consider industry standards and historical experience as appropriate where plans are silent.⁴

As is described in OAR 333-580-0040(1)(b)(A) and (B), the specific standards and methodology contained in OAR 333-590-0000 through 333-590-0060 for general hospital bed-need are used to determine whether the criterion in OAR 333-580-0040(1)

² OAR 333-580-0040(1). References related to bed need analysis:

1. La EM, Lich KH, Wells R, et al. Increasing access to state psychiatric hospital beds: exploring supply-side solutions. **Psychiatric Services**. 2015.
2. Torrey EF. **The Insanity Offense**. New York: Norton; 2012:192-196.
3. Glick ID, Sharfstein SS, Schwartz HI. Inpatient psychiatric care in the 21st century: the need for reform. **Psychiatric Services**. 2011;62(2):206–209.
4. Capdevielle D , Ritchie K : The long and the short of it: are shorter periods of hospitalization beneficial? **British Journal of Psychiatry** 192:164–165, 2008.
5. Bray I, Gunnell D. Suicide rates, life satisfaction and happiness as markers for population mental health. **Social Psychiatry and Psychiatric Epidemiology**. 2006 May 1;41(5):333-7.
6. Ruaño G, Szarek BL, Villagra D, Gorowski K, Kocherla M, Seip RL, Goethe JW, Schwartz HI. Length of psychiatric hospitalization is correlated with CYP2D6 functional status in inpatients with major depressive disorder. **Biomarkers**. 2013 Jun 4;7(3):429-39.
7. Pirkola S, Sund R, Sailas E, Wahlbeck K. Community mental-health services and suicide rate in Finland: a nationwide small-area analysis. **The Lancet**. 2009 Jan 16;373(9658):147-53.
8. Mojtabai R. Unmet need for treatment of major depression in the United States. **Psychiatric Services**. 2009 Mar; 60(3):297-305.
9. Cooper J, Stagman S. Children’s mental health: What every policymaker should know. Columbia University, New York NY. 2010 Funk, Michelle and Drew, Natalie and Knapp, Martin (2012) Mental health, poverty and development. **Journal of public mental health**, 11 (4). pp. 166-185.
10. Swartz MS, Wilder CM, Swanson JW, Van Dorn RA, Robbins PC, Steadman HJ, Moser LL, Gilbert AR, Monahan J. Assessing outcomes for consumers in New York's assisted outpatient treatment program. **Psychiatric Services**. 2010 Oct;61(10):976-81.

³ OAR 333-580-0040(1)(a) and (b).

⁴ OAR 333-580-0040(1)(b)(A)and (B).

can be met. In addition, since this application is for psychiatric services, the standards and methodology specific to psychiatric bed-need contained in OAR 333-615 must be addressed.

a. Rationale for determining hospital bed need

The CN program established a rational approach for determining hospital bed need over 30 years ago. The central concern in the origin of CN rules was to promote effective, lower cost healthcare, through encouraging less expensive and more accessible alternatives to what was perceived as resource-intensive and over-used hospital care. OAR 333-545-0000. The CN approach was a regulatory precursor to the modern adoption of the Triple Aim, and of the Oregon Health Plan's emphasis on rational and effective medical modalities.

A stated priority in the CN rules is to encourage meeting inpatient psychiatric need within existing community hospital settings. OAR 333-615-0020.

b. Service area

An issue for both applicants and reviewers in the case of proposals for new psychiatric facilities is how to interpret the separate service area definitions contained in the general bed need rules (OAR 333-590) and the psychiatric bed need rules (OAR 333-615). The applicant has in this instance opted to apply the larger, Health Service Area (HSA) based definition found in the psychiatric rules, to both sections. This service area as used by the applicant is comprised of the entire counties of Multnomah, Clackamas, and Washington. However this is not the appropriate service area for demonstrating general bed need under OAR 333-590, as a small, general hospital would be expected to only draw from their local population. Thus a smaller, zip code-based service area should be applied, with a concomitantly reduced population base and calculated service area need, supported by a well-argued rationale. In this instance the requirements of OAR 333-615-0030(1)(d) require that the service area be calculated separately by both the OAR 333-590-0050(1) and OAR 333-615-0030(1) methodologies. Additional analysis related to service area is set out below.

c. General bed need related to proposed NEWCO facility

The proposed 100 bed inpatient psychiatric facility is intended to serve the needs of the tri-county area consisting of Multnomah, Washington and Clackamas counties for inpatient psychiatric services. The application is required to meet standards both for general bed need and for specific psychiatric bed need. OAR 333-615-0000(5) (a) and (b). With regard to the issue of general bed need, the applicant has stated that they do not believe that a general bed need exists in the tri-county area, but that their project may move forward due to specific consideration of psychiatric need under provisions for the consideration of alternatives to the proposed project. A similar approach was taken under CN rules for approving the applicant's one existing Oregon psychiatric facility, Cedar Hills Hospital (CHH), roughly a decade ago. Since the time of the CHH review, the

landscape for health and mental care services has undergone evolutionary changes, led by managed care expansions, joint area provider projects such as Unity and in particular by the creation of Coordinated Care Organizations (CCOs).

CN rules generally do not differentiate between types of intended inpatient beds. All proposals for new inpatient beds are required by the CN rules to demonstrate a need for general medical/surgical beds without regard to differentiation. In the case of psychiatric beds, the additional bed need rules contained in OAR 333-615 are applied along with the determination of general bed need as specified under OAR 333-590. A broad description of CN bed need for specialized beds is that a project must demonstrate a need for general inpatient beds within a reasonable service area. If such a need is established, then specialty beds can be developed from the general total. The principle is that a stock of approved hospital beds exists without differentiation under license or rule, out of which needed specialty services will pull or convert beds from the total. This approach is analogous to a competitive market mechanism; where different needs for types of inpatient beds are in competition with all other potential uses of a general bed total, and where it is expected that the assigned amounts among different and competing needs will come to an equilibrium over time. This equilibrium, as for most markets, is likely then to reflect an efficient balancing of need and supply, though factors of differential reimbursement levels among service types may somewhat skew the outcomes. As noted previously however, psychiatric beds that are placed into new, dedicated psychiatric facilities are not readily convertible back to general need for cost and licensure reasons, unless located in acute care hospitals- introducing a skew to the consideration of a market-based equilibrium among different types of inpatient needs. For this reason, CN rules contain a bias toward hospital-based psychiatric beds, which are more readily convertible to other purposes, or useable to meet some excess surge scenarios. However the current reimbursement system is biased against the provision of inpatient psychiatric care at regular hospitals.

With regard to the general need for inpatient hospital beds, one of the intended purposes of the CN bed need methodology was to match the number of allowed local hospital beds to foreseeable surge needs. At the time that CN rules were adopted there was both evidence for and concern about the tendency of the medical system to implement more expensive care modalities such as hospital services when outpatient or other alternative modes of care of lesser cost were effective. The applicant has, in its supporting analyses for CN, focused at times on the current capacity based on staffed inpatient beds as indicating potential need. Yet CN inpatient bed need is based on licensed bed totals, rather than staffed beds. For the greater Portland area that the current application is based upon, there is no foreseeable general inpatient bed need based on CN bed methodology and current licensed hospital bed capacity, for at least the next decade. A consideration of recent inpatient experience suggests that dynamic changes in Oregon's population have led to periods where hospitals may lack sufficient staffed beds to accommodate surge needs within normal hospital operations, both across Oregon and in the proposed service area. Foreseeable events such as yearly influenza outbreaks have grown alongside Oregon's population to the point where as of early January of 2017 virtually all Oregon hospital were filled to capacity. Similarly the ongoing spike in the

migration of retiring seniors to Oregon and the Portland area will affect hospital service demand in the future. However potential surge needs above the total of currently staffed beds can be accommodated within present licensed bed capacity, and this point should be held in mind while assessing any proposed evidence related to occupancy or unmet inpatient need.

While an application for a psychiatric hospital as in the present instance is required to address the extensive CN methodological criteria for general inpatient bed need, approval may be granted regardless of the findings of general bed need under ORS 333-590. Psychiatric care is substantially different than general acute medical care; however the applicant's statements that the need of a population for psychiatric care cannot be addressed through general inpatient bed capacity is arguable given Oregon experience. Thus if a population need for psychiatric services can be shown, a heavier weight is placed upon the consideration of the practicalities of alternatives to the proposal that exist through different care modalities, conversions of existing general bed capacity, or by configurations of existing resources; and the applicant is expected to provide a strong base of evidence that such alternatives cannot reasonably provide better access to services for unmet need, improve outcomes, or provide lower costs. As CN rules specify a moderate psychiatric bed need threshold as less than 40 beds per 100,000 population compared to the current 9 beds per 100,000 in Oregon, some degree of potential unmet inpatient psychiatric need may exist across the state. However under CN psychiatric rules contained in ORS 333-615-0020(5), the finding of moderate existing capacity is intended to lead to a discussion of best ways to meet need rather than to automatic approval of new beds.

d. Specific methodology for determination of bed need under
OAR 333-590-0050

The specific methodology for the determination of need for new, general hospital beds is contained in OAR 333-590-0050. To satisfy the requirements of this section, applicants are required to follow a multi-step calculation of bed need delineated below in this section. With regard to the present NEWCO application, this process is applied as if the application was for a general hospital without regard to the proposed specialization of the applicant's proposed facility.

i. Determination of Service Area

Under OAR 333-590-0050(1) the service area of a proposal is defined as those zip codes from which either 10% or more of the hospital's discharges are reasonably expected to originate from, or in which the hospital would have at least a 20% market share. The applicant has proposed that the service area for the OAR 333-590-0050 methodology should be the three county region consisting of Multnomah, Clackamas and Washington Counties, as is consistent with OAR 333-615-0030. However a distinct zip code based service area is specified under OAR 333-590-0050(1) for the analysis of bed need for OAR 333-590-0050. The CN psychiatric bed need specified service area is not related to zip codes or contiguous groups of zip codes in which the proposed facility is

likely to achieve either a 20% market share or 10% of its own discharges, as is required by OAR 333-590-0050(1).

Based on patient origin data from the applicant's other psychiatric facility in Oregon, CHH, as supplied by the applicant, it is unlikely that the proposed facility will achieve a 20% market share of acute hospital services in any single or contiguous group of zip code areas. However it is likely that some group of contiguous zip codes centered on the proposed facility site and within the proposed three county service area would account for 10% or more of facility discharges. As previously noted, for comparability to general community hospitals, the applicant has not properly identified the service area for the proposed facility, which would be a smaller group of zip code areas immediately accessible from the proposed site. For many residents of the proposed three county service area, access to the proposed site is likely to be limited due to transportation and location issues. In the prior CN process for the applicant's CHH, it was stated that a county-level service area was roughly comparable to a smaller, zip code area base when combined with adjustments for out of area patient draw; however in the present circumstance, given the existence of the applicant's CHH facility in Washington County and the location of the Unity facility in Multnomah County, it is no longer clear that county-level service areas are comparable to the specified zip code service areas consistent with OAR 333-590-0050(1). Similarly it is not clear that patient origin data from the applicant's CHH facility, which is located in Washington County, would be a guide to where patients for the proposed facility in outer Clackamas County would originate.

ii. Determination of the Service Area Population

The applicant has provided population data from Portland State University's Population Research Center for 2004 to 2014, along with Census data from 1990 through 2010. Requiring data extending further into the past, as specifically listed in CN rules, is analytically misleading at best for understanding future hospital demand in Oregon. A concern here is that the supplied data, while judged sufficient by this analysis to meet the regulatory CN requirement, is not adequate for understanding current, dynamic population trends that are affecting Oregon and in particular the greater Portland area. The senior age 65+ population in the proposed service area is currently undergoing a rapid expansion, which due to higher health care needs of an aging cohort is likely to strain existing hospital resources in the future. To the extent that this population change is not reflected within the historical data used by the applicant to forecast need, the need forecast by the applicant is likely to understate true future need expected here.

iii. Determination of Discharge and Use Rates for the Proposed Service Area

The applicant has provided information on current and projected rates for their proposed tri-county service area in compliance with the requirements of OAR 333-590-0050(3).

iv. Estimation of Future Service Area Utilization

The applicant has provided the required analysis for OAR 333-590-0050(3)(b) for their proposed tri-county service area. The applicant has proposed applying 2014 age-gender cohort usage rates to projected populations. This analysis emphasizes that modeling future need with an assumption of no change in current cohort utilization is a reasonable methodology in this instance, despite that OAR 333-590-0050(1) directs that a declining usage rate be applied to inpatient utilization forecasts. However the above referenced decline reflects a forecast period that is already historical. As the outdated standard of declining utilization cannot with any accuracy be applied at this time, it is appropriate to apply flat usage rates within age categories. However a concern is that the available age categories may mask changing utilization patterns. For example, if the average age of those who are in the category of 65+ is increasing, their service utilization rate will also be increasing.

v. New Versus Replacement Utilization

OAR 333-590-0050(4) and (5) direct the applicant to evaluate the extent to which the proposed facility will meet new demand for hospital services, as opposed to replacing hospital need presently serviced by other facilities. The applicant has noted that the proposed facility may decrease ER usage for mental health needs at other facilities; however this is not likely to represent a change in inpatient utilization. Thus the proposal will be considered as being for new utilization.

With regard to the requirement of assessing new versus replacement utilization relative to ORS 442.025, as required under OAR 333-590-0050(5), the applicant states it is not aware of an alternative to a new facility. The focus of this rule section is with whether existing beds could be used to meet the proposed need. It is likely that some portion of the proposed need could be accommodated using existing licensed hospital capacity, as demonstrated by the expected 2017 opening of the Unity psychiatric facility in Portland, which is a collaborative use of existing licensed capacity.

vi. Calculation of Future Patient Days at the Proposed Facility

The applicant has calculated a range of future patient days relative to its proposal and to the standards of OAR 333-590-0050(6). The applicant's use of a 10 year forecast window is reasonable in this instance, given the lower levels of capitalization, construction and complexity attendant on a psychiatric versus a general hospital.

vii. Calculation of Bed Need

The applicant has applied the specified methodologies of OAR 333-590-0050(6)-(11) for its proposed tri-county service area, demonstrating that for the next ten years there is expected to be a general bed surplus in the proposed three county service area. The applicant has also employed an alternative method of calculating general bed need, based on average daily censuses, which indicates that a small (61 bed) need may exist in the service area in 10 years assuming no other hospital beds are added. In both of their methodology calculations the applicant has used a total number of beds that appears to be based on staffed rather than licensed capacity. Using licensed bed totals instead of staffed totals under the methodology OAR 333-590-0050(6)-(11) does not change that a surplus of general hospital beds is expected for the next ten years in the service area.

viii. Determination of Available Beds Within 50 Miles

OAR-333-590-0050(12) directs the applicant, if a need is demonstrated under OAR-333-590-0050(11), to evaluate the availability of beds within 50 miles. As a surplus of general beds is expected to exist for the next 10 years, no general bed need has been demonstrated. Thus the standard of evaluation of beds within 50 miles does not apply.

ix. Infeasibility of Conversion of Existing Beds for Specialty Purposes

According to OAR-333-590-0050(14), if a need for new beds is not justified, a CN will not be issued unless conversion of existing beds is not architecturally or economically feasible. The applicant has stated in its application that general and psychiatric inpatient facilities are not easily convertible between the two modalities; however no evidence was provided in support of this statement and the possibility of using existing licensed but currently unstaffed capacity cannot be excluded.

x. Conclusions Under OAR-333-590-0050

The applicant has not demonstrated under the methodology of OAR-333-590-0050(1) to (11) that a general bed need currently exists, or will exist within 10 years of the opening of the proposed facility. Based on CN rules, there is an excess of general inpatient hospital beds in the proposed service area that is sufficient in scope to meet projected need for at least the next 10 years. While this analysis notes that recent inpatient hospital surges may indicate that the forecasting models included in the CN process are restrictive, the limitation of capacity is due in part to the proportion of licensed bed capacity which area providers are choosing to setup and staff. Under the CN rules, there is no general bed need. The applicant has proposed that the need for a large inpatient psychiatric hospital, even at a time of potential bed surpluses, is supported by the high occupancy of its one existing facility in the area, CHH. However to the extent that this high occupancy is due to transfers from area emergency departments, the planned opening of the Unity facility in 2017 in Portland will alleviate the need for many such transfers.

e. Determining relationship of proposed new hospital to existing health care system under OAR 333-590-0060

Under OAR 333-590-0060, the applicant is required to apply a specified methodology for determining the relationship between its proposal and existing service area hospital resources. The applicant has applied this methodology to existing facilities within the service area. The analysis under OAR 333-590-0060 is relative to the requirements of OAR 333-590-0050(12) and is used to answer the question of the availability of alternatives to the proposed facility. As noted for the analysis under OAR 333-590-0050, the applicant used staffed bed counts as opposed to licensed bed counts in its analysis, and did not adequately specify facilities outside of the proposed service area but within 50 miles.

i. Identification of Other Service Area Providers

The applicant has identified other providers per OAR 333-590-0060(1) for use in the calculations of OAR 333-590-0060(1) through (11).

ii. Estimation of Commitment Ratios

The applicant has determined the estimated commitment ratio for other facilities as specified under OAR 333-590-0060(2).

iii. Calculation of First Year Average Daily Censuses

The applicant has calculated the expected ADCs among significant providers for the proposed first full year of operation.

iv. Calculation of Peak Daily Censuses

The applicant has calculated the expected peak daily censuses for other significant facilities per the specification under OAR 333-590-0060(4).

v. Estimation of Commitment of Beds By Facility

The applicant has calculated the commitment of beds by each significant facility toward the peak occupancy as specified under OAR 333-590-0060(5).

vi. Estimation of Available Beds By Facility

The applicant has followed the methodology of OAR 333-590-0060(6) in determining the availability of beds beyond peak census needs at each facility for the proposed first year of operation.

vii. Estimation of Excess Beds Available for the Service Area

The applicant has followed the methodology of OAR 333-590-0060(7) in determining the availability of beds beyond peak census needs.

viii. Evaluation of the Feasibility and Cost of Using Other Facilities for Need

The applicant has asserted without providing substantial support to its argument that there is no reasonable alternative to their proposal. In this section the applicant does not address whether reconfiguration of other locations, using existing licensed if not currently staffed capacity, would be feasible. The current Unity project serves to rebut the applicant's assertion of no reasonable alternative, and is an example of how existing licensed capacity can be converted to meet psychiatric need. For serving Medicaid and senior patients, the conversion of existing capacity within the core metropolitan area also more closely matches to the physical location of the population of need, and will reduce transportation times and lower access barriers. Whether the proposed unmet need for inpatient psychiatric beds requires a single campus, as opposed to a more widely distributed addition of services at existing facilities, is also not addressed by the applicant. The applicant has not provided adequate evidence that all or part of future psychiatric need cannot be met within current units or by unused general capacity at other sites per OAR 333-590-0060(8).

ix. Evaluation of Alternative Health Facilities

Under OAR 333-590-0060(9) the applicant is required to evaluate the use of alternatives when need is not shown under OAR 333-590-0050 or under OAR 333-590-0060. For expected future needs for inpatient psychiatric services, the applicant has stated that there are no alternatives of lesser cost. However, the applicant has not provided evidence that either a true unmet need exists or that its proposal is superior to either existing or foreseeable future alternatives. Residential and outpatient mental health services, along with medication assistance programs, are alternatives that according to some authorities produce superior outcomes at lower costs. Current CCO approaches for integrating mental and physical care needs and services are another example of meeting mental health needs without adding hospital beds.

x. Needs of Members of Special Organizations

The standards of OAR 333-590-0060(10) do not apply to the present application, as the proposed facility would serve the general public.

xi. Conclusions Under OAR 333-590-0060

For the methodology contained in OAR 333-590-0060, the applicant has compared the proposed new facility to existing area facilities. It is not in dispute that substantial unused hospital bed capacity, both licensed and staffed, exists within the proposed service area. The issue however, with regard to application of this rule, is whether it is feasible to use such unused capacity in some configuration or other

alternative arrangements to meet the proposed need for further psychiatric inpatient capacity. OAR 333-590-0060 specifies that the results of the incorporated methodology are to be compared against other factors, including pro-competitive initiatives, changes in hospital locations and population features. The applicant has presented arguments under the assumption that no practical alternative exists to adding inpatient psychiatric services, and that other service types are not substitutes for inpatient psychiatric services. It is noted here, however, that in line with evolving Oregon CCO practice, the literature supports that outpatient and residential services are practical modes of providing mental health care services for the bulk of populations that might otherwise end up in short-stay psychiatric beds.⁵ The applicant has not sufficiently demonstrated a need for the proposed facility under OAR 333-590-0060.

f. Psychiatric inpatient need, generally

Applications for psychiatric inpatient beds are required to apply the standards and methods delineated in OAR 333-615-0020 and 0030. In general, psychiatric bed need is based on population ratios of available beds in larger service areas, though existing alternative modes of meeting or preventing such need also are factored into the analysis.

With regard to the specific determination of need for psychiatric beds addressed under CN psychiatric bed need there are multiple issues that affect a potential finding of need for the proposed project, and whether superior or existing alternatives exist to serve psychiatric need apart from the proposal. One such issue is whether the entire tri-county area is a reasonable service area for the proposal. Another issue is that while the range of population-based projections of psychiatric bed need that are available both from CN and from the medical literature support a possible need in Oregon for additional beds, a component of such unmet need is likely concentrated among a population requiring more intense care and longer stays than the applicant is proposing, such as historically were provided at state facilities.⁶ While financial pressure and an emphasis on stabilization and safety have dropped typical inpatient psychiatric lengths of stay from months to days across the last several decades, there is a lack of the type of controlled studies that would provide guidance on whether the shortening of care that has led to what is labeled in the psychiatric literature as ultra-short stays are effective.⁷ The service as proposed by the applicant falls under this heading of short or ultra-short stays. Similarly while recommendations exist in the literature for the substitution of outpatient and residential services for inpatient psychiatric needs with regard to assessment and stabilization, the evidence base for such alternatives is also not definitive. However a number of non-controlled studies have pointed to issues with the short stay model in practice.⁸ Presently, Oregon is pioneering alternative methods of meeting psychiatric need that was traditionally met in the inpatient setting, including using integrated care to reduce actual need as well as providing non-inpatient settings for care.

⁵ See references 2 and 10 in footnote 2.

⁶ See references 1 and 2 in footnote 2.

⁷ See reference 3 in footnote 2.

⁸ See reference 4 in footnote 2.

Psychiatric inpatient need is typically concentrated among lower-income populations, and a majority of unmet need among non-senior populations typically occurs among Medicaid-eligible populations.⁹ In Oregon the development of Coordinated Care Organizations (CCOs) has promoted the integration of physical and mental health needs for Medicaid populations, with a goal of reducing the need for emergent and inpatient psychiatric usage through better medication adherence and the provision of more regular or innovative care services. Based on experience in other urban area outpatient mental health programs, Oregon CCOs have the potential to move the curve of how much unmet need for short-stay inpatient psychiatric services remains in this population, and implies that the traditional bed to population ratio may no longer be a reasonable guide to unmet need.¹⁰ As CCOs in Oregon emphasize the coordination of care across a spectrum of possible care providers, addressing unmet need among CCO populations requires an applicant to demonstrate that their proposal would be an integral part of the care services that CCOs contract with and depend upon. The applicant has not provided evidence of support from the community of CCOs for its proposal. Thus the potential population served by the proposal would likely not include Medicaid eligibles that are deliberately placed at the proposed facility by CCOs. Similarly the market penetration of managed care and health maintenance organizations apart from CCOs in the proposed service area is relatively high, and no evidence of support for the proposal has been submitted by such organizations. It is not likely that groups such as Kaiser will direct substantial numbers of their enrollees to the proposed facility as opposed to their current usage of alternative and residential programs. This analysis then indicates that the actual population to be served by the proposed facility is smaller than proposed, and that a smaller facility size may be warranted.

That over the course of the CN process the applicant has substantially changed the composition of the population to be served by the proposal without changing the effective design of the proposed facility is another indication of the difficulty in determining the specifics of population and need that should be attributed to the project. Nationally, a significant source of inpatient psychiatric admissions, regardless of age, is from screenings for suicidal ideation, with the goal of providing safety and stabilization. To the extent that suicide rates are one proxy measure for unmet psychiatric needs, a relatively high suicide rate in Oregon is another potential indicator of unmet psychiatric inpatient need. However an issue to consider here is that suicide rates in the proposed service area are substantially lower than for the rest of Oregon.¹¹ As one potential indicator of inpatient need, the higher prevalence of suicide across other regions of the state implies that facilities such as proposed would better serve the health of Oregonians if alternatively placed in Southern or Eastern Oregon. From this perspective, the low rate of inpatient psychiatric beds per capita in Oregon as a whole, as pointed out by the applicant, is misleading for unmet need in the proposed service area. As a caveat here according to the current medical literature, defining population mental health need by measures such as suicide rates is not comprehensive.⁵ The applicant in this case has not supplied evidence-based information that approving the proposed facility would aid any

⁹ See references 8 and 9 in footnote 2.

¹⁰ See reference 10 in footnote 2.

¹¹ See Exhibit #1, Figure 1.

population-based measures such as suicide rates, and evidence to date from other locales supports that non-inpatient services may better reduce such measures of psychiatric unmet need.¹²

Importantly, lower cost and potentially more effective alternatives to a substantial amount of the proposed need NEWCO is proposing to serve are possible or under development; including meeting psychiatric service need through a combination of medication adherence programs and increased outpatient psychiatric services, as noted in the literature.¹³ The applicant did not address such alternatives is concerning, especially as innovative CCO approaches to integrated physical and mental health aim to reduce emergency department and hospitalization needs through the use of such lower cost alternatives. The applicant has not provided evidence that its proposed facility will integrate into ongoing managed care and CCO innovations to deal with population mental health needs; as noted, there is no CCO support for the project. The potential for integration with CCO and managed health care organizations can also be judged by how the applicant's existing facility in the area, CHH, has integrated into existing inpatient care systems. Despite the applicant's statements that the proposed facility will reduce mental health ED burden, its existing CHH facility across the decade of its existence has only signed one hospital transfer agreement, with one of the smaller entities in its market. Instead of support, substantial opposition has been expressed to the proposed facility by other major health systems, which are collectively working to establish a shared facility to serve low-income populations with mental health inpatient needs in Portland. In consideration of this and the above issues regarding the availability of alternative ways of meeting service area psychiatric needs at lower cost with greater access, there is not a need for the proposed facility in its current size, location and configuration.

g. Analysis of bed-need under OAR 333-615-0020

OAR 333-615-0020(5)(a) through (f) requires an applicant to address a list of standards, as presented below.

i. Historical Usage in the Service Area

OAR 333-615-0020(5)(a) requires applicants to provided historical data relative to population and utilization of psychiatric services in the proposed service area. The applicant has noted elsewhere in the application that such historical data is generally not available, and has instead supplied present data on psychiatric inpatient beds usage at its CHH, without meeting the standard of OAR 333-615-0020(5)(a).

ii. Historical Usage in Other Service Areas

The applicant has not addressed the standards of OAR 333-615-0020(5)(b).

¹² See reference 7 in footnote 2.

¹³ See references 2 and 10 in footnote 2.

iii. Short Term Bed Need and Lengths of Stay

OAR 333-615-0020(5)(c) directs the applicant to demonstrate that standards for short-term placement of patients into psychiatric beds will be met, while OAR 333-615-0020(5)(d) delineates a standard length of stay as being under 15 days for most patients. The applicant has stated that their expected lengths of stay will conform to this standard.

iv. Listing Non-Inpatient Providers

The applicant did not supply information to meet the criteria specified in OAR 333-615-0020(5)(f) of delineating all non-inpatient service alternatives in the proposed facility's service area.

v. Determination of Service Area for Psychiatric Beds

The applicant has proposed that the service area for its psychiatric facility consist of Multnomah, Clackamas, and Washington Counties.

vi. Evaluation of Alternatives

The applicant has supplied information on area inpatient psychiatric service providers as delineated in OAR 333-615-0030(1). However the applicant has not supplied required information on alternative providers per the definitions contained in OAR 333-615-0010. The CN rules for psychiatric beds apply a different approach than the general methodology of OAR 333-590-0050 for interpretation of findings about bed to population ratios. Within OAR 333-590-0050, with the exception of OAR 333-590-0050(14), a finding that existing bed inventories are sufficient for projected population need would preclude approval of the proposed project; whereas a finding of a need for additional beds would support approval. In contrast, according to the standard of OAR 333-615-0020(5), a bed to population ratio of below .4 per thousand cannot be taken by itself as evidence of need for proposed additional psychiatric beds, nor does a ratio of greater than .4 per thousand preclude approval. In the present instance, the lack of evaluation of non-hospital alternatives, along with concerns regarding access and the population to be served supports a conclusion that the applicant has not met the standard of a moderate degree of supporting evidence. One component of the moderate standard as contained in OAR 333-615-0030(2)(a) is "...there shall be substantial evidence that further development of less costly or more effective alternatives by any other prospective provider is not feasible". The applicant has not supplied such substantial evidence regarding non-hospital alternatives. In addition while it is possible that the applicant will achieve a status to take or bill for Medicaid clients, the extent to which the applicant will fit into the CCO framework on continuity of care, and into ongoing efforts to avoid hospitalization of Medicaid participants, is unknown and not supported by the application. In addition given current practice trends to treat psychiatric needs in outpatient settings where possible and to reserve inpatient services for those with truly substantial need, only a limited portion of Medicaid clients can be expected to have

any potential to use the proposed facility, and it is arguable that these likely would benefit from longer stays than the applicant is proposing based on current reimbursement streams.

vii. Determination of Bed Need

As the proposal is for a new facility, rather than an expansion or conversion of an existing facility, the methodology set forth in OAR 333-615-0030(3) for determining psychiatric bed need is not required.

viii. Net Addition of Inpatient Beds to the Service Area

OAR 333-615-0030(4)(a) and (b) direct that except under unusual circumstances of non-availability, access, and less costly alternatives, additional psychiatric beds will not be approved if the project will increase licensed short-term acute care inpatient capacity. The applicant has demonstrated that the proposed facility will be licensed as a psychiatric facility, instead of as a general acute care facility. The licensure of the proposed beds will not be convertible to general licensure from psychiatric without a new CN application. Thus the proposal will not increase the number of licensed, acute care beds in the service area.

ix. Conclusions Under OAR 333-615-0020

The applicant has not demonstrated through the methodology of OAR-333-615-0020 that reasonable alternatives to the proposed psychiatric inpatient facility are not feasible or are not already in place in the proposed tri-county service area. The degree of true need among Oregonians for this service is also unclear from the application; given that substantial population groups will not likely fully or at all utilize the proposed facility due to the availability of non-inpatient alternative services or who will be served by the Unity facility. The majority of need for the ultra-short stay inpatient format proposed by the applicant can also be addressed through lower cost non-inpatient services. Thus, need for the proposed facility has not been demonstrated.

h. Analysis of bed-need under OAR 333-615-0030

The applicant failed to provide specific responses to address OAR 333-615-0030, beyond noting that it supplied text to addressed listed standards elsewhere in its application. For the same reasons stated above with regard to OAR 333-615-0020, need for the proposed facility has not been demonstrated.

2. Will the proposed service result in an improvement in patients' reasonable access to services.¹⁴

¹⁴ OAR 333-580-0040(3).

Under this criterion the applicant must identify any potential problems of accessibility including traffic patterns; restrictive admissions policies; access to care for public-paid patients; and restrictive staff privileges or denial of privileges.

a. Traffic Patterns and Accessibility

The proposed facility would be located on a property at the intersection of Day Road and Boones Ferry. The application states that this location is “served by bus route 96 and is a no-cost, twenty (20) minute bus ride from the Smart Transit Center in Wilsonville, making the site easily accessible for patients needing transportation.” The facts do not support the applicant’s assertion that this site is easily accessible for patients needing transportation.

TriMet Bus 96 serves this location only on weekdays during rush hour. The South Metro Area Regional Transit (SMART) does not provide direct service to this location and neither does the weekday only rush hour WES Commuter train. On weekdays only, and not on weekends, the closest stop for both SMART and the WES Commuter train is Commerce Circle, approximately a ½ mile walk from the proposed location. Consequently, access to the proposed site is problematic for patients, visitors and staff who are dependent on public transportation especially for those of limited means who cannot afford alternative modes of transportation. Limited availability of public transportation will hinder patients’ reasonable access to services. The proposed location is, according to the applicant, less than ½ mile from an Interstate 5 interchange making it easily accessible for the I-5 freeway.

b. Staff Privileges

The applicant states on page 89 of its March 11, 2016 letter to the agency that it has no restrictive staff privilege policies.

c. Access to Care for Patients: State Policy has Reshaped the Landscape for Mental Health Services

Outside the state hospital system, Oregon currently has one freestanding psychiatric hospital, CHH, now owned by UHS. It, like the proposed facility, is a for-profit freestanding psychiatric hospital. CHH received a Certificate of Need With Conditions in 2008. As discussed below, the landscape for mental health services has profoundly changed since 2008 but, then as now, the question of whether approval of this project would result in an improvement in patients’ reasonable access to services is one of the pivotal questions raised by the present application.

In the years since approval of the CHH facility, the Oregon Health Authority (OHA) has engaged in a comprehensive public planning process for behavioral health services as evidenced by the Oregon Health Authority 2015-2018 Behavioral Health

Strategic Plan, November 2014.¹⁵ As detailed in a December 1, 2016 report to the Oregon Legislature titled “Investments in Community Behavioral Health, Health Systems Division Report” (The Investments Report), unprecedented investments were made in community behavioral health system during the 2013 legislative session with additional investments approved by the 2015 session.¹⁶ As noted by The Investment Report: “Specific services and system expansions focused on promoting community health and wellness, keeping children healthy and helping adults with mental illness live successfully in the community.” As explained in The Investment Report, outcome measures thus far indicate substantial progress towards OHA’s investment goals that emphasize mental health promotion and prevention in the community as a means of avoiding the need for hospitalization or the high use of emergency departments. Oregon’s investment in its community behavioral health system will help people avoid hospitalization or shorten hospital stays, resulting in less need for inpatient psychiatric beds.

Investments in the adult community mental health system has been guided by the March 13, 2007, “Community Services Workgroup Report for the Oregon State Hospital Master Plan.”¹⁷ The premise of this report is that there is one mental health system and the full continuum of mental health services needs to be enhanced to successfully improve the quality and efficiency of services. This report was cited as an excellent starting place to get a handle on the issues of patients’ reasonable access to services in the Division’s 2008 CHH decision. It has formed the basis of mental health investments since 2013. As noted by The Investment Report, the strategy for making investments contemplated transformation efforts that have helped shape the health care system since the original workgroup report was developed, including the implementation of coordinated care organizations (CCOs) and the Affordable Care Act.

Another development that has transformed the future landscape of mental health care in Oregon is the United States Department of Justice (USDOJ) Performance Plan.¹⁸ Entered into after lengthy discussions with the Civil Rights Division of USDOJ, this plan cements OHA’s commitment to improve mental health services for adults with serious and persistent mental illness (SPMI) by providing them with community services that will assist them in the most integrated setting appropriate to their needs, help them achieve positive outcomes and prevent their unnecessary institutionalization. Among its many requirements, the plan requires OHA to explore the reasons for individuals with SPMI “boarding” in emergency departments and to provide solutions. The resulting analysis dated October 28, 2016, is the “ED Boarding of Psychiatric Patients in Oregon, A Report to the Oregon Health Authority” (The ED Boarding Report).¹⁹ The OSDOJ Performance Plan requires OHA to reduce the rate of visits to emergency rooms by individuals with SPMI by 10% from baseline by the end of year one (June 30, 2017) and by the end of year two (June 30, 2018) by 20% from baseline.

¹⁵ See Exhibit #2, attached.

¹⁶ See Exhibit #3, attached.

¹⁷ See Exhibit #4, attached.

¹⁸ See Exhibit #5, attached.

¹⁹ See Exhibit #6, attached.

d. The Applicant's Reliance on ED Boarding and "High Occupancy Rates" at Existing Providers to Justify Construction of a New Facility

The applicant repeatedly argues that there is 'high unmet need' in the service area as evidenced by ED boarding and high occupancy rates at existing providers of psychiatric beds. In its letter dated December 2, 2016 the applicant stated that: "There is a simple remedy to the current ER boarding crisis: provide enough inpatient mental health care options." In light of the findings of The ED Boarding Report, the applicant's "simple remedy" does not appear to be the only or even the best cure for ED boarding in Oregon. "Synthesis of the Literature, Stakeholder Interviews and Statistical Analysis of Quantitative Data" of The ED Boarding Report lists many other possible solutions to ED boarding in addition to increasing inpatient psychiatric care capacity, including, but not limited to, expanding comprehensive community-based mental health resources for persons with severe mental illness; expanding the availability of ED alternatives such as crisis centers or psychiatric emergency centers like the new Unity Center in Portland (discussed below); increasing alternatives to inpatient beds such as sub-acute beds and residential services; expanding community mental health services to reduce the number of psychiatric ED visits; addressing specific challenges for pediatric populations; and providing supportive services, such as housing in the community. It is interesting to note that the main reason respondents²⁰ identified for the lack of inpatient psychiatric beds related to OSH capacity, not to a lack of bed capacity in the community. Please see page 54 of The ED Boarding Report. As evidenced by The Investment Report discussed above, Oregon has begun to actively pursue many of the solutions to ED boarding suggested by The ED Boarding Report and is actually required to reduce ED boarding by the terms of the OSDOJ Performance Plan.

Disability Rights Oregon (DRO) is a nonprofit that is the Governor's designated protection and advocacy system for the State of Oregon. It is funded by the federal government to provide legal advocacy services for the people with disabilities across the state, including individuals with psychiatric disabilities. DRO has been granted affected party status. Bob Joondeph, its executive director, has been an advocate for people with psychiatric disabilities for 30 years. He has served on numerous planning processes, task forces, and workgroups that have tried to improve services for people with psychiatric disabilities in the State of Oregon including the Behavioral Health Strategic Plan Work Group that helped to formulate the "Oregon Health Authority 2015-2018 Behavioral Health Strategic Plan, November 2014." In a letter dated November 23, 2016, he noted that:

The question of whether the Portland region needs another private, for-profit psychiatric facility should depend on broad-based planning that encompasses all aspects of mental health funding and services. Unlike some areas of medical and social services, behavioral health resources can be effectively targeted to preventative and crisis response

²⁰ "Respondents" are individuals that participated in stakeholder interviews.

services for the purpose of maintaining health and safety and preventing the greater expense of inpatient treatment. When public and private insurance dollars are unnecessarily spent on institutional care, the cost of insurance increases and the allocation of public resources for other purposes decreases. On the public side, Oregon has already attracted criticism from the U.S. Department of Justice for spending a high percentage of its behavioral health dollar on institutional care.

The NEWCO proposal has not been considered within the context of the Oregon Health Authority's public planning process for behavioral health services. Its model of services has apparently not been tailored to meet public need in the manner that the new Unity Center developers undertook when consolidating institutional level care. It seems to present itself along the model of an antiquated stand alone psychiatric facility that is large (100 beds), sited near a prison, and presented as not an ingredient in a continuum of care, but as a solitary player that promises to cooperate with others in the future.

NEWCO contends that its facility will address the 'boarding' problem in Oregon. In public planning processes that in which I have participated, building new inpatient beds has not been raised as an option to solve the problem. Instead, planners are creating new crisis services, diversion systems, supported and supportive housing, police training and facility models like the Unity Center to lessen the demand on hospital emergency departments. As in Oregon's health care reform efforts generally, more attention is being given to managing chronic conditions in the community rather than constructing more expensive and less desired facilities that respond to the failures of community treatment. As noted above, the NEWCO approach appears to be "old school" and expensive for the public and insurance purchasers.

As evidenced by the discussion of the various documents discussed above, Mr. Joondeph's comments are reflective of the direction that the State of Oregon is taking to improve patients' reasonable access to services as evidenced by the various reports and documents cited above.

NAMI Oregon, also an affected party, is a grassroots, membership-governed organization that offers free education, support and advocacy services to individuals living with mental illness and their families and other loved ones. It has 15 chapters

across Oregon that annually serve about 8,000 Oregonians. Its members have direct lived experience with mental illness, as individuals living with an illness, as family members or friends of individuals living with mental illness, or as both. NAMI Oregon's executive director, Chris Bouneff, testified at the public meeting that:

We also believe that the financial impact on the rest of our treatment system and support system needs to be taken into account. We learned through the state hospital system, and many of us warned lawmakers that it's coming, but we learned you can't build your way out of this problem. You can't have a disproportionate share of resources going to the most expensive levels of care while not having a concurrent significant investment in the rest of the treatment system, otherwise you don't prevent the crises that lead to hospitalization, and you quickly overwhelm the services you have in the hospital.

Mr. Bouneff's remarks proved to be prescient as the Governor's proposed budget for the 2017-2019 biennium includes the closure of the Junction City campus of Oregon State Hospital in 2018. In an email dated December 6, 2016 from Ron Escarda, an employee of UHS, to Dana Selover with OHA, Mr. Escarda argues that: "With the Oregon Governor's recent published plan to close the state hospital in Junction City and its 140+ beds, I think the issue of no need for additional capacity is rendered even less credible."²¹ Rather than supporting Mr. Escarda's argument, the closure of the Junction City facility validates Mr. Bouneff's concerns. OHA's Director Message from December 1, 2016, contained the following information:

While Junction City has played an important role in OSH's ongoing transformation as an innovative leader among state hospitals, closure of the facility will enable the state to maintain the investments Oregon has made in community-based behavioral health treatment in the past four years. It also will help us meet our obligations under the performance plan we developed with the United States Department of Justice this summer to reduce institutionalization for adults with serious and persistent mental illness.

If Oregon moves forward with closing the Junction City facility, the closure would only be accelerating a direction that the state had already planned to go according to a spokesman for the Oregon Health Authority quoted in the Lund Report: "Prior to the opening of Junction City, the facility was described as a short-term solution for residential beds that would be alleviated as community-based treatment capacity increased".

²¹ See Exhibit # 7, attached.

e. Improving Access to Services Through Alternatives to Hospitalization

The Unity Center for Behavioral Health (Unity) began operations in February 2017. Legacy Health, Kaiser Permanente, Adventist Health and Oregon Health & Science University have come together to create an innovative model of care by creating a facility that has the goal of providing care for all those in need through a combination of emergency, inpatient and outpatient services. Inspired by the John George “Alameda Model”, but also providing a “warm hand off” to needed supports, this facility will provide a dedicated psychiatric emergency room to reduce ED boarding. It will operate 24/7 and will be staffed with psychiatrists, social workers, ARNPs and peer support counselors. Unlike the proposed NEWCO facility, this facility is a community based project made possible by donors such as the City of Portland, Multnomah, Clackamas and Washington Counties as well as individual and institutional donors in the community. It is the result of a community wide effort involving many stakeholders. It will consolidate the current inpatient beds at Legacy Health, Adventist Health and Oregon Health & Science University at the site of the former Holiday Park Hospital in NE Portland. The inpatient program will include 101 inpatient beds (22 child and adolescent and 79 adult). This is an 11- bed reduction of the current number of adult beds operated by the partners but an increase of six beds for the pediatric population. It seeks to de-criminalize mental illness by getting police away from transporting patients with mental illness.

It is highly likely that other facilities around the state that offer inpatient psychiatric services will add psychiatric emergency rooms to their complement of services. Legacy Health, Providence Health & Services – Oregon, (Providence) and Kaiser Permanente Northwest (Kaiser) have been granted affected party status. They, along with Adventist Medical Center, submitted a joint letter (The Joint Letter) dated December 1, 2016 in which they, for the reasons stated in that letter, conclude that the NEWCO project “represents a diminution of care in our community, not an advancement” and “respectfully request that the Division deny the application.” Each of these entities is an existing health provider in the Portland region that collectively provide the majority of acute mental health care in the region. While not a partner, Providence has actively supported the development of the Unity Center and this model of innovative care. In relation to patients’ reasonable access to services, The Joint Letter provides the following information:

We anticipate caring for 44-55 patients on an average day in the ED. Mr. Escarda’s November 17 public comment letter (p.5) states that ‘the new or additional care offered by the Unity Center will be emergency services, which will not address the more acute psychiatric patients who will still require inpatient stabilization and care’. This statement is both uninformed and inaccurate. Our analysis strongly suggests that the Unity Center’s ED will reduce demand for inpatient beds: today we know that many psychiatric inpatients are admitted for very short stays

simply so they do not board in an acute care hospital ED. For example, over the last 30 months at Legacy's Good Samaritan and Emanuel Adult Psychiatric units, 185 patients were discharged in less than 24 hours and another 230 discharged in less than 48 hours. Collectively, this represents 20% of the total admissions to these two units. Unity's planning suggests strongly that the initiation of the Psychiatric ED service will significantly reduce the percentage of patients being admitted for 24-48 hours. This, of course, reduces the need for inpatient beds. Unity is a true community partnership and needs and deserves time to open and stabilize before another provider is added.

SEIU Locals 49 and 503 (SEIU) were granted affected party status. SEIU members represent one of the largest classes of healthcare consumers in the state and are impacted as purchasers, patients and providers. In a letter dated November 21, 2016 it also urged the Division to deny the NEWCO application and noted that the Unity Center "is a proven successful model that aims to avoid psychiatric hospitalization altogether by focusing on immediate treatment at the outpatient level of care." It also wrote that: "In fact, academic studies have found that the availability of inpatient beds is not the sole factor in determining whether behavioral health patients receive the optimum level of care best suited to their needs." It stated that:

As the state continues to adopt new and innovative treatment initiatives like the Alameda Model and other regional dedicated psychiatric EDs, resident populations can receive treatment for mental and behavioral health needs earlier in the continuum of care process, before their behavioral health needs manifest into more serious conditions. These innovations will allow Oregon to maintain a balanced system of care.

f. Reasonable Access to Services Affected by Location of Facilities

The proposed NEWCO facility will be located in a suburban area of the Portland tri-county region without adequate access to public transportation. In his November 29, 2016 letter, NAMI's executive director, Mr. Bouneff, emphasized the importance of having a proposed hospital located within a reasonable distance to the home communities of the people that the applicant intends to serve. He notes that "individuals and families travel long distances to access inpatient care, which precludes families and other support networks from even visiting a loved one" and this can prevent coordination with community care providers. At the public meeting Mr. Bouneff testified that his organization does not favor large institutions and that it would be "more enthusiastic about capacity being added when we're talking about 5 to 10 to 15 beds."

In its December 2, 2016 rebuttal comments (The Rebuttal letter) the applicant stated that:

There were some persons in the public hearing who stated a better solution would be community services or facilities of 10-16 beds. This is not economically feasible and would not solve the large bed shortages. No community, especially heavily rural areas, has ever been able to solve this issue due to the inability to build, staff and run 5-10 bed inpatient programs. While in theory it would be preferable for patients to get the care that they need close to home as possible, it is not feasible, economically & operationally and the reason why this model or idea or idea has never gained traction or been more fully explored as a viable option by healthcare systems and community providers.

The facts do not support the applicant's dismissal of the possibility of small closer-to-home facilities that are integrated into the community that they serve. The Division is currently considering an application for a proposed 16-bed psychiatric hospital to be located on property adjacent to Good Shepherd Medical Center in Hermiston. It is designed as a secure emergency and hold facility set to serve Eastern Oregon, a heavily rural area, and it expects that approximately 70% of patients will be funded through two CCOs. It has received a grant from the Eastern Oregon Human Services Consortium for \$500,000 and Good Shepherd Health System is leasing the land for the project for \$1 per year for 30 years. If approved, the patients that it serves will not have to travel to other regions of the state such as the Portland area for inpatient psychiatric services. Geriatric patients are included in its intended patient population.

g. Reasonable Access to Services, Geriatric Patients, Restrictive Admission Policies and the Role of Emergency Rooms

Tuality Healthcare has been granted affected party status. Tuality Forest Grove operates a 22-bed geriatric psychiatry unit. In its letter dated November 28, 2016 regarding the NEWCO application, it expresses "significant concerns about this proposed facility's ability to truly meet the mental health needs of the Geriatric Oregonian population." One of these concerns is as follows:

Finally, the state should consider the disbursement of services statewide when evaluating the need for additional geriatric inpatient psychiatric services for Oregonians. While the workforce and population is centered in the Willamette Valley, Oregonians around the rest of the state do not have any Geriatric Psychiatric inpatient beds. The Three existing programs all are centered in the Portland metropolitan area. We believe that a hospital either at the

western side of the state or the southern area would better serve Oregon geographically or avoid concentrating all of this geriatric care within 20 miles of the Portland metro area.

The proposed NEWCO facility will not operate an emergency room. Since access to an emergency room often serves as a safety net for individuals without health insurance or who are under-insured, lack of an emergency room has the potential to leave the majority of uninsured or under-insured patients to be cared for by established general acute care providers. It is important to note that this facility could reasonably be expected to serve far fewer “no pay or slow pay” and Medicaid patients than existing community based hospital psychiatric units. For the reasons noted above, this is especially true given the location of the proposed facility. Since comprehensive medical care will not be available at the facility, patients who require emergency care beyond the facility’s scope of services will not be able to access its services. These patients are often the individuals most acutely in need of services and their reasonable access to services will not be improved by this project. They are also often the most costly patients to treat. The importance of being able to serve this population is recognized by the Division’s administrative rules. Please see OAR 333-615-0020(4).

Geriatric patients are particularly likely to have serious medical conditions. In its letter dated November 28, 2016, Tuality Healthcare offered the following observation:

Second, as you can imagine the geriatric population due to their age has many serious medical conditions particularly the geriatric psychiatric population. At Tuality Forest Grove we have been able to care for these difficult patients since there is an emergency room onsite in the facility. Any emergency medical treatment can be quickly diagnosed and treated so the patient can remain at the facility when appropriate. The proposed NEWCO facility will not have these needed Emergency Services, which means they will only take the patients needing minimal care, the easiest and least (sic) expensive to provide care. Therefore leaving the more difficult and expensive patients for the Tuality Forest Grove facility, or NEWCO will be taking patients for which care cannot be safely provided.

In a letter dated April 26, 2016, the Division asked the applicant to address how it would ensure that geriatric patients received proper care:

Many, if not most, geriatric patients have numerous medical complications such as diabetes, high blood pressure and cardiac diseases. As a group, many of them have not had healthy lifestyles and may have a long history of illnesses. Please provide a detailed discussion of the

appropriateness and logistics of treating such patients in a freestanding psychiatric hospital that lacks an emergency department and the ability to provide the acute care services that they may need.

On June 28, 2016, the applicant responded:

Medical co-morbidity is an increasingly common health management issue for all of our patient population, not just geriatric patients. We develop clear exclusion criteria that account for facility-specific attributes and identify the threshold of our ability to safely manage a patient's medical co-morbidity in a free-standing setting. We also have an internal medicine function to assist the Psychiatric providers in their care management. When it is determined that a patient's medical needs require more interventions and care we cannot provide we would transfer the patient to an appropriate medical facility for those services.

The applicant's response bolsters the concerns expressed by Mr. Berman about the applicant taking patients with less complicated needs and leaving more difficult patients for community based hospital inpatient psychiatric units to treat. Since they will provide less comprehensive services than existing hospitals (with the exception of CHH), it will increase the acuity in the patient mix at other hospitals, placing an increased burden on community based hospital inpatient units. As the applicant notes, medical co-morbidity is an increasing commonly health management issue for all its patient population. The "exclusion criteria" will prevent the NEWCO facility from treating many individuals regularly seen in general hospital emergency rooms every day but that will be beyond the ability of this facility to treat, necessitating their transfer by ambulance to the nearest hospital, Legacy Meridian Park Medical Center.

h. Acute Care Hospitals Increasing Supply of Inpatient Psychiatric Beds

Belying the applicant's assertion in its January 5, 2016 application that: "based on available information, there is no indication acute care hospitals are increasing supply of inpatient psychiatric beds" is the following statement from Tuality Healthcare's November 28, 2016 letter:

Tuality Forest Grove has added additional beds as the need has become necessary in a sequential order supplementing what is needed. Most recently about five years ago was the addition of 4 new beds. Additional space exists in Tuality Forest Grove that should the need continue to grow in Oregon as the "Baby Boomer" population ages, Tuality Forest Grove intends to add more beds in a sequential

fashion to allow them to occur in the least costly and most productive manor (sic).

In this regard it is also important to note that Providence recently opened a new 19-bed inpatient geriatric psychiatric unit at Providence Milwaukie Hospital. By letter dated December 1, 2016, the CEO of Willamette Valley Medical Center, Peter Hofstetter, wrote to the Division requesting that it deny the NEWCO application with respect to geriatric psychiatric services as it “operates a geriatric psychiatric unit only 28 miles from the proposed new hospital and our unit has capacity averaging only 70% occupancy” and because of concern about the “impact that this CON would have on what is already a very fragile delivery system for geriatric mental health services and how those needs will be met in the immediate future.”

i. Priority for Units at General Community Hospitals

It is important to highlight that OAR 333-615-0020 recognizes that it is state policy to encourage and assist general community hospitals to establish psychiatric services and that priority under OAR 333, Division 615 is to be given to the establishment of access to local hospitalization in geographically distributed, quality psychiatric units, within community hospitals and that hospitalization is to be utilized only when an individual’s needs cannot be safely and effectively met by less costly alternatives. Section (4) of that rule provides that the development of a number of psychiatric units, of economically and programmatically viable size, in general hospitals is to be favored over development of freestanding facilities. Further under OAR 333-615-0000, the applicant bears the burden of showing that other aspects of its proposal compensate for its lower priority status. For all of the reasons discussed in the review of this criterion, the applicant has failed to bear its burden of showing that other aspects of its proposal compensates for its lower priority status.

j. Reasonable Access to Services and ED Transfer Agreements

The comments received from Washington County, Department of Health & Human Services via letter dated December 5, 2016 emphasized the need for the proposed hospital, if approved, to: “have clear *Letters of Agreement* with area Emergency Departments for NEWCO patient experiencing a medical episode requiring emergency care.” The County has extensive experience working with metro area hospitals, including CHH. The applicant has stated in numerous contexts that the proposed NEWCO facility will be similar in form and function to CHH. Consequently, it is important to note that Providence St. Vincent is the closest facility equipped to provide acute medical care for CHH and, in its nine years of operation, CHH has not yet reached a transfer agreement with this facility. When questioned by the Division about this, the applicant replied that: “discussions are still-in process” with this facility. CHH does not have an ED transfer agreement with any facility other than Tuality Hospital; a facility located a considerable distance away in Hillsboro. In response to the Division’s request for a detailed accounting of which hospital emergency rooms CHH has transferred patients

experiencing medical emergencies to during the previous three years, the applicant provided the following information:

Of 49 patients admitted for further medical care in 2013, there were 47 admitted to Providence St. Vincent's Hospital; one admitted to Providence Portland, and one admitted to Legacy Meridian Park. Of 29 patients admitted for further medical care in 2014, there were 27 admitted to Providence St. Vincent's Hospital, and two patients admitted to OHSU. Of 44 patient admitted for further medical care in 2015, there were 42 admitted to Providence St. Vincent's Hospital, one admitted to OHSU, and one admitted to Adventist Medical Center.

It is interesting to note that Tuality Hospital does not appear on this list during any of the three years.

When asked by the Division in a letter dated April 26, 2016 whether the proposed hospital will have a transfer agreement with Legacy Meridian Park Medical Center, the closest facility equipped to provide acute medical care, the applicant responded:

There have not been discussions to-date with Legacy Meridian Park Medical Center. We do anticipate having such discussions once this certificate of need process has been completed. It is our hope that such a transfer agreement can be put in-place.

The applicant's response validates Mr. Joondeph's concern, noted above, that this facility presents itself "along the model of an antiquated stand-alone psychiatric facility." The paucity of appropriate ED transfer agreements at the facility that NEWCO is modeling itself on and the applicant's response to the Division's inquiry not only calls into question whether the proposed hospital would have an appropriate relationship with its service area, discussed below, but also raises serious concerns about patients' reasonable access to services and whether that access will be improved as a result of this project.

In discussing the lack of an ED transfer agreement, SEIU, in its November 21, 2016 letter, observed that: "For these reasons, we are seriously concerned that UHS' proposed facility will not be equipped to deal with the medical emergencies and medical complexities that naturally arise in the populations it anticipates to serve, such as geriatric patients."

k. Restrictive Admission Policies, Reasonable Access to Services for Patients with IDD and Severe Mental Illness

When asked by the Division in its April 26, 2016 letter whether it would serve low-functioning patients (e.g. patients with IQ below 80) in any of the age cohorts, the applicant responded that it “will not serve patients who are not able to cognitively participate in treatment groups.” In response to this reply, Mr. Joondeph’s November 23, 2016 letter stated that:

NEWCO materials stated that the proposed facility would not serve individuals with intellectual disabilities because they wouldn’t benefit from cognitive therapy. However, it does plan on serving individuals with dementia. I’m not sure that I appreciate the difference but am concerned that people with IDD will experience discrimination under this plan.

Based on the applicant’s response to the Division’s April 26, 2016 inquiry, there appears to be reason for concern that patients with Intellectual and Developmental Disabilities (IDD) may not enjoy access to the services of the proposed facility. Additionally, it appears that many of most seriously mentally ill patients will not be able to be admitted to this facility as the severity of their mental illness may prevent them from participating in therapy groups.

l. Scholarly Article Regarding Access for Patients including Public-Paid Patients

As noted above, the proposed facility is a for-profit venture. What impact this fact may have on patients’ reasonable access to services in the subject of a frequently cited article in the February 2005 issue of *Psychiatric Services* entitled “A Comparison of the Performance of For-Profit and Nonprofit U.S. Psychiatric Inpatient Care Providers Since 1980.” The authors of this article synthesized evidence from a systematic review of the literature reporting substantiated performance differences between private for-profit and private nonprofit psychiatric inpatient care providers in the United States since 1980. They also compared differences in performance between nonprofit and for-profit inpatient psychiatric care providers with reported differences between nonprofit and for-profit providers for other types of health care. The authors concluded that on the basis of data collected since 1980, nonprofit psychiatric inpatient providers in the United States had superior performance on access, quality, cost-efficiency, and amount of charity care. They found that caution is warranted in pursuing public policies that permit or encourage the replacement of nonprofit psychiatric inpatient providers with for-profit providers of these services. All of the existing inpatient psychiatric providers in the service area, except UHS owned Cedar Hills Hospital, are hospital-based units operated by community hospitals that are nonprofit charitable organizations.

m. Reasonable Access to Services for the Population Most Needing Services

Data provided in The Joint Letter shows that the largest segment of current inpatient psychiatric patients in the proposed service area are those age 18 to 64 representing nearly 82% of the total psychiatric discharges of residents from the three county area in 2015 and that just under 56% of all discharges for the age 18-64 population in 2015 were Medicaid or uninsured. The letter states that:

Based on the above, if NEWCO were intending to serve all Service Area residents in need of care, one would expect that 81% of its requested beds (81) would be for adults and of this, at least 50% would be made available to Medicaid and insured patients (40+ beds). However, NEWCO is projecting only 52 beds for adults and their commitment to serving Medicaid is not evident.

As shown in Figure 3, based on 2015, the most recent Oregon inpatient utilization data available, for psychiatric patients between the ages of 18 to 64, Medicaid paid 51% of the days. Medicaid days as a percentage of total paid days has increased from 25% as recently as 2013 to over 50% in 2015.

While NEWCO states in its application that it expects the vast majority of the population they will serve in the 18 to 64 age group will be Medicaid eligible, absolutely no documentation is provided in its pro-forma to support how revenue will flow for these patients.

n. Track Record of UHS Owned CHH in Relation to Reasonable Access to Services for Public-Paid and Uninsured Patients

The Joint Letter raises concerns about CHH's compliance with the conditions of approval of its Certificate of Need, as does SEIU's November 21, 2016 letter. The Certificate of Need program shares these concerns. In this context is important to again note that the applicant has made it clear that NEWCO will operate like CHH and UHS is the parent company of both entities. Applicable to this discussion are:

Condition 1. The applicant will make reasonable efforts to make it widely known to the general public that emergency psychiatric treatment is available at this facility 24 hours a day, seven days a week, regardless of ability to pay or payor source, if a patient presents at the hospital and requires stabilization. Reasonable efforts include, but are

not limited to: clearly posting this information on the web page for the facility . . .”

Condition 5. The applicant will accept admissions and transfers of patients without quotas, limits or restrictions based upon payor source or the ability to pay. The applicant will also provide care to the uninsured in the same proportion as the psychiatric inpatient units of community hospitals located in the service area. Beginning one year after commencement of the operation of this facility, and on an annual basis thereafter, the applicant will submit a comprehensive report to the CN program detailing the amount of care provided to uninsured individuals and to Medicaid eligible individuals for whom the facility cannot receive payment because of the IMD exclusion. The department will evaluate this information against the experiences of other psychiatric inpatient units located in the service area.”

As noted in The Joint Letter, because CHH does not participate in the OAHHS inpatient database, there is no public data to substantiate its ongoing conformance with Condition 5. While CHH has filed Medicare cost reports it is not possible to tell from a review of these reports whether it provided any uncompensated care during the year for which the cost report was filed since only hospitals paid through the Inpatient Prospective Payment System (for acute care) are required to file Worksheet S-10, its hospital uncompensated and indigent care data.

Although the program has repeatedly pointed out to CHH that the appropriate comparison required by Condition 5 is not against a community hospital as a whole but against its psychiatric inpatient unit, we continue to get information from the applicant such as that provided in Table 5 on page 33 of The Rebuttal Letter that measures its performance against community hospitals as a whole. Further, as pointed out in the Division’s June 28, 2016 letter to the applicant, the web page for CHH states that: “We do not accept the Oregon Health Plan (Medicaid) or any Managed Medicaid through the Coordinated Care Organizations.” This statement directly contravenes the intent of both Condition 1 and Condition 5 that was to ensure that CHH served its fair share of Medicaid patients despite the IMD exclusion. These conditions were meant to make sure that CHH did not shift the burden of caring for these patients on existing community providers while filling beds with more profitably insured patients. This statement, appearing on their web page, also evidences a failure to comply with the clear directive set out in Condition 1.

As reported on page 17 of the Division’s 2008 “Final Order Issuing Certificate of Need With Conditions” for CHH: “The Ascend CN application (page 44) specifies that “all services will be adult psychiatric services and there will be no specialty units.” This has not turned out to be the case. The website for the facility states that: “The specialty

approach is what makes us different.” Its inpatient specialty programs include Substance Abuse Treatment Program, Behavioral Pain Management Program, The Woman’s Program, a Mental Health Unit, a 10-bed Crisis Stabilization Unit, and a Military Program that serves active duty military service members who are insured, predominately come from out-of-state and enjoy benefits that will cover the expected 7 to 45 day stay.

The proposed NEWCO facility proposes to follow the same specialty care model. SEIU, in its November 21, 2016 letter, states that:

UHS’ failure to include any substantive discussion of existing providers, other than those owned by UHS, is not entirely surprising given that the proposed facility will be an outlier in a market otherwise filled with integrated care providers. UHS’ proposed facility is a for-profit, standalone hospital offering specialty services.

o. OAR 333-615-0020(5) Requires that Need be Population Based Rather Than Facility Based

On page 18 of The Rebuttal Letter, the applicant posits that: “Cedar Hills’ experience with high occupancy is a good ‘barometer’ of the inpatient psychiatric bed shortages in our region and we see the trend growing.” This approach to planning for future behavioral health services is not in keeping with what has been happening in Oregon, as extensively discussed above, and is not congruent with the principle that has informed and guided those efforts: there is one mental health system and the full continuum of mental health services needs to be enhanced to successfully improve the quality and efficiency of services. Please see the March 13, 2007, “Community Services Workgroup Report for the Oregon State Hospital Master Plan.” It should also be noted that OAR 333-615-0020(5) requires that: “Demonstration of need for general psychiatric beds will be population based, rather than facility based.”

CHH does not operate an emergency room, often has its beds filled with patients in specialty programs, offers a limited number of “crisis stabilization beds” and excludes many medically compromised patients. This facility also appears to be out of compliance with the conditions of approval of its Certificate of Need. It is also important to note that the proposed NEWCO facility, unlike CHH, will not provide a “Crisis Stabilization Unit” which the applicant described as having “specific programming that is designed to treat our patients who are possibility more aggressive or who are unable to interact with other patients in a larger milieu.” This will leave the proposed hospital without a dedicated unit to treat these patients who, here again, are the types of patients seen and treated everyday in the EDs and inpatient psychiatric units of community based hospitals.

The “Burden of proof for justifying need and viability of a proposal rests with the applicant.” OAR 333-580-0000(8). In addition “[a]pplicants must demonstrate to the Division that a proposal is approvable.” OAR 333-580-0030(5). For the reasons

explained above, the applicant has not met its burden to establish that the proposed hospital will result in an improvement in patients' reasonable access to services.²²

**B. Availability of Resources and Alternative Uses of those Resources:
OAR 333-580-0050**

1. Does the proposed project represent the most effective and least costly alternative, considering all appropriate and adequate ways of meeting identified needs?²³

a. Best price

The applicant must demonstrate that the best price for the proposal has been sought and selected. The portion of the application that is supposed to address this item skips over it and does not address it. Please see pages 46 and 47 of the application.

b. Best solution among reasonable alternatives.

The applicant must demonstrate that proposed solutions to identified needs represent the best solution from among reasonable alternatives, including internal and external alternatives.²⁴

i. Internal alternatives

This portion of the rule requires that the applicant:

- List the major internal operational adjustments considered which could lower the cost and improve efficiencies of offering the beds, equipment or service;
- Demonstrate that the alternatives considered represents the best solution for patients and discuss why other alternatives were rejected;
- If the proposal is for an inpatient service, demonstrate that this method of delivery is less costly than done on an outpatient basis; and
- Demonstrate that the selected architectural solution represents the most cost effective and efficient alternative to solving the identified need.

In this section of its January 5, 2016 application, the applicant offers two internal alternatives (1) expansion of existing facilities and/or (2) care redesign to redirect care to other, non-inpatient modalities. This section of the January 5, 2016 application states that UHS CHH has limited capacity for further expansion and "there is no indication that acute care hospitals are increasing supply of inpatient psychiatric beds". In relation to

²² Under OAR 333-580-0040(4), if the project proposes to serve the needs of members of a health maintenance organization, the applicant must address whether these members need the proposed project, considering the special needs and health care utilization rates of this population? This project does not propose to serve the needs of members of an HMO and therefore this criterion is not applicable.

²³ OAR 333-580-0050(1)

²⁴ OAR 333-580-0050(1)(b)(A) and (B).

increased use of outpatient services, the applicant states that: “Theoretically, if all needed psychiatric care could be delivered on an outpatient basis, we would expect to see providers moving that direction, given its much lower delivery cost.” The cost of expanding CHH would be roughly the same cost as building a new facility in Wilsonville.

As discussed above, what is actually happening in the service area is a move to decrease the need for inpatient beds both through the development of the Unity Center and other investments in the community behavioral health system that will help people avoid hospitalization or shorten hospital stays, resulting in a need for less inpatient psychiatric beds in facilities such as NEWCO. Planning for future behavioral health services based on a perceived need at CHH is not in keeping what has been happening in Oregon and is not in keeping with the principle that there is one mental health system and the full continuum of mental health services needs to be enhanced to successfully improve the quality and efficiency of services.

As noted above, in a letter dated September 29, 2016, the Division raised concerns about the failure of the design of the hospital to provide for visual and physical separation of child and adolescent care units from each other and from adult units as required by Oregon administrative rule. Subsequently by letter dated October 5, 2016, the applicant wrote that: “UHS has determined that inpatient care for children, persons 5-11 old, **will not be included at this time**, due to space configurations and treatment modality requirements for the different age cohort groups.” (Emphasis added.) In The Rebuttal Letter, on page 50, the applicant discusses concerns raised about UHS’ practices regarding boarding and co-mingling of patients in its facilities. It states that it is its policy to “fully and at all times comply with federal, state and local regulations governing the proper boarding of patients.” However, it then goes on to state:

As described above, in some isolated and rare emergent circumstances, it can become necessary to board a child patient on an adolescent unit or an adolescent on an adult unit. This typically occurs when a patient in active crisis arrives as one of our facilities in need of care. However, even in these rare circumstances boarding is only done with the full consent of the patient and the patient's guardian. If it does occur, the patient who is on another unit sleeps only on that unit. All clinical programming occurs on the age appropriate unit. During sleep hours, the patient is on a heightened level of supervision for safety purposes. As soon as there is a bed available in the intended unit, the boarded patient is promptly moved to the appropriate unit.

This response is concerning because OAR 333-535-0061(8)(d) related to building requirements requires that child and adolescent units are physically and visually separate and from each other and from adult units. This provision helps ensure the safety and wellbeing of patients cared for in the facility. It is concerning that even before the

proposed facility is built, the applicant is justifying the need to inappropriately co-mingle patients in “isolated and rare emergent circumstances.”

A project that does not conform to licensing rules does not satisfy the standard that the selected architectural solution represents the most cost effective and efficient alternative to solving the identified need

ii. External Alternatives:

If the proposed beds, equipment or services are currently being offered in the service area, this portion of the rule requires that the applicant demonstrate:

- Why approval of the application will not constitute unnecessary duplication of the services;
- Why the proposal is an efficient solution to identified needs;
- Why the proposal represents the most effective method of providing the proposal; and
- That the applicant can provide this proposal at the same or lower cost to the patient than is currently available. If these factors cannot be demonstrated, the applicant must show that without the proposal, the health of the service area population will be seriously compromised.²⁵

Much of what was written in response to the issue of internal alternatives is equally applicable here. There are inpatient psychiatric beds available in the service area and concerted efforts underway to provide community based alternatives designed to prevent the need for hospitalization and to shorten lengths of stay. For all the reasons discussed above, the development of a stand alone, 100-bed psychiatric hospital, located in the suburbs of Portland without adequate access to public transportation, lacking an emergency room and not resulting from a larger broad-based planning effort, is not the most effective alternative considering all appropriate and adequate ways of meeting identified needs. It would add unneeded beds resulting in unnecessary duplication of services and the applicant has not demonstrated that without the proposal the health of the service area population will be seriously compromised.

iii. Less costly alternatives of adequate quality.²⁶

If a less costly and adequately effective alternative for the proposal is currently available in the area, this portion of the rule requires the applicant to demonstrate why the proposal is not an unnecessary duplication and why it a more efficient solution to the identified needs. This portion of the rule also requires the applicant to demonstrate that the identified needs of the population cannot be reasonably served under current conditions, or by alternative types of service or equipment of equal quality to the proposal.

²⁵ OAR 333-580-0050(1)(b)(B).

²⁶ OAR 333-580-0050(1)(b)(C).

Mr. Bouneff, NAMI's executive director, noted, in his letter dated November 29, 2016, that:

Hospital care is a necessary service, but it represents the most expensive level of care in our mental health system. We already spend an inordinate amount on hospital-level of care. Would additional spending reduce our ability to maintain and expand community services that are less costly and critically necessary to keep people out of acute care? If it does reduce our ability to invest in community care, we will quickly overwhelm any capacity that the proposed hospital adds.

As Mr. Joondeph, DRO's executive director, quoted earlier, observed:

Unlike some areas of medical and social services, behavioral health resources can be effectively targeted to preventative and crisis response services for the purpose of maintaining health and safety and preventing the greater expense of inpatient treatment. When public and private insurance dollars are unnecessarily spent on institutional care, the cost of insurance increases and the allocation of public resources for other purposes decreases.

The Investment Report evidences the fact that Oregon's efforts to provide alternatives to expensive inpatient treatment are bearing fruit and will continue to restructure how behavioral health services are provided to the service area population. As Unity Center comes on line and other community hospitals add psychiatric emergency rooms to their complement of services, many hospitalizations will be avoided altogether by focusing on immediate treatment at the outpatient level of care. For residents of the service area, this will result in a less costly and more effective alternative to the building of more resource intensive inpatient psychiatric beds.

iv. If there are competing applications for the proposal, each applicant must demonstrate why theirs is the best solution, and why a certificate of need should be granted them.

No competing applications are being reviewed simultaneously with this proposal.

2. Will sufficient qualified personnel, adequate land, and adequate financing be available to develop and support the proposed project? ²⁷

This section of the rule requires the applicant to demonstrate that there are, or will be:

²⁷ OAR 333-580-0050(2)

- Sufficient physicians in the area to support the proposal; sufficient nurses available to support the proposal;
- Sufficient technicians available to support the proposal;
- Adequate land available to develop the proposal and accommodate for further expansion; and
- Source(s) and availability of funds for the project.

The applicant has identified a site in the City of Wilsonville for the proposed facility and has signed a purchase and sale agreement. The proposed site location is an 8.7 acre vacant lot, allowing, according to the applicant, “sufficient space for the hospital and necessary parking, as required by zoning regulations.”

NEWCO has not provided any information on the ability to expand the facility in the future. The siting (position of the building on the plot of land) of the building on the plans provided to the CN program leave little room for horizontal expansion in the future and no information on construction type or zoning requirements have been given to indicate if vertical expansion is a possibility.

The applicant has entered into a signed purchase agreement for \$2.98 million for the proposed hospital site. As noted above, total estimated capital expenditures, as verified by licensed architect or engineer for the construction of the proposed facility will be appropriately \$35.8 million. UHS will fund the proposed project and working capital with no additional financing required. There appears to be adequate financing available to develop and support the proposed project.

As a public company, UHS is required by the Securities and Exchange Commission (SEC) to produce ongoing information of the company’s performance. The Division obtained copies of this information. According to the SEC required annual comprehensive overview of UHS’ business and financial condition which includes financial statements (referred to as a 10-K), the Company had \$61.2 million in cash and cash equivalents as of December 31, 2015, which is an increase of ~91% from the prior year.

Cash and cash equivalents as of June 30, 2016, based on the quarterly information provided to the SEC (referred to as a 10-Q), noted continued strong cash position of \$56.3 million. UHS has net cash provided by operating activities of over \$1 billion for the previous two years ended December 31, 2015 and 2014 and is on track to meet or exceed this for the 2016 year-end based on June 30, 2016 cash provided by operating activities of \$801.2 million. Without the proposed facility, UHS has working capital (current assets divided by current liabilities) as of December 31, 2015 and June 30, 2016 of 1.56 and 1.27 respectively which is a measure used to show a business’s ability to pay for its current liabilities with its current assets. Taking into consideration the total expected capital expenditures for the proposed project, using December 31, 2015 and June 30, 2016 consolidated financial statements, the working capital of UHS would be

1.53 and 1.24, both of which are in line with industry standards. Total equity of UHS is \$4.3 billion and \$4.4 billion as of December 31, 2015 and 2014.²⁸

On September 14, 2016, the State of Oregon Office of Economic Analysis issued the Oregon Economic and Revenue Forecast²⁹ and noted within the report, Oregon is outpacing other states by a considerable margin today for both job and income gains, however, job gains have slowed somewhat in the most recent months, which is creating a tightening labor market across the state, which has increased the difficulty in finding qualified staff and an increase in wages.

The applicant noted 188 Full Time Equivalents (“FTE”) for 100 beds or 1.9 Staff per Bed in year 5 of operations. It was questioned in a letter from an affected party as to whether the staffing ratios were appropriate (3.2 Staffing was noted as appropriate in the letter). We noted that recent newspaper articles in Washington noted similar staffing ratios for 2 recently proposed psychiatric hospitals:

- 150 Employees projected for a 75 bed facility in Lacey, Washington (2.0 Staffing Ratio): (<http://www.thenewtribune.com/news/business/article69581157.html>)
- 200 Employees projected for a 100 bed facility in Spokane, Washington (2.0 Staffing Ratio): (<http://www.spokesman.com/stories/2017/jan/03/spokanes-new-psychiatric-hospital-will-help-meet-s/>)

Since of the staffing can come from the parent company, it can be difficult to determine an appropriate staffing ratio, but the staffing ratio is consistent with other facilities proposed by UHS.

In relation to staffing the proposed hospital with sufficient qualified personnel, the applicant assures the Division in letters dated March 11 and June 28, 2016, that: “UHS has multiple resources available to assist with the recruitment and identification of appropriate and qualified personnel.” It lists these resources as being web sites, UHS recruiters and nursing schools in the Puget Sound region. In its application, it writes that, given the fact that Cedar Hills Hospital is already in the service area and that “UHS has extensive experience and resources recruiting, employing and retaining skilled staff, including national recruitment programs”, “We do not anticipate any difficulties undertaking the same actions at NEWCO.” This stands in contrast to both Tuality Healthcare’s experience, concerns expressed in The Joint Letter and the statements of UHS CFO Steve Filton at an UBS Conference on May 23, 2016. Tuality Healthcare reported on its experience in trying to recruit for a psychiatrist for its facility:

Third, as I would expect you are aware, the State of Oregon does not have near the number of psychiatrists need (sic) to provide care for its mentally ill. This is especially true for

²⁸ (Detailed financial statements can be found at: https://www.sec.gov/Archives/edgar/data/352915/000156459016022902/uhs-10q_20160630.htm#CONDENSED_CONSOLIDATED_BALANCE_SHEETS)

²⁹ (<http://www.oregon.gov/das/OEA/Documents/oregon.pdf>).

inpatient facilities and even more so for Geriatric Psychiatry. The Tuality Forest Grove facility has had to recruit nationwide when a vacancy has occurred, and taken months to fill these vacancies. Creating another Geriatric Psychiatric facility will further exacerbate this problem and dilute the few Geriatric Psychiatry providers that do exist in the community. It would be better to allow the very few Geriatric Psychiatric facilities in Oregon (3 total) to use the few existing Geriatric Psychiatrists in the most productive way.

The Joint Letter expressed concern that the proposed facility “would dilute the already existing scarce resources of psychiatrists, psychiatric RN and therapists; leading to fragmentation of care and higher costs. The SEIU letter dated November 21, 2016 quotes UHS CFO Steve Filton on UHS’ experience recruiting personnel for its hospitals (please see the footnotes in the SEIU letter for details):

In many of our markets we’re actually turning patients away, and we’re turning them away because we simply don’t have the number of qualified personnel, clinical personnel that would include psychiatrics, nurses, other clinical personnel that we need . . . the nursing shortage, I think on the behavioral side a little bit more problematic. First of all, physically, we don’t have as many resources to replace nurses. We physically need nurses at the bedside . . . in some markets, that causing us to not be able to treat all the patients who present themselves for admission.

In a letter dated August 25, 2015, the applicant acknowledged that there is “a significant RN shortage that all providers are experiencing in the PNW.” In response to a question from the Division, in its August 30, 2016 letter, the applicant reports a “48% turnover rate hospital-wide for the trailing 12 months” at Fairfax hospital, its freestanding psychiatric hospital located in Kirkland, Washington. According to Nursing Solution’s 2016 National Healthcare Retention & RN Staffing Report, the 2015 national turnover rate for hospital nurses working in behavioral health was 26.5%.³⁰

In relation to staffing and other issues, nationally there are ongoing quality concerns about UHS, NEWCO’s parent organization. Both SEIU’s November 21, 2016 letter and The Joint Letter outline quality and billing issues at UHS facilities in the recent past. In its most recent SEC filing Form 10K published on August 5, 2016, UHS revealed that it has been served with subpoenas and other requests for information from

³⁰ Please see: <http://www.nsinursingsolutions.com/Files/assets/library/retention-institute/NationalHealthcareRNRetentionReport2016.pdf>

the Office of the Inspector General and the USDOJ's Criminal Frauds Section regarding a number of its facilities. UHS and its facilities has been the subject of investigative reports in the Boston Globe (March 7, 2016), the Dallas Morning News (March 18, 2016) and most recently in BuzzFeed News. (December 7, 2016).

The Division specifically questioned the applicant about the Dallas Morning News article and how, in light of the concerns about "dangerously poor care and unsafe conditions" at UHS facilities across the country, the proposed hospital would keep patients, staff and the public safe. After reviewing the applicant's response to concerns raised by the Division about reported problems at a number of its facilities, DRO's executive director, Mr. Joondeph drew the following conclusion:

In reviewing the materials provided by OHA and NEWCO, I was unable to find a direct defense of the applicant's corporate facilities in other states. I would have preferred a direct explanation of the problems and how they were corrected, rather than pronouncements of general effectiveness, certification and recognition. This approach led me to not expect transparency and openness in the future.

The Division shares Mr. Joondeph's assessment of the applicant's response to its questions and to concerns raised about safety and billing issues at its other facilities.

The "Burden of proof for justifying need and viability of a proposal rests with the applicant." OAR 333-580-0000(8). In addition, "[a]pplicants must demonstrate to the Division that a proposal is approvable." OAR 333-580-0030(5). For the reasons explained above, the applicant has not met its burden to establish that the question posed in this criterion can be answered in the affirmative as required by OAR 333-580-0030(2).

3. Will the proposed project have an appropriate relationship to its service area, including limiting any unnecessary duplication of services and any negative impact on other providers?³¹

This section of the rule requires the applicant to identify the extent to which the proposal and its alternatives are currently being offered to the identified service area population, or in the case of acute inpatient beds, could be offered on the basis of an analysis under Division 590 of the CN administrative rules. The applicant is required to discuss to the best of its knowledge, any negative impact the proposal will have on those presently offering or reimbursing for similar or alternative services. OAR 333-580-0050(3). Areas to be discussed are utilization, quality of care and cost of care. OAR 333-580-0050(3)(b). The applicant must demonstrate that jointly operated or shared services between the applicant and other providers have been considered and the extent to which they are feasible or not. OAR 333-580-0050(3)(c). The applicant must also demonstrate that all necessary support services and ancillary services for the

³¹ OAR 333-580-0050(3)

proposal are available at acceptable levels to insure that patients will have the necessary continuity in their health care. OAR 333-580-0050(3)(d).

In determining whether this criterion can be answered in the affirmative the discussions that appear above in conjunction with OAR 333-580-0040(3) (Will the proposed project result in an improvement in patients' reasonable access to services?); OAR 333-580-0050(2) (Will sufficient qualified personnel, adequate land, and adequate financing be available to develop and support the proposed project?); and OAR 333-580-0050(2) (Will sufficient qualified personnel, adequate land, and adequate financing be available to develop and support the proposed project?) are directly applicable and are incorporated herein by this reference.

As noted above, the applicant has not met its burden to establish that the proposed hospital will result in an improvement in patients' reasonable access to services. There are inpatient psychiatric beds available in the service area and concerted efforts underway to provide lower cost and more effective community based alternatives designed to prevent the need for hospitalization and to shorten lengths of stay. Institutional care is very expensive and prevention and crisis response services that avoid the need for hospitalization and shorten lengths of stay will save money for patients, families, payers such as insurance companies and government, and for the general public. Money spent on inpatient care diverts money from favored community based alternatives.

A new, stand alone, 100-bed psychiatric hospital, located in the suburbs of Portland without adequate access to public transportation, lacking an emergency room and not resulting from a larger broad-based planning effort does not appear to have an appropriate relationship to its service area. The proposed facility would add unneeded beds resulting in an unnecessary duplication of services.

Since comprehensive medical care will not be available at the facility, patients who require emergency care beyond the scope of the facility's scope of services will not be able to access its services. These patients are often the individuals most acutely in need of services and are also often the most costly patients to treat and, if this facility were to be approved, the burden of caring for these patients will fall on existing community based hospital inpatient psychiatric units. This will have a negative impact on these providers. Additionally, lack of an emergency room in combination with its location would mean that the proposed hospital is less likely to serve individuals without health insurance or who are under-insured. This will also have a negative impact on the existing community based providers.

Insured patients using the proposed facility will be those who would otherwise be treated by existing community hospital inpatient psychiatric units thereby resulting in a diminished contribution from commercially insured patients thus negatively impacting existing providers.

As discussed previously, given the difficulty in recruiting qualified staff such as psychiatrists and psychiatric RNs, the proposed hospital may dilute this already scarce

resource leading to fragmentation of care, higher costs and negative impacts on other providers.

The paucity of appropriate ED transfer agreements at Cedar Hills Hospital, the facility that NEWCO is modeling itself on, and the applicant's response to the Division's inquiry regarding ED transfer agreements at the proposed facility calls into question whether patients utilizing the proposed hospital would have the necessary continuity in their health care.

The "Burden of proof for justifying need and viability of a proposal rests with the applicant" and the applicant "must demonstrate to the Division that a proposal is approvable." OAR 333-580-0000(8) and 333-580-0030(5). For the reasons explained above, the applicant has not met its burden to establish that the proposed hospital will have an appropriate relationship to its service area, including limiting any unnecessary duplication of services and any negative impact on other providers.

4. Does the proposed project conform to relevant state physical plant standards, and will it represent any improvement in regard to conformity to such standard, compared to other similar services in the area?³²

Under this criterion, the proposed project must comply with state licensing, architectural and fire code standards. OAR 333-580-0050(4)(a). If the proposal is already being offered in the defined service area, the applicant must describe, to the best of his or her knowledge, to what degree the existing service complies with state licensing, architectural and fire code standards. OAR 333-580-0050(4)(b).

NEWCO has provided floor plans for the proposed facility and while an in-depth formal plan review was not completed since the project had not been approved by the CN program major elements were reviewed and comments provided to NEWCO. NEWCO's Architectural Firm (SRG Partnership, Inc.) provided responses to those comments and the following items are not compliant with the Oregon Health Authority Physical Environment (Division 535) Oregon Administrative Rules:

- No visual separation is provided between adolescent and geriatric cohorts as required by OAR 333-535-0061(8)(d);
- No visually functional windows are provided in patient rooms as required by OAR 333-535-0025(1)(c); and
- No age appropriate spaces are provided as required by OAR 333-535-0061(8)(a) since some required spaces are shared between adolescent/geriatric cohorts and some between adolescent/adult/geriatric cohorts.

Additionally, SRG Partnership, Inc. has sent a set of questions via email as directed by FPS to help identify rule requirements/interpretations. In the emailed

³² OAR 333-580-0050(4).

document SRG Partnership, Inc. references previously approved waivers for a similar facility type and has inquired if those waivers could be applied to NEWCO's facility. A reliance on the possibility of obtaining an approved waiver indicates that NEWCO does not intend to comply with the Oregon Health Authority Physical Environment (Division 535) Oregon Administrative Rules. Whether NEWCO would be able to obtain a waiver is unknown. However, it is clear from a review of the floor plans that the project, as presented, is not compliant with state physical plant standards.

C. Economic Evaluation: OAR 333-580-0060

In this portion of the analysis, the specific rule requirement will be set out and the analysis will follow.

1. Is the financial status of the applicant adequate to support the proposed project and will it continue to be adequate following the implementation of the project?³³

a. Any financial forecasts which deviate significantly from the financial statements of the five-year historical period presented in the application must be fully explained and justified. OAR 333-580-0060(1)(a).

UHS is proposing a new subsidiary to be created, therefore there are no historical financial statements, however, UHS has a similar facility, CHH, in which financial information was utilized to project pro forma financial information.

b. An applicant must describe how it will cover expenses incurred by the proposal in the event the proposal fails to meet budgeted revenues in any forecasted year. OAR 333-580-0060(1)(b).

As discussed above, UHS believes it will be able to fund the operations from cash reserves of the proposed project if revenue and expenses are not in line with forecasted amounts, however, UHS is projecting the project will be self-sufficient in year three of operations where the proposed project will be making a profit. The bottom line ratio (excess revenue over expense pre tax divided by total operating income) is projected to be -132%, -6%, 16%, 24% and 25% based on year one of operations through year five of operations. Based on historical information for CHH, bottom line ratio for 2014-2016 is in the range of 32%–33% before intercompany expenses. After intercompany expenses CHH had a bottom line ratio of -5% to -6%. Operating margin for CHH for 2014-2016 is 34%–35% while the projected project is assuming it will be as high as 37% in year five of operations.

³³ OAR 333-580-0060(1).

c. Applicants must discuss the results of ratio analysis required by Form CN-9 and OAR 333-580-0100(4), explaining strengths and weaknesses. The discussion should refer to each ratio as detailed in Table 1 of OAR 333-580-0100(4). Specifically:

i. Applicants must describe their debt capability in terms of the required ratio analysis. OAR 333-580-0060(1)(c)(A).

As discussed in the application, the proposed project will be a subsidiary of UHS and will not have standalone financial statements as all assets and liabilities will be held at the parent company, therefore the applicant did not comment on the debt capability as it is driven based on the proforma balance sheet. In addition, the project will be funded out of cash reserves of UHS, therefore no additional debt will be taken out. If the building and land is recorded on UHS' books there would be no depreciation and amortization expense recorded on a standalone basis for the proposed project, instead these expenses would be recorded on UHS' consolidated financial statements.

ii. The discussion of liquidity should include comments on the adequacy of cash, the collection period for patient accounts receivable, and the payment period for accounts payable. OAR 333-580-0060(1)(c)(B).

Based on the December 31, 2015 10-K filed, UHS consolidated accounts receivable collection period was ~52 days (average accounts receivable \$1,292,582,000/(\$9,043,451,000/365 days). UHS consolidated cash and cash equivalents as of December 31, 2015 were \$61,228,000. See above for additional information.

iii. The profitability ratios required by OAR 333-580-0100(4) and Form CN-9 must be discussed. OAR 333-580-0060(1)(c)(C).

As noted above, the applicant does not believe a large portion of Form CN-9 ratios are applicable, as a standalone balance sheet will not be presented and no debt will be incurred as part of the proposed project.

d. Board designated assets: The intended uses of this fund are to be discussed in general terms. Alternative uses or contingent availability of these funds, such as to meet a cash requirement, also need to be addressed. Additionally, the proportion (percent) of depreciation that was or is to be funded is to be identified for each financial period presented. OAR 333-580-0060(1)(d).

The applicant noted this was not applicable as UHS will use existing cash reserves to fund the project as noted above.

e. The applicant must discuss the availability of other sources of funding, including, but not limited to, donor restricted assets, assets of parent or subsidiary corporations, or a related foundation, which may be acquiring assets and/or producing income that is for the purpose of, or could be used for the purpose of, capital expenditure by the applicant. OAR 333-580-0060(1)(e).

UHS is the parent company for the proposed project and will fund the capital expenditures based on a letter of financial commitment from Senior Vice President and Chief Financial Officer on behalf of Universal Health Services, Inc. dated December 28, 2015.

f. Money market conditions must be discussed in terms of their impact on project financing, including interim financing, if applicable. Include the month and year in which financing is to be secured in this narrative:

i. The estimated rate of interest must be justified by the applicant. If debt financing is secured before or during the review process, the actual rate of interest obtained should be reported within 30 days of securing financing. OAR 333-580-0060(1)(f)(A).

As noted above, applicant will be funded from the parent company, therefore this is not applicable.

ii. When a bond rating report is issued before or during the review period in conjunction with a proposed bond issue to fund a certificate of need proposal, the applicant must submit a copy of the report to the Division within 30 days of its issuance. OAR 333-580-0060(1)(f)(B).

As noted above, applicant will be funded from the parent company, therefore this is not applicable.

iii. The financing term selected must be supported with evidence showing the benefits of its selection. OAR 333-580-0060(1)(f)(C).

As noted above, applicant will be funded from the parent company, therefore this is not applicable.

g. Patient days, admissions and other units of service used in forecasting projected expenses and revenues, both for the facility as a whole and for services affected by the proposed project, must be consistent with projections used to determine area need. All assumptions must be discussed. OAR 333-580-0060(1)(g).

Expected patient days forecasted is based on Cedar Hills and is therefore consistent.

In the review of patient days provided, we noted in a letter from an affected party that including an insurance payor such as Kaiser, which is seen as a closed system, may be misleading as those members would not be expected to contract with the applicant. Kaiser would represent approximately 18% of residents, and no additional information was provided by the applicant on how they will direct patients to its facilities.

h. An applicant must identify and explain all inflation assumptions and rates used in projecting future expenses and in completing the forms described in OAR 333-580-0100. It is important that the assumptions used by the applicant in preparing financial forecasts be carefully considered. All relevant factors pertaining to historical experience of the applicant, together with upcoming changes affecting the future, should be considered in forecasting the financial condition of the entity. Specifically:

i. Projected changes in wages and salaries should be based on historical increases or known contractual obligations and planned future personnel increases. Considerations should include expected full-time equivalent staffing levels, including increases resulting from the proposal. OAR 333-580-0060(1)(h)(A).

The proposal did not anticipate any increases in wages and salaries or other obligations, however, if increases were utilized, the proposed project would still be profitable in year three as initially projected.

ii. Projected deductions from revenues should be explained and justified. OAR 333-580-0060(1)(h)(B).

The proposed project utilized information from another operating entity, which is similar to arrive at deductions from revenue, which was consistent based on the application.

iii. Expected changes in the intensity and/or complexity of services provided must be considered in addition to the rate of inflation in arriving at an overall rate of increase in revenues or expenses. OAR 333-580-0060(1)(h)(C)

The applicant does not believe any changes in the revenue per patient day would change at the new location compared to CHH location even with a change in the mix of patients.

With over 50% of payor mix in the Portland Metro area comprising of Medicaid for 18–64 year olds, it is unclear what the impact of this payor will have on this new

facility. The Applicant noted the proposed project will be reimbursed by Oregon Medicaid for child/adolescent and geriatric patient as it is expected a majority of their inpatients will be eligible for Medicaid coverage, however, a break down by patient mix was not provided. According to the recent cost report provided by UHS for CHH for the year ended December 31, 2015, total discharges for Medicaid patients were 56 out of 2,845 or 1.97%. Medicare patients were 877 discharges of 2,845 or 30.82% for the year ended December 31, 2015.

The applicant projects the reimbursement rates on a global basis, which is estimated at \$2,250 per Patient Day (Gross), but no anticipated payor mix was provided. It would be reasonable to anticipate that this optimal Revenue calculation would be based on a perceived payor mix, which was not identified in the Application.

iv. Projected gross revenue must reflect:

- Patient day increases/decreases
- Outpatient activity increase/decrease
- All debt service coverage requirements; and
- Other significant impacts the proposal will make on revenue projections.
- Each applicant must submit within 30 days, a copy of the financial feasibility report if the applicant arranges for such a report and it becomes available before or during the review period. OAR 333-580-0060(1)(h)(D).

The applicant has shifted its projection of patients to a 24% 5–17 years old, 52% 18–64 years old and 24% 65 years old and older patient mix based on the most recently submitted architectural analysis. No change in average gross revenue per day was adjusted. As discussed earlier, the Portland Metro area generally sees a payor mix within the 18–64 years olds that is at least 50% Medicaid.

The Length of Stay calculated mimics that of the CHH location. It was noted that the CHH population includes military personnel stationed outside the service area (Joint Base Lewis McCord). Typically, this population has a length of stay that is 2 to 3 days longer than the other patients seen at CHH. It is unclear that there would be a repeat of this population at the new facility, and as such, it would seem reasonable that the patient length of stay would be shorter than CHH. Also a new facility in Lacey, Washington located 20 miles from Joint Base Lewis McCord may reduce the amount of outmigration from Washington to Oregon.

As the applicant has indicated, a decrease in length of stay would be offset with an increase in patients. This would be proven by a shortage of beds in the area which is not evident from the data from other facilities in the area that have average occupancy rates of 80.7% for adult and geropsychiatric (Table 23) and 69.7% for child and adolescent (Table 24). The occupancy data does not seem to have significantly changed in the past 6 years (Table 18 of Application). Table 21 of Application also demonstrates

an average daily census of 141 to 145 over the 6-year analysis. Willamette Valley Medical Center, who is 28 miles away from the proposed project, noted they were only at 70% capacity. Based on this data, it is not clear whether a decrease in length of stay would be offset through an increase in patients.

As discussed above, the applicant's patient mix is expected to be 52% 18–64 years old, however, a provision referred to as the Institute for Mental Disease (IMD) Exclusion prevents federal Medicaid funds from being used by states to care for adults seeking inpatient care in freestanding psychiatric hospitals with more than 16 beds, which could raise concerns about the ability and intent to meet the needs of Oregon's large and growing Medicaid population. It is unclear at this time on the impact of IMD and this proposed facility.³⁴

2. Will the impact of the proposal on the cost of health care be acceptable?³⁵

The applicant has not demonstrated that the proposed facility is needed or the most effect and least costly alternative considering all appropriate and adequate way of meeting the population's need for services. For the reasons previously discussed, the proposed facility would add unneeded inpatient hospital beds to the service area. Hospital care is the most expensive level of care in the mental health system. As explored in this order, less costly and more effective alternatives to the building of more resource intensive inpatient psychiatric beds are preferable. Consequently, the impact of this proposal on the cost of health care is not acceptable.

a. The applicant must discuss the impact of the proposal both on overall patient charges at the institution and on charges for services affected by the project

i. An applicant must show what the proposal's impact will be on the gross revenues and expenses per inpatient day and per adjusted patient day. OAR 333-580-0060(2)(a)(A).

Based on the application, gross revenues and operating expenses per patient day and per adjusted patient day would remain relatively constant, as the forecast does not include any assumed price inflations. As explained above, the payor mix was not identified by the applicant; therefore it is not possible to project the impact on other similar facilities populations. If the Medicaid portion as a percentage of total discharges mimicked the 2% of CHH, this would be far below the 50%+ seen across the geographic area, which could result in a shift in payor mix seen at other facilities in the area.

³⁴ See Exhibit #8, attached for financial considerations regarding the applicant's proforma statements.

³⁵ OAR 333-580-0060(2)

ii. An applicant must show what the proposal's impact will be on the gross revenues and expenses per inpatient day and per adjusted patient day. OAR 333-580-0060(2)(a)(B).

See response above.

b. The applicant must discuss both the proposed or actual charges for the proposed service and the profitability of the proposed service, compared to other similar services in the state (if any). OAR 333-580-0060(2)(b).

Based on the application, the proposed charges, deductions, and expenses are based on actual charges from the CHH location.

c. The applicant must discuss the projected expenses for the proposed service, and demonstrate the reasonableness of these expense forecasts. OAR 333-580-0060(2)(c).

As discussed above, expenses projected were based on actual CHH's expenses.³⁶

d. If the proposed service is currently not being provided in the area, the applicant should identify potential travel cost savings by:

i. Establishing what the existing travel costs are to patients. OAR 333-580-0060(2)(d)(A).

CHH is within 13 miles of the proposed project however, CHH does not accept children/adolescence. The applicant believes "these costs are unknown but very likely significant, given the substantial psychiatric bed shortage."

There are other facilities that provide similar services proposed by UHS. As Portland has the most beds of any area in the state of Oregon, there is no evidence of significant outmigration of patients to other service areas; therefore travel cost savings are not seen as significant.

ii. Establishing what the travel costs will be to patients after implementation of the proposal. OAR 333-580-0060(2)(d)(B).

See above for discussion of travel costs.

iii. Showing what the difference is between the figures in OAR 333-580-0060(2)(d)(A) and (B). OAR 333-580-0060(2)(d)(C).

See above for discussion of travel costs.

³⁶ See Exhibit #8 for additional information regarding expenses.

e. The applicant must discuss the architectural costs of the proposal:

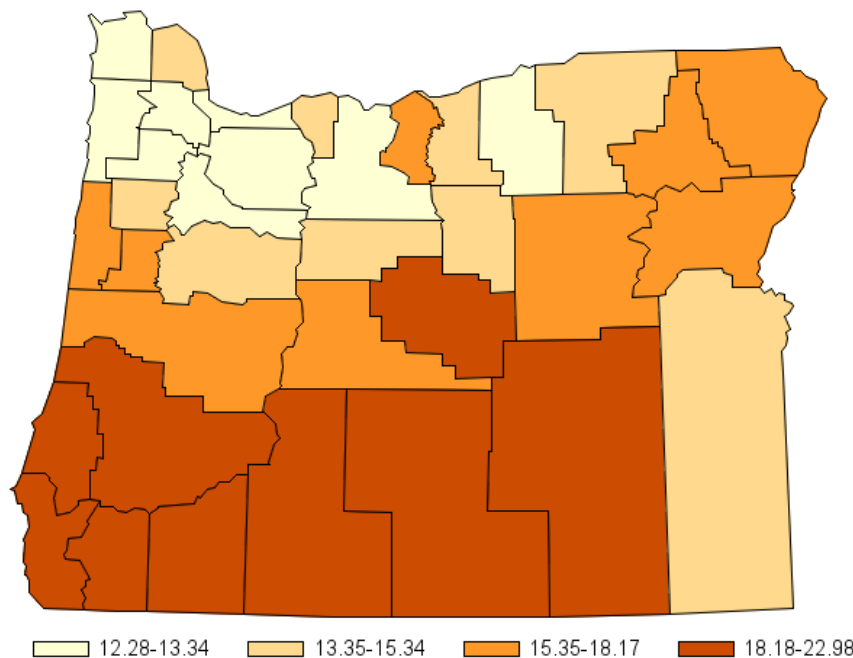
i. An applicant must demonstrate that the existing structure will last long enough to derive full benefits from any new construction or remodeling. OAR 333-580-0060(2)(e)(A).

Since the building is only proposed, there is no “existing structure” in place. The applicant did not provide the building construction type so it is not possible to estimate with accuracy the lifespan of the building.

ii. General construction costs must be within reasonable limits (within high/low range as described in the most current issue of the Dodge Research Report adjusted for location). OAR 333-580-0060(2)(e)(B).

Using the information provided on the applicant’s Form CN-3 it is shown that total project cost is \$35,834,324 and construction cost is \$27,716,081. This calculates out to \$574.52/SF and \$444.36/SF respectively. Using online construction cost estimating software (www.buildingJournal.com) the projected low cost of construction is \$325.17/SF and the projected high cost of construction is \$502.77/SF. Since the provided cost of construction by the applicant (\$444.36/SF) falls between these projected estimates the price per square foot appears reasonable.

2004-2010, Oregon
Smoothed Death Rates per 100,000 Population
All Injury, Suicide, All Races, All Ethnicities, Both Sexes, Ages 0-64 Years
Annualized Crude Rate for Oregon: 15.18



Reports for All Ages include those of unknown age.

* Rates based on 20 or fewer deaths may be unstable. These rates are suppressed for counties (see legend above); such rates in the title have an asterisk.

Rates appearing in this map have been geospatially smoothed.

Produced by: the Statistics, Programming & Economics Branch, National Center for Injury Prevention & Control, CDC
Data Sources: NCES National Vital Statistics System for numbers of deaths; US Census Bureau for population estimates.

OREGON HEALTH AUTHORITY

2015–2018 BEHAVIORAL HEALTH STRATEGIC PLAN

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2015–2018 BEHAVIORAL HEALTH STRATEGIC PLAN

Forward

Pamela A. Martin, Ph.D., A.B.P.P.

This strategic plan represents a shared vision for building and expanding an integrated, coordinated and culturally competent behavioral health system that provides better health, better care and lower cost for all Oregonians. This plan grew out of a collaboration among the Oregon Health Authority, consumers and families, advocates, peer organizations, health providers, county and city governments, tribes, local law enforcement, community mental health programs, coordinated care organizations, and many other stakeholders. Through a series of town hall meetings, these interested parties discussed how to best align behavioral health services with Oregon's health system transformation efforts.

During these discussions, we heard some common themes. Our stakeholders told us that we must ensure that all Oregonians get:

- **The right care** – Behavioral health care should be culturally appropriate, person-centered and trauma-informed;
- **In the right place** – People should have access to behavioral health services regardless of where they live, and they should receive services in their community whenever possible, keeping people out of emergency departments and the state hospital who do not need to be there;
- **At the right time** – In addition to making sure that appropriate services are available when people need them, we must strive to catch illnesses early and prevent behavioral conditions from developing in the first place, through promotion and early intervention, especially with children, youth and families.

Based on these meetings, we developed this strategic plan that will guide our work for the next three years. It has a clear emphasis on health equity and access to care, behavioral health promotion and prevention, and supporting successful recovery in the community. Through the 2015–2018 Behavioral Health Strategic Plan, the Oregon Health Authority, specifically the Addictions and Mental Health Division (AMH), renews its commitment to improving the lives of some of Oregon's most vulnerable citizens and gives us the framework for how to achieve these goals.

Contributors

In 2014 the Oregon Health Authority hosted a series of events designed to solicit input from a wide range of behavioral health stakeholders. In six regional town hall meetings, stakeholders were asked to respond to four questions related to the challenges and strengths of the current behavioral health system, the role of the state in the delivery of behavioral health care, and the guiding principles and values underpinning services and supports. OHA also hosted a tribal consultation, a webinar and an AMH all-staff town hall meeting. OHA identified key themes emerging from all of the discussions to guide the development of the strategic initiatives and their underlying goals.

AMH is also guided by three formal advisory groups: The AMH Planning and Advisory Council (mandated by the federal block grants), the Oregon Consumer Advisory Council, and the Children’s System Advisory Committee. In addition, Oregon State Hospital has the Oregon State Hospital Advisory Board, whose members are appointed by the Governor. Links to the Web pages for each of these advisory groups are in Appendix A.

To finalize the plan and ensure it is aligned with the vision for health system transformation, OHA convened a work group of behavioral health stakeholders who met during September and October 2014.

Behavioral Health Strategic Plan Work Group

Ed Blackburn, M.A. Executive director Central City Concern Portland, Oregon	Jennifer Lind, M.P.H. Regional CCO executive Jackson Care Connect Medford, Oregon
Bob Joondeph, A.B., J.D. Executive director Disability Rights Oregon Portland, Oregon	Juliet Follansbee, J.D. Executive director Psychiatric Security Review Board Portland, Oregon
Norwood Knight-Richardson, M.D., M.B.A. Senior vice president and chief administrative officer Oregon Health & Science University Portland, Oregon	Deborah Friedman, M.A., M.B.A. Chief operations officer Health Share of Oregon Portland, Oregon

<p>Chris Bouneff Executive director NAMI Oregon Portland, Oregon</p>	<p>Kevin McChesney President Oregon Residential Provider Association Regional director of operations Telecare Corporation Gresham, Oregon</p>
<p>Kevin Campbell Chief executive officer Greater Oregon Behavioral Healthcare, Inc. The Dalles, Oregon</p>	<p>Tony Melaragno, M.D. Chief administrative officer Legacy Good Samaritan Portland, Oregon</p>
<p>Anne Larson M.Ed., Q.M.H.P., L.M.H.C. Adult system of care specialist FamilyCare Health Plans Portland, Oregon</p>	<p>Silas Halloran-Steiner Director Yamhill County Health and Human Services McMinnville, Oregon</p>
<p>Bob Dannenhoffer, M.D. Board chair Umpqua Health Alliance Roseburg, Oregon</p>	<p>Jackie Mercer, M.A. Chief executive officer NARA Northwest Portland, Oregon</p>
<p>Bob Lieberman, M.A., L.P.C. Chief executive officer Kairos Grants Pass, Oregon</p>	<p>David Hildalgo, L.C.S.W. Director Multnomah County Mental Health and Addiction Services Division Portland, Oregon</p>
<p>Mark Fisher, P.S.S. Resident advocate coordinator Columbia Care Services, Inc. Medford, Oregon</p>	<p>Kim Scott, M.P.A. President and chief executive officer Trillium Family Services Portland, Oregon</p>

Executive summary

This strategic plan reflects the voices of Oregonians from communities across the state who shared their top behavioral health care priorities. More than 500 people helped create a shared vision for building and expanding an integrated, coordinated and culturally competent behavioral health system. The Oregon Health Authority (OHA) and its Addictions and Mental Health Division (AMH) received input through a series of regional town hall meetings, advisory meetings, a tribal consultation, a webinar and written feedback. The information gathered demonstrates the need for strategic initiatives aimed at improving behavioral health care throughout Oregon.

The impact of addictions and mental illness in Oregon

Substance use disorders, gambling disorders and mental illness carry widespread physical, social and financial consequences for individuals, their families and communities. These problems result in billions of dollars each year spent on health care for preventable illnesses, the criminal justice and social welfare systems. There are the measureable costs, such as lost wages and homelessness, as well as the immeasurable human cost of lost potential and lost opportunity.

Behavioral health issues are a major public health concern nationally and in Oregon. It is estimated that in between 2011 and 2012, 21 percent of all adults (18 and older) dealt with mental illness, and 4.6 percent had a severe and persistent mental illness.¹ The estimated prevalence for children with serious emotional disorders is tied to a state's poverty rate; for Oregon, it was estimated that 6–12 percent of all kids ages 9–17 would experience serious emotional disorders in 2013.²

Substance use disorders remain a serious problem in Oregon. During any one-year period from 2008 to 2012, approximately 283,000 people aged 12 or older were dependent on or misused alcohol; 123,000 people aged 12 or older were dependent on or misused illicit drugs within the year prior to the survey.³ Oregon has made significant progress in reducing unintentional and undetermined drug overdose deaths; the rate declined from 11.4 per 100,000 people in 2007 to 8.9 per 100,000 people in 2012. However, the rate of overdose death in 2012 was four times higher than in 2000.⁴

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1. Center for Behavioral Health Statistics and Quality. (2013). Behavioral health, United States, 2012. Retrieved from www.samhsa.gov/data/sites/default/files/2012-BHUS.pdf.
 2. Substance Abuse and Mental Health Services Administration. HHS Publication No. SMA 13-4707. Rockville, MD: Retrieved from www.samhsa.gov/data/2012BehavioralHealthUS/2012-BHUS.pdf.
 3. Prepared by NRI/SDICC for CMHS: September 17, 2012.
 4. Substance Abuse and Mental Health Services Administration. (2013). Behavioral health barometer: Oregon, 2013. HHS Publication No. SMA-13-4796 OR. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Improving behavioral health care in Oregon

Oregon's health care transformation has changed how health care is conceptualized, managed, delivered and financed here. The number of people eligible for Medicaid-funded health services has significantly increased. Prevention, treatment and recovery services have a solid evidence base on which to build a system that promises better outcomes for people who have been diagnosed with or who are at risk for mental illness, substance use, gambling disorders and co-occurring disorders.

In order to align behavioral health care with the goals of health care transformation in Oregon (better health, better care and reduced cost), and to respond to the needs articulated by stakeholders in every community, the strategic plan will focus on these areas:

- ◇ Prevention and promotion;
- ◇ Early intervention services;
- ◇ Behavioral health crisis and treatment services;
- ◇ Recovery support and recovery-oriented systems of care;
- ◇ Trauma-informed care;
- ◇ Innovative and flexible services;
- ◇ Health equity and health disparities;
- ◇ AMH internal transformation to support the strategic plan.

Oregon's behavioral health system

Oregon's behavioral health system uses federal, state and local dollars to provide mental health and addiction services.

Medicaid/Oregon Health Plan – For people on the Oregon Health Plan, behavioral health services are covered by their coordinated care organizations if the services are covered by Medicaid. By integrating behavioral and physical health care for their members, coordinated care organizations are better able to treat the whole person, resulting in improved health outcomes. As the state continues to expand the coordinated care model, coordinated care organizations are assuming responsibility for more behavioral health services, such as treatment for substance use disorders and mental health residential treatment.

Local mental health authorities typically are composed of the local board of county commissioners that is responsible for the management and oversight of the community's public system of care for mental illness, intellectual and developmental disabilities, and substance use disorders. Local mental health authorities manage local funding and resources, and they plan, develop, implement and monitor services within their area to ensure consumers are experiencing the expected improvements in health outcomes.

Community mental health programs provide care coordination and treatment for people with mental illness, intellectual or developmental disabilities, and substance use disorders. Core services include screening, assessment and referral to providers and community organizations, as well as emergency or crisis services. All members of a community can access core services from community mental health programs, subject to the availability of funds. These safety net and crisis services play a key role in the overall behavioral health system.

The Addictions and Mental Health Division (AMH) is part of the Oregon Health Authority. AMH's mission is to help Oregonians achieve optimum physical, mental and social well-being by providing access to addiction and mental health services and supports to meet the needs of adults and children to live, learn, work and fully participate in their communities. This mission is accomplished by partnerships with service users and their families, cities, counties, other OHA divisions, state agencies, coordinated care organizations, providers, advocates and stakeholders. AMH is pursuing this mission at a time of significant transformation in Oregon's publicly funded health care system.

In the current biennium, AMH has a budget of \$980 million and employs approximately 2,200 people. More than 90 percent of its employees provide care and support services at Oregon State Hospital. The division makes services available through contracts with community providers and state-operated facilities, including:

- Thirty-six community mental health programs;
- Sixteen coordinated care organizations;
- Two Oregon State Hospital campuses; and
- One state-run secure residential treatment facility.

AMH is active in prevention. More than 275,000 Oregonians participated in community prevention or treatment services for behavioral health conditions in the 2011–2013 biennium. In addition, professionals work to prevent disorders in Oregon youth (ages 10 to 25). Prevention professionals work with community partners throughout the state to limit youth access to gambling, alcohol and other drugs. They also foster community environments that support behavioral health and individuals' ability to withstand challenges.

Oregon State Hospital provides an essential service to Oregonians who need long-term, hospital-level care that cannot be provided in the community. For adults needing intensive psychiatric treatment for severe and persistent mental illness, the hospital provides 24-hour on-site nursing and psychiatric care, credentialed professional and medical staff, treatment planning, pharmacy, laboratory, food and nutritional services, vocational and educational services. The hospital's role is to restore patients to a level of functioning that allows a successful transition back to the community.

The state hospital campuses are located in Salem and Portland. Their combined capacity is 659 adults. The hospital provides inpatient services to people who have been civilly committed or judged guilty except for insanity or who require assessment and treatment for their ability to assist in their own defense. In 2015, the hospital will open a new campus in Junction City and close the Portland facility.

New investments in 2013

In 2013, Governor Kitzhaber and the Legislature made an unprecedented investment in mental health services, with almost \$40 million going to the community mental health system. The budget identifies specific services and system expansions that focus on promoting community health and wellness, keeping children healthy and helping adults with mental illness live successfully in the community. During the September 2013 special session, the Legislature increased the cigarette tax to fund community mental health services by an additional \$20 million during the 2013–2015 biennium.

The new investments filled gaps and provided an opportunity for the Addictions and Mental Health Division to work with both established and new partners as the system adapts to the changing landscape of behavioral health and the implementation of coordinated care organizations.

Strategic initiatives

Six strategic initiatives will focus attention and resources in the areas of greatest need and opportunity in Oregon. These initiatives will guide behavioral health efforts from 2015 through 2018. The overarching goal of these initiatives is to improve the lives of all Oregonians, as well as those in need of behavioral health services and their families. These initiatives are designed to promote healthy communities using cost-effective and timely interventions.

The strategic initiatives are consistent with the triple aim of Oregon's health system transformation:

1. Better health – improve the lifelong health of all Oregonians;
2. Better care – increase the quality, reliability and availability of care for all Oregonians;
3. Lower cost – reduce or contain the cost of care so it is affordable for everyone.

Each goal has strategies and measures for success. The strategies will guide AMH in setting policy and budget priorities, collaborating with partners and measuring outcomes.

Strategic plan outline

- 1. Health equity exists for all Oregonians within the state's behavioral health system.**
 - 1.1. Promote health equity and eliminate avoidable health gaps and health disparities in Oregon's behavioral health care system.
 - 1.2. Target and treat common chronic health conditions faced by people with severe and persistent mental illness, substance use disorders and co-occurring disorders.
- 2. People in all regions of Oregon have access to a full continuum of behavioral health services.**
 - 2.1. Increase equitable access to culturally and linguistically appropriate prevention, treatment and recovery services and supports in underserved areas of the state.
 - 2.2. Expand access to crisis services in all areas of the state.
 - 2.3. Expand statewide access to Medication-Assisted Treatment.

3. The behavioral health system promotes healthy communities and prevents chronic illness.

- 3.1. Ensure all Oregonians have access to prevention and early intervention programs that are specifically responsive to diverse cultural health beliefs and practices, preferred languages and literacy levels.
- 3.2. Increase the availability of physical health care professionals in behavioral health care settings.
- 3.3. Develop and enhance programs that emphasize prevention, early identification and intervention for at-risk children and families.
- 3.4. Strengthen the prevention, screening and treatment of the psychological, physical and social impacts of early childhood and lifespan trauma.

4. The behavioral health system supports recovery and a life in the community.

- 4.1. Increase access to safe, affordable housing for people in recovery.
- 4.2. Provide supported employment services to people in recovery.
- 4.3. Reduce the stigma related to addictions and mental health through partnerships with people in recovery and their families.
- 4.4. Provide recovery support services, including those that are specifically responsive to diverse cultural health beliefs and practices, preferred languages and literacy levels, to people who are transitioning out of substance use disorder treatment and gambling disorder treatment as part of their continuing care plan to support ongoing recovery.
- 4.5. Improve the existing recovery-oriented system of care for people transitioning from residential to outpatient treatment for substance use disorders.

5. Only people who meet admission criteria are admitted to Oregon State Hospital, and admissions and discharges are performed in a timely manner.

- 5.1. Reduce or eliminate the waiting list for services at Oregon State Hospital.
- 5.2. Reduce the length of stay for patients who are civilly committed to Oregon State Hospital.
- 5.3. Discharge patients who are civilly committed within 30 days of being determined “ready to place” or “ready to transition” by their treatment teams.
- 5.4. Decrease the number of people who are admitted to Oregon State Hospital under ORS 161.370 for misdemeanors.

6. Addictions and Mental Health Division operations support the strategic plan.

- 6.1. Align AMH's structure to support the strategic plan, improve quality management and streamline the development of behavioral health policy.
- 6.2. Pursue an integrated approach to the collection, analysis and use of data.

The guiding principles reflected in the goals and strategies are:

- The full spectrum of behavioral health is applied – promotion, prevention, treatment and recovery.
- The recovery model is followed – “People get better. People recover.”
- Care is consistent with standards for culturally and linguistically appropriate services.
- Health care disparities are addressed.
- Behavioral health care is self-directed.
- Families are supported and involved.
- Diverse community outreach, engagement and collaboration are essential for success.
- Geography affects access and is a key factor in statewide planning.
- Care is based on evidence-based practices, promising practices and traditional culturally based practices.

Initiative 1

Health equity exists for all Oregonians within the state's behavioral health system.

Goal 1.1: Promote health equity and eliminate avoidable health gaps and health disparities in Oregon's behavioral health care system.

Background and importance

Health equity is the attainment of the highest level of health for all people. Many Oregonians are unable to attain their highest level of health because of cultural, language and other communication barriers. When the health care system is not responsive to the cultural needs of individuals, the result is avoidable inequities in access, quality of care and health outcomes. In order to create a responsive, inclusive and equitable system of care, AMH will make investments in resources to reduce health disparities and pursue health equity in the behavioral health care system.

Cultural, linguistic and communication barriers can lead to increased health disparities. Research demonstrates that language barriers between patient and provider create problems such as delay or denial of services, issues with medication management, underuse of preventive services and increased use of emergency services. Racial and ethnic minorities have higher prevalence of chronic health conditions, higher mortality rates and less access to care than the general population.

Measures of success:

- Increased access and treatment completion among racial and ethnic behavioral health patient populations;
- Increased number of goals, policies and benchmarks integrated throughout the behavioral health systems that are directly linked to culturally and linguistically appropriate service standards;
- Increased knowledge and demonstration of cultural responsiveness among AMH staff;
- Increased racial and ethnic representation on AMH councils and committees.

Strategies:

1. AMH will gather feedback from communities and specific cultural populations to inform policy development to support health equity in the behavioral health care system.
2. AMH will collaborate with the Office of Equity and Inclusion on the implementation of a comprehensive civil rights policy and a procedure for taking reports of discrimination from service recipients, including tracking and monitoring for systemic issues.
3. AMH will revise contract language and Oregon Administrative Rules to institutionalize commitment to a behavioral health system that promotes equity and reflects current civil rights and protections.
4. AMH will conduct an Intercultural Effectiveness Scale Assessment with AMH staff.
5. AMH will use diversity development best practices in recruiting, hiring and retaining culturally diverse employees and in performance management, contracting and procurement.
6. AMH will develop and implement a health equity education and training plan for all AMH staff.

Over the next five years, AMH will partner with the OHA Office of Equity and Inclusion, Public Health Division, Division of Medical Assistance Programs, and both existing and new community partners and consumers to seek opportunities to support the health care needs of an increasingly diverse population. A key component to success in this area will be the development of a diverse work force. This strategy includes encouraging targeted programs at colleges and universities as well as the expanded use of traditional health workers in all health care settings.

Goal 1.2: Target and treat common chronic health conditions faced by people with severe and persistent mental illness, substance use disorders and co-occurring disorders.

Background and importance

People with severe and persistent mental illness die an average of 25 years earlier than the general population.⁵ This is a serious public health problem for the people served by our public mental health system. The increased mortality rates in this population are largely due to preventable conditions such as cardiovascular, respiratory and infectious diseases.

A number of factors place people with severe and persistent mental illness, substance use disorders and co-occurring disorders at higher risk of sickness or death, including higher rates of smoking, alcohol consumption, poor nutrition, obesity and lack of exercise. In addition, antipsychotic medications have become associated with weight gain, diabetes, high cholesterol, insulin resistance and metabolic syndrome.⁶ Lack of access to appropriate health care and lack of coordination among behavioral health and general health care providers compound these factors.

Measures of success:

- Establishment of a baseline indicating the difference in mortality rates between the general Medicaid population and people with severe and persistent mental illness, substance use disorders and co-occurring disorders;
- Decreased prevalence of risk factors and chronic health conditions in people with severe and persistent mental illness, substance use disorders and co-occurring disorders;
- Increased access to integrated physical and behavioral health care in patient-centered primary care homes;
- Increased availability of traditional health workers.

5. Oregon Health Authority, Public Health Division. (2014). Retrieved from <http://public.health.oregon.gov/PHD/ODPE/IPE/Pages/index.aspx>.

6. National Association of State Mental Health Program Directors (NASMHPD) Medical Directors Council. (2006). Morbidity and mortality in people with serious mental illness. Alexandria, VA: National Association of State Mental Health Program Directors.

Strategies:

1. AMH will collect, analyze and report on the mortality rates of people with severe and persistent mental illness compared to the general Medicaid population.
2. Under the guidance of the OHA chief medical officer, AMH will facilitate the development of certification standards for behavioral health homes and promote the integration of primary care services in behavioral health settings.
3. AMH will promote a culture of wellness by partnering with Public Health, residential and outpatient service providers, and consumers to actively address tobacco use, beginning with individuals living in residential settings.

Partnerships across systems are critical for reaching the goal of health equity for people with multiple health challenges. For example, AMH and Public Health have a number of joint initiatives focusing on tobacco prevention and cessation for youth, young adults aged 18–25 and individuals living in mental health residential settings. Information sharing and the enforcement of tobacco laws are coordinated across many agencies, including OHA, the Department of Justice and the Oregon Liquor Control Commission.

Initiative 2

People in all regions of Oregon have access to a full continuum of behavioral health services.

Goal 2.1: Increase equitable access to culturally and linguistically appropriate prevention, treatment and recovery services and supports in underserved areas of the state.

Background and importance

Oregon has experienced a significant increase in access to health care coverage through the expansion of Medicaid under the Affordable Health Care Act. In addition, the Legislature in 2013 made an unprecedented investment in the expansion of mental health services to provide increased availability of services for individuals without health care coverage and for services not covered by Medicaid. Both initiatives provide the opportunity for more Oregonians to access behavioral health services.

To take full advantage of these opportunities, we need to better define a structure for the behavioral health care delivery system that ensures access throughout Oregon, with particular attention to rural and frontier regions. These regions of Oregon struggle to find the human resources and infrastructure to support a basic array of behavioral health services. While recent investments in mental health services have improved the availability of behavioral health services for many, further funding of the non-Medicaid behavioral health system is necessary to reach all Oregonians.

Measures of success:

- Increased use of behavioral health services in all Oregon counties;
- Expanded service array due to 2013–2015 investments in behavioral health;
- Increased availability of tribal mental health services;
- Increased number of culturally and linguistically specific prevention, treatment and recovery services and supports.

Strategies:

1. AMH will collaborate with local mental health authorities, community mental health programs and coordinated care organizations to develop a basic service set available in all communities.
2. AMH will work with coordinated care organizations, the OHA Transformation Center, community mental health programs, local mental health authorities and other partners to develop strategies to encourage and facilitate regionalization of behavioral health services in rural and frontier regions.
3. AMH will work the Oregon Health & Science University OPAL-K program, the OHA Transformation Center and others to identify strategies to develop the infrastructure and expand telehealth psychiatric services in rural and frontier regions of Oregon.
4. AMH will work with Public Health to develop more on-site behavioral health services in schools.
5. AMH will collaborate with tribes to revise the approval process for tribal behavioral health services to support them in providing culturally responsive services.

Several positive factors contributed to the coordination of behavioral health services in Oregon communities in 2014. Coordinated care organizations and community partners made strides in identifying community needs and coordinating services with a variety of partners from the counties, criminal justice system, judicial system, education and social services. The Legislature also made significant investments in behavioral health that have greatly increased capacity in many areas (see Appendix B).

Over the next several years, AMH will monitor the impact of the enhanced service array and use of services statewide. This will be accomplished through contractually required reporting by programs and monitoring the AMH data dashboard developed to track use and costs of both Medicaid and non-Medicaid services. A similar data dashboard was developed for Medical Assistance Programs.

Over the next several years, AMH will collaborate with internal and external partners to look for practical, long-term solutions to bring a set of basic services to all communities. Solutions are likely to include the use of traditional health workers, natural supports, telehealth, mobile units and schools. In all cases, engaging with both the private and public health systems will be imperative.

Goal 2.2: Expand access to crisis services in all areas of the state.

Background and importance

A responsive crisis system provides the necessary intervention and supports that reduce the likelihood of hospitalization or incarceration. Several of the recent investments in the behavioral health system are aimed at strengthening the crisis system. Recent investments in mobile crisis services and jail diversion programs provide timely behavioral health interventions in the community that decrease the need for hospitalization and avoid incarceration. The expansion of Assertive Community Treatment teams provides necessary supports for adults with severe and persistent mental illness, reducing the need for crisis interventions.

Emergency departments, medical units and correctional facilities are increasingly used to “board” Oregon youth who face primary mental health challenges. Adults, youth and children sometimes spend several days in an emergency department waiting for a psychiatric acute care bed to become available. This misuse of emergency care appears to relate to a range of issues including access and coordination of care challenges. Improving access to timely routine care and intensive outpatient care may prevent the need for higher levels of care.

Measures of success:

- Reduced number of emergency department visits for psychiatric services for individuals who are enrolled in the Oregon Health Plan;
- Decreased number of youth aged 0–17 seen in emergency departments for psychiatric reasons;
- Reduced lengths of stay in emergency departments for youth and adults with primary mental health diagnoses;
- Reduced criminal justice involvement for children engaged in fidelity-based Wraparound planning process.

Strategies:

1. AMH will lead a task force of key providers and make recommendations designed to prevent the use of emergency departments, pediatric units or correctional facilities for primary intervention in the absence of effective treatment services.
2. AMH will engage a consultant to assess and advise it on improvements in the statewide crisis system.
3. AMH will propose additional behavioral health crisis funding to support new and existing promising practices.
4. AMH will work with the OHA Health Information Team to develop a notification system so that coordinated care organizations know when their members are in emergency departments or pediatric units and are unable to return home due to safety concerns.
5. AMH will develop more diversion services that can respond to youth and families for more safe transitions to home.
6. AMH, the Department of Human Services and the Oregon Youth Authority will collaborate to increase the number of community justice and Oregon Youth Authority-involved youth participating in a fidelity-based wraparound planning process.

For children, youth and families, DHS Child Welfare and AMH will participate in a state-level steering committee to address regional barriers and to ensure that local systems of care can adequately plan for and serve children with significant and complex health care needs. For example, AMH is actively involved in developing the new family system navigators that will be part of the child welfare system. AMH, Medical Assistance Programs, Department of Human Services and Oregon Youth Authority are all participating in designing behavior rehabilitation services. AMH will continue to work closely with the coordinated care organizations, Department of Human Services, Oregon Youth Authority and others to increase the number of children and youth who have access to wraparound services.

Goal 2.3: Expand statewide access to Medication-Assisted Treatment.

Background and importance

Oregon ranks high among the states for the non-medical use of prescription opioid medications. Increasingly restrictive prescribing guidelines and increased access to heroin has resulted in a growing number of Oregonians becoming opioid-dependent. Addiction carries a high societal and medical cost, including increased criminal justice and Child Welfare involvement, overdoses, hospitalization and death. Intravenous drug use also increases the risk of the spread of infectious diseases. Medication-assisted treatment, combined with therapeutic services and psychosocial

supports, is an evidence-based practice considered the most effective for the treatment of opioid dependence.

Measures of success:

- Increased percentage of individuals with opioid dependence accessing medication-assisted treatment;
- Increased treatment retention among those individuals newly accessing medication-assisted treatment;
- Increased number of physicians providing medication-assisted treatment.

Strategies:

1. AMH will work directly with the Transformation Center and Public Health to create an opioid task force composed of stakeholders from a variety of OHA divisions, prescribers, treatment providers and other important parties.
2. AMH will provide education and resources to coordinated care organization representatives, community groups and health care providers on policies and best practices related to opioid dependence and treatment.
3. AMH will engage residential treatment providers to increase use of medication-assisted treatment in residential treatment.
4. AMH will collaborate with the OHA chief medical officer to increase the availability of physicians licensed to prescribe buprenorphine (an opioid used to treat addiction) and similar medications in all regions of Oregon.
5. AMH will provide education on best practices and integrating therapeutic services with medication-assisted treatment in physical health care settings.
6. AMH will collaborate with OHA Public Health and Pharmacy Services to increase availability of overdose-reversal medications such as Naloxone.

Opioid overdose affects Oregonians of all ages. AMH and Public Health will focus on work that will immediately increase the availability of medication-assisted treatment and promote the wide dissemination of medication that saves lives following overdose. At the same time, AMH will join with Public Health, the OHA Transformation Center, providers and communities to develop long-term prevention and treatment strategies to address this problem, which is statewide and national in scope.

Initiative 3

The behavioral health system promotes healthy communities and prevents chronic illness.

Goal 3.1: Ensure all Oregonians have access to prevention and early intervention programs that are specifically responsive to diverse cultural health beliefs and practices, preferred languages and literacy levels.

Background and importance

AMH provides prevention funding to all 36 counties and nine federally recognized tribes using Substance Abuse Prevention and Treatment Block Grant funds. The Substance Abuse and Mental Health Services Administration Center for Substance Abuse Prevention requires that block grant funds be spent in each of the six strategy areas. Those requirements are passed along to the prevention providers.

Prevention – keeping youth from beginning to use alcohol and drugs – and early intervention in substance use disorders must be priorities if we are to curb the state’s lifespan rates of misuse and dependence. With Oregon’s eye on reducing the costs of health care, now is the time to invest in pre-treatment prevention and health promotion to achieve long-term reductions in misuse and dependence rates.

AMH provides leadership for the state in prevention messaging. AMH provides consistent, up-to-date information about emerging issues with timely and targeted messages about issues such as underage, high-risk and binge drinking, prescription drug misuse and social norming campaigns.

Measures of success:

- Increased number of biennial implementation plans that include strategies in all six Center for Substance Abuse Prevention areas;
- Increased accuracy in collecting and reporting prevention data using the prevention data collection system;
- Decreased use of alcohol, tobacco and other drugs as measured through existing statewide student and adult surveys.

Strategies:

1. AMH will revise implementation plan guidelines to include strategy requirements and communicate the requirements to prevention coordinators.
2. AMH will continue to develop and implement the “mORe” campaign, which offers resources to Oregon communities to support a statewide “positive community norms” effort to reduce teenage alcohol use.

Goal 3.2: Increase the availability of physical health care professionals in behavioral health care settings.

Background and importance

People with behavioral health conditions often do not receive adequate physical health care. The reasons for this include barriers such as difficulty navigating multiple systems, lack of transportation, lack of child care, and other factors. People facing any of these barriers may be more likely to access physical health care in an integrated setting. A behavioral health home offers the convenience and comfort of a trusted environment where services are coordinated and delivered in a single visit. Behavioral health homes are created when behavioral health facilities and agencies also provide primary care services.

Over the next two years, AMH will focus on tracking health status, promoting an optimal level of health care and creating the option of behavioral health homes for those people who will benefit from having their primary health care delivered where they receive behavioral health services. The work on behavioral health homes is going forward with a grant from the Centers for Medicare and Medicaid Services, OHA staff across divisions and a group of pioneering providers. At the same time, the OHA Transformation Center is working on a learning collaborative with providers and other projects to promote the integration of physical, behavioral and oral health care services. The Department of Human Services is participating on OHA’s task force to address access to physical and behavioral health care for children and youth receiving behavioral rehabilitation services. The goal for the entire system is to provide fully integrated care for all Oregonians.

Measures of success:

- Decreased chronic conditions and early death rates among people diagnosed with chronic behavioral health conditions;
- Increased percentage of people diagnosed with chronic behavioral health conditions who receive physical health care services in a behavioral health home or patient-centered primary care home;
- Decreased emergency department admissions related to physical conditions of those diagnosed with chronic behavioral health conditions.

Strategies:

1. AMH and OHA will sponsor and facilitate a behavioral health home learning collaborative. It will identify and reduce barriers to integration of physical health care providers in behavioral health homes and share best and promising practices.
2. AMH, under the guidance of the OHA chief medical officer, will standardize the certification requirements for behavioral health homes.

Goal 3.3: Develop and enhance programs that emphasize prevention, early identification and intervention for at-risk children and families.

Background and importance

New science is constantly emerging that reinforces the importance of early childhood development. According to the World Health Organization, early childhood is the most important time in overall development. Brain and biological development during the first years of life are highly influenced by an infant's environment. Early experiences determine health, education and economic participation for the rest of life.

Mental health promotion includes universal preventive interventions such as parenting education, support for growing families and creation of healthy communities and environments for children. Risk factors can be addressed before they become problematic and mitigate the need for early intervention or treatment. During the first years of a child's life, there are opportunities across systems (primary care, hospitals, early learning and behavioral health) for screening and early intervention. In a coordinated system of care, at-risk families with young children would be routinely identified and served by the appropriate entity. An effective early childhood system of care would identify, coordinate, serve and reduce risk factors for families with young children.

Measures of success:

- Increased provision of mental health services to children ages 0–5;
- Increased number of mental health professionals certified in an early childhood evidence-based or promising practice.

Strategies:

1. AMH will develop core competencies, including cultural competencies, for early childhood mental health service providers.
2. AMH will disseminate and fund mental health best practices for young children ages 0–5 in collaboration with Medical Assistance Programs and the Department of Human Services.
3. AMH will track consultation and treatment activities mandated by early and periodic screening, detection and treatment (EPSDT).
4. AMH will expand the use of prenatal maternal depression and substance use disorder screening and treatment.

Goal 3.4: Strengthen the prevention, screening and treatment of the psychological, physical and social impacts of early childhood and lifespan trauma.

Background and importance

In the Adverse Childhood Experiences study by Kaiser Permanente and the Centers for Disease Control and Prevention, researchers identified strong, graded relationships between exposure to childhood traumatic stressors and numerous negative health behaviors and outcomes, health care utilization and overall health status later in life among adult respondents. For example, people who had experienced four or more categories of childhood exposure had four to 12 times the health risks for alcoholism, drug misuse, depression, and suicide attempts compared to those who had experienced none.⁷

Most adverse experiences in the early years go unresolved. Unresolved traumatic experiences are highly correlated with the development of behavioral health conditions. The federal services reports that a significant number of people who receive mental health and addictions services have experienced traumatic events. Ninety percent of public mental health clients have been exposed to traumatic events.

Although some people develop mental illness in adulthood, more often the onset of severe emotional and behavioral disorders occurs in childhood and interferes with critical periods of development during childhood and adolescence. The onset of mental illness in adolescence often has a long-term impact on the individual's capacity to function as an adult. The presence of adverse childhood experiences greatly increases the likelihood of a mental illness or substance use disorder.

7. Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences Study. *American Journal of Preventive Medicine*, 14 (4).

Measures of success:

- Increased number of behavioral health professionals trained to provide treatment to children ages 0–5;
- Increased trainings on adverse childhood experiences and trauma-informed care provided to physical health, behavioral health and helping professionals;
- Increased number of organizations that have a trauma-informed care policy that aligns with AMH’s trauma-informed care policy;
- A process developed to measure and implement screening, assessment and treatment services for depression in mothers of young children.

Strategies:

1. AMH will create professional development opportunities to increase proficiency in providing treatment services to families with children ages 0–5.
2. AMH will contract with Portland State University, in partnership with Oregon Health & Science University and the Department of Human Services, to form a collaborative called Trauma-Informed Oregon.
3. AMH will work with Public Health and coordinated care organizations to develop a screening and treatment protocol for mothers of young children in primary care settings.
4. AMH will disseminate the trauma-informed care policy to all community mental health programs and their service contractors.
5. OHA will provide more training in trauma-informed care to health care, behavioral health care and other helping professionals.
6. AMH will promote and provide training on the use of wellness recovery action plans for adults who receive and provide behavioral health services.

Initiative 4

The behavioral health system supports recovery and a life in the community.

Goal 4.1: Increase access to safe, affordable housing for people in recovery.

Background and importance

Safe and affordable housing is essential for the recovery process, but it is not always readily available. Individuals with severe and persistent mental illness often depend on Supplemental Security Income, which is not enough to cover rent and other living expenses.

Affordable apartments are in short supply statewide. People in recovery may have difficulty securing and maintaining housing if support services are not available. Landlords may be reluctant to rent to them despite fair housing laws. These factors can overwhelm people who end up cycling between jails, institutions and homelessness.

The Substance Abuse and Mental Health Services Administration defines recovery as a process of change through which individuals improve their health and wellness, live a self-directed life and strive to reach their full potential. Its definition of recovery lists four dimensions that support life in recovery: health, home, purpose and community. The lack of a home and the stability it offers makes it difficult to address the other three dimensions.

According to the Bazelon Center for Mental Health Law, studies have consistently shown that people with mental illness overwhelmingly prefer living in their own homes rather than congregate settings with other people with mental illness. The benefits of supported housing include a reduction in the use of shelters for individuals who are homeless as well as reductions in hospital admissions and lengths of stay. According to the Center for Supportive Housing, a stable living situation improves a tenant's ability to participate in support services. Investments in housing and social services for individuals in recovery can significantly reduce public spending on medical and criminal justice services.

AMH funding aids the development of supported housing and rental assistance programs for people in recovery. Rental assistance programs serve individuals in recovery for mental illness and substance use disorders so that they can find and lease a rental unit with all the rights and responsibilities of any other resident. Affordable, community-based rental properties are funded with the stipulation that the units are integrated with non-disabled housing to ensure an individual's right to reside in the least restrictive environment possible, consistent with the Americans with Disabilities Act (ADA) and the U.S. Supreme Court's 1999 decision in *Olmstead v. L.C.*

Measures of success:

- Increased number of people in recovery who are enrolled in Supported Housing Rental Assistance;
- Increased number of individuals in supported housing.

Strategies:

1. AMH will implement rental assistance programs for individuals with mental illness and serve 576 tenants statewide.
2. AMH will fund rental assistance programs for individuals in recovery from substance use disorders and serve 628 people statewide.
3. AMH will continue the current practice of allocating General Fund, Community Mental Health Housing Trust Fund, and Alcohol and Drug-Free dollars to the development of supported housing for individuals in recovery.
4. AMH will expand partnerships with stakeholder groups, including those that represent racial and ethnic populations, to develop alternative and innovative ways to fund the development of supported housing for people in recovery.

AMH has a history of developing housing with private partnerships, notably in Villebois, a community located in Wilsonville on the site of the former Dammasch State Hospital. In 2014, AMH partnered with the National Alliance for Mental Illness and the Oregon Residential Provider Association to develop proposals and identify community providers who will build affordable housing.

As a result of this partnership, 168 new units of affordable housing will be built in Oregon with tobacco tax funds. Over the next five years, AMH will work with the National Alliance for Mental Illness, Oregon Family and Community Services, providers, and other public and private partners to add affordable housing units for individuals and families and for people who are disabled due to mental illness, substance use disorders and co-occurring disorders.

Goal 4.2: Provide supported employment services to people in recovery.

Background and importance

Research consistently affirms that most people with severe and persistent mental illness want to work and think that it is an integral part of their recovery. Still, fewer than 15 percent of adults with severe and persistent mental illness are competitively employed.

Individual placement and support (IPS) is an evidence-based approach to supported employment for people who have a severe and persistent mental illness. Individual placement and support assists individuals in their efforts to achieve steady employment in mainstream competitive jobs, either part-time or full-time. Supported employment services include resumé-building and interviewing skills, assistance with job searches, and transportation to interviews. Staff members also work with clients on the job or debrief them after work to ensure a good transition. People who obtain competitive employment through IPS have increased income, improved self-esteem, improved quality of life, and reduced symptoms. Individuals receiving supported employment services have been shown to reduce their use of hospitals and emergency departments.

Measure of success:

- Increased access to individual placement and support services for individuals diagnosed with severe and persistent mental illness.

Strategies:

1. AMH will ensure all community mental health programs have IPS programs in operation by June 2015.
2. AMH will increase staffing levels for Oregon Supported Employment Center for Excellence (OSECE) to provide more timely training and technical assistance to newly developing programs.

Goal 4.3: Reduce the stigma related to addictions and mental health through partnerships with people in recovery and their families.

Background and importance

The problems associated with behavioral health conditions are often mistaken for behavioral choices people make. This has created a negative association with behavioral health care and stigma toward those seeking it. Stigma can adversely shape how people who have behavioral health conditions view themselves. They often avoid treatment in an effort to keep from being labeled with a disorder that is viewed negatively by themselves, society or members of their community. The stigma related to addictions and mental health disorders results in limited resources for prevention, treatment and recovery. It also creates barriers to accessing services, gaining employment and maintaining recovery. Reducing stigma will strengthen people's ability to experience recovery and a life in the community.

Measures of success:

- Increased percentage of people accessing behavioral health services who gain employment;
- Increased percentage of people who receive peer-delivered services.

Strategies:

1. The AMH Office of Consumer Activities will conduct or support activities as part of its Stigma and Discrimination Reduction Initiative.
2. AMH Office of Consumer Activities will provide education, training and technical assistance to promote reduction of stigma and discrimination, recovery support partnerships and wraparound services.
3. AMH along with Medical Assistance Programs and other partners will develop plans for the expansion of peer-delivered services in Oregon.

Goal 4.4: Provide recovery support services to people who are transitioning out of substance use disorder treatment and gambling disorder treatment as part of their continuing care plan to support ongoing recovery. These services include those that are specifically responsive to diverse cultural health beliefs and practices, preferred languages, and literacy levels.

Background and Importance

Recovery from substance use disorders and gambling disorders is a lifelong experience. In the past, resources have been used largely for acute treatment needs rather than ongoing recovery support. The Substance Abuse and Mental Health Services Administration has allocated resources to promote recovery-oriented systems of care that employ person-centered planning to identify and meet individual needs across all life domains. These needs can be met by accessing recovery support services and non-traditional interventions that are usually not reimbursable as medically necessary services. Examples of recovery support services are traditional health workers, education and job training, housing barrier removal, transportation, and access to flexible funding to pay for miscellaneous items such as identification cards, interview clothing and bus passes.

Measures of success:

- Reduced substance use and problem gambling among individuals accessing behavioral health services;
- Increased percentage of people accessing behavioral health services who gain employment;
- Decreased arrests among people accessing behavioral health services who are referred by the criminal justice system;
- Increased number of people in recovery accessing supported drug-free housing.

Strategies:

1. AMH will identify aftercare recovery support services that are most needed by recovering individuals.
2. AMH will assess community capacity to provide aftercare recovery support services.
3. Identify programs, agencies and other stakeholders to collaborate on increasing access to aftercare recovery support services.
4. AMH will link providers and service systems across the continuum of care to ensure continuity of care, seamless transitions and capacity to provide ongoing care coordination and peer support.

Goal 4.5: Improve the existing recovery-oriented system of care for people transitioning from residential to outpatient treatment for substance use disorders.

Background and importance

A meaningful, transformed system of care that provides day treatment with supported housing, case management and peer-delivered services must be widely available. An enhanced recovery-oriented system of care will eliminate a gap in our continuum of care. If this transformation of our current system of care is not implemented, it will result in increased costs due to readmission to treatment, criminal justice and child welfare involvement, poor health outcomes, homelessness and premature death.

Day treatment with supported housing, case management, and addition or expansion of peer-delivered services is for people who are ready to be discharged from substance use disorders residential treatment, but do not have a supportive and stable living environment. Staying six to 12 months in day treatment with supported housing allows people to make strong connections in the community and identify local resources and supports for long-term competency in self-reliance. Peer-delivered services are effective in helping individuals build a foundation in the recovery community. This connection provides lifelong support to sustain long-term recovery.

Measures of success:

- Decreased readmission to high levels of care;
- Decreased number of children placed in foster care while family members receive substance use disorder treatment;
- Increased number of people in independent living.

Strategies:

1. AMH will support, sustain and enhance the current recovery-oriented system of care. This includes day treatment, supported housing, case management and peer-delivered services, and renter rehabilitation programs.
2. AMH will partner with existing “second chance” renter rehabilitation programs designed to help prospective renters overcome obstacles that prevent them from obtaining housing.

Initiative 5

Only people who meet admission criteria are admitted to Oregon State Hospital, and for those who need it, admissions and discharges are performed in a timely manner.

Goal 5.1: Reduce or eliminate the waiting list for services at Oregon State Hospital.

Background and importance

Someone experiencing a mental health crisis may be taken to a nearby emergency department for evaluation. A person needing admission to an inpatient psychiatric unit of a general hospital frequently waits under observation in emergency rooms; this is called “psychiatric boarding.” Psychiatric boarding is a problem for everyone involved. The child, adolescent or adult being boarded is not receiving the level of care needed and is often not in an environment conducive to recovery. The emergency department where the individual is being boarded is unequipped to meet the needs of the psychiatric boarder. People who are subsequently admitted to a psychiatric acute care service may be civilly committed and are then put on a waiting list for admission to Oregon State Hospital. Oregon State Hospital has approximately 200 beds for civilly committed adults and geriatric patients. One way to reduce psychiatric boarding in emergency departments is to reduce the wait time to be admitted to the state hospital. When acute psychiatric beds are open, individuals can be transferred more quickly from emergency departments.

Measure of success:

- Ninety percent of patients on the Oregon State Hospital waiting list are admitted within 14 days of placement on the list.

Strategies:

1. Oregon State Hospital will create a new process for determining that a person is appropriate for admission. In most cases, only those who have received treatment on an inpatient psychiatric unit for seven days will be considered.
2. Oregon State Hospital and AMH staff will develop a proposal to relocate the admission team currently housed at AMH to the Oregon State Hospital Salem campus in order to work more closely with the hospital’s program and discharge staff.
3. Oregon State Hospital will actively engage Oregon’s 62 acute care hospitals in finding solutions to psychiatric boarding through the Oregon Association of Hospitals and Health Systems (OAHHS).

Goal 5.2: Reduce the length of stay for patients who are civilly committed to Oregon State Hospital.

Background and importance

Patients who are civilly committed to Oregon State Hospital sometimes remain there after they have received the maximum benefit from hospitalization. The hospital has made a commitment to decrease the length of stay for these patients. The hospital will create a plan to address factors that unnecessarily extend the length of time between when a patient is declared ready to place or transition and when the transition back to that person's community takes place. Effective discharge planning that starts at the time of admission is a key factor in making this a success.

Measure of success:

- The average length of stay for patients who are civilly committed to Oregon State Hospital is reduced by 25 percent.

Strategies:

1. Oregon State Hospital will develop a plan to reduce the length of stay for civilly committed patients, including procedures for discharge planning.

Goal 5.3: Discharge patients who are civilly committed within 30 days of being determined ready to place or transition by their treatment teams.

Background and importance

Patients who are appropriate for community discharge sometimes remain at Oregon State Hospital after they have received the maximum benefit from hospitalization. Intensive discharge planning is the key to timely return to the community. Discharge planning starts at the time of admission and is patient-centered. Discharge planning includes not only the individual's behavioral health and overall health needs, but basic social needs including housing and employment. Oregon State Hospital has made a commitment to decrease the length of time between declaration of readiness and actual transition.

Measure of success:

- Ninety percent of patients who are ready to place or transition are discharged within 30 days of placement on that list.

Strategies:

1. Oregon State Hospital and AMH will collaborate with community stakeholders and patients to identify each patient's post-discharge needs and provide those programs and services within 30 days.

Goal 5.4: Decrease the number of people who are admitted to Oregon State Hospital under ORS 161.370 for misdemeanors.

Background and importance

When an individual is arrested, a court may order an evaluation if it appears the person may be unable to assist in his or her defense due to symptoms of mental illness. ORS 161.370 allows the court to order admission to Oregon State Hospital for evaluation and services necessary to restore a person's "fitness to proceed" with the legal process. The number of patients who are admitted to the state hospital under ORS 161.370 has increased significantly in the past two years, requiring the hospital to open additional units to serve them.

Approximately 20 percent of the patients at Oregon State Hospital are there under an ORS 161.370 court order. In 2013 the average length of stay was 108 days. A team that includes a psychiatrist, psychologist, social worker, registered nurse and peer recovery specialist works with each of these patients. They receive 20 hours per week of active treatment. In 2013, 44 percent of ORS 161.370 patients were charged with misdemeanors. Most of these individuals can be served in their communities. Reducing the ORS 161.370 population at Oregon State Hospital will free resources that can be used to reduce the hospital's waiting list and reduce the disruption in the lives of people charged with minor crimes by encouraging evaluation and treatment in their home community.

Measure of success:

- The percentage of patients who are admitted to Oregon State Hospital under ORS 161.370 for misdemeanor charges will decrease by at least 50 percent.

Strategies:

1. OHA will seek a change in ORS 161.370 so that no one can be admitted to the state hospital if only misdemeanor or felony Class C charges are in place.
2. Oregon State Hospital and AMH will collaborate with appropriate community stakeholders to develop programs and services to serve such patients in the community, ideally to prevent arrests.
3. AMH will seek opportunities to support communities in developing crisis and jail diversion services for people with behavioral health needs and crisis intervention training for law enforcement staff.

Reducing the number of people sent to Oregon State Hospital requires the collaboration of law enforcement, community behavioral health staff, the courts and jails. There is hopeful data from Marion County, where law enforcement and a new mobile crisis unit have teamed up with community leaders to address the number of misdemeanor-related admissions to the state hospital. Marion County has demonstrated a 50 percent decrease in the number of admissions during a three-month period compared the previous year. AMH, Oregon State Hospital and community partners will continue to work on putting community services in place and encourage the appropriate use of the limited number of state hospital beds.

Initiative 6

Addictions and Mental Health Division operations support the strategic plan.

Goal 6.1: Align AMH's structure to support the strategic plan, improve quality management and streamline the development of behavioral health policy.

Background and importance

Historically, AMH has been organized to reflect the two major sources of federal block grant funding, one for substance abuse prevention and treatment, and one for mental health promotion and the treatment of mental illnesses. Over the past decade or more, a greater understanding of the relationship between substance use disorders and mental illness has emerged, along with an emphasis on addressing substance use disorders and mental illness as co-occurring disorders for many people. The division's organization needs to reflect the integration of substance use disorders and mental health services into a "behavioral health" approach, which encompasses prevention, health promotion and treatment of all disorders defined in the Diagnostic and Statistical Manual of Mental Disorders (DSM). This integration will facilitate efforts to integrate behavioral health services into physical health settings and vice versa.

In 2014 AMH engaged in facilitated conversations designed to map its fundamental daily work. At the same time, reports and data sets that are either sent into AMH by contractors or are generated by AMH were reviewed as a step toward creation of a standard set of reports, or "dashboard," that can be summarized and presented on a regular schedule. The quality assurance functions of AMH are robust, including the regulatory functions.

However, it became apparent that there is a gap in the quality improvement area. The introduction of a new data collection system, called the Measures and Outcomes Tracking System, and the finalization of the dashboards must be accompanied by a clearer path to using the data generated for behavioral health system improvement and development. The new Quality Management section will oversee quality assurance and data collection activities and will align with the OHA Quality Council to identify opportunities of quality improvement to promote Oregon's health system transformation.

Measures of success

- AMH addiction prevention and treatment programs, and mental health prevention, promotion and treatment programs are administratively combined under Behavioral Health.
- The Quality Management section conducts regular review of the AMH dashboard and the Measures and Outcomes Tracking System data.

Strategies

1. AMH will combine the substance use disorders, problem gambling and mental health programs under one administrative structure.
2. AMH will work with OHA Health Analytics to develop a set of measures (dashboard) regarding behavioral health services. It will include utilization, pharmacy claims, readmissions and costs at all levels of care, and will separate child and adult services data where relevant.
3. AMH will develop a Quality Management unit that will oversee quality assurance and data collection activities and promote transformation of the health care system from a behavioral health perspective.

Goal 6.2: Pursue an integrated approach to the collection, analysis and use of data.

Background and importance:

OHA implemented the coordinated care model to transform the state's health care system in 2012. The key components of the transformation included the integration of all publicly funded health care services, transparency and shared accountability. To align with health care transformation, AMH implemented a system change to create an outcomes-based, data-informed system of care. To ensure ongoing success of these transformation and system change efforts, AMH must collect, integrate, analyze and use data to drive and measure improvement across a diverse, publicly funded system of care.

Measures of success:

- Completion of the Measures and Outcomes Tracking System project by July 1, 2015.
- AMH performs quarterly quantitative and qualitative data analysis on key metrics resulting in actionable, targeted and aligned quality improvement initiatives.
- The review process includes increased collaboration with providers, coordinated care organizations and other stakeholders.

Strategies:

1. Establish the information technology infrastructure, resulting in meaningful, integrated business intelligence data sets. This will include developing health analytical capabilities necessary to mine and aggregate behavioral health system of care data across multiple data warehouses.
2. Expand the scope and competencies of the AMH quality improvement unit to include business intelligence data analysis, and collaboration and partnering with behavioral health system of care providers, coordinated care organizations and other stakeholders.
3. Develop and set performance standards, metrics, surveillance and data feedback processes and monitoring improvement initiatives. These will be carried out by the behavioral health system of care providers, ensuring strong collaborative partnerships and shared accountability for the delivery of high-quality integrated services.
4. Integrate Measures and Outcomes Tracking System data with the Medicaid administrative claims data.
5. Create a data workbook that defines metrics, the importance of each and how each one is measured. The data workbook will be used to build and customize behavioral health system of care performance dashboards.
6. Reallocate and invest additional resources to build the AMH quality improvement bench.
7. Build processes and workflows among Health Analytics and Business Solution Unit, AMH and Medical Assistance Programs quality improvement units and AMH program units in order to integrate business operations and increase their efficiency.
8. Coordinate all quality improvement work with OHA's Quality Council.

Summary

Behavioral health conditions have a negative impact on individuals, families and communities. Billions of dollars per year are spent on health care, criminal justice and social welfare systems as a result. Many of these widespread personal and financial consequences are avoidable. The Oregon Health Authority and its Addictions and Mental Health Division are committed to the strategic initiatives described in this plan. The six initiatives represent the beginning of an effort to build a behavioral health care system consistent with the vision described below.

A vision for the future

In the future, safe and compassionate mental health, substance use and gambling disorder treatment is available to Oregonians in urban, rural and frontier areas. There is increased use of technology, and many more trained traditional health workers to help people and providers monitor and manage health issues. Medication-assisted treatment is widely available to people coping with substance use disorders. Health disparities experienced by our most vulnerable citizens are eliminated so that everyone has equal access to health services and the opportunity for a full life in the community.

Resources have been added to prevention efforts so fewer young people start gambling or using tobacco, alcohol and drugs. There is routine screening for people of all ages for trauma, depression and substance use. Early detection and intervention for behavioral health issues leads to less psychological, physical and social impact for children and adults. Mental health first aid and crisis intervention training and similar training are widely available and routinely taught to health care providers, educators, law enforcement and corrections officers, health and welfare workers, and the general public, reducing stigma and increasing early intervention.

Crisis services are available as an alternative to incarceration and inpatient care; treatment is provided in the least restrictive environment and is centered on the service user and family choice. Every addition to the behavioral health system supports recovery, with an emphasis on affordable housing and employment. When hospital-level care is needed, people have access to the right level of care at the right time and only for as long as is necessary. As community programs grow, the need for psychiatric acute care is reduced, and savings can be used to enhance community supports.

Ongoing implementation of the strategic plan

This strategic plan is a living document that will be reviewed and revised annually. AMH will develop a detailed work plan for each goal with specific actions and timelines. Stakeholders and partners will continue to provide direction to AMH related to planning, measuring outcomes and revising goals as needed. Throughout the process, AMH will facilitate collaboration with the health care and social services systems so that resources are used efficiently and effectively to improve the overall health of all Oregonians.

Appendix

Addictions and Mental Health advisory groups

Addictions and Mental Health Planning and Advisory Council (AMHPAC)

Website: www.oregon.gov/oha/amh/amhpac/Pages/index.aspx

Oregon Consumer Advisory Council (OCAC)

Website: www.oregon.gov/oha/amh/Pages/ocac.aspx

Children's System Advisory Committee (CSAC)

Website: www.oregon.gov/oha/amh/pages/csac.aspx

Oregon State Hospital (OSH) Advisory Board

Website: www.oregon.gov/oha/amh/osh/pages/advisory-board.aspx

Glossary

Local mental health authorities (LMHAs) are responsible for the management and oversight of the public system of mental health, intellectual and developmental disabilities, and addiction services at the community level. They must plan, develop, implement and monitor services within the area they serve to ensure expected outcomes for consumers of services within available resources. This broad management and oversight responsibility includes the following primary functions:

- Management of children and adults at risk of entering Oregon State Hospital or residential care, or who are transitioning from the state hospital or residential care. This includes monitoring discharge and facilitating what is known as step-down housing;
- Care coordination of residential services and supports for adults and children;
- Management of the mental health crisis system;
- Management of community-based specialized services including, but not limited to, supported employment and education, early psychosis programs, assertive community treatment or other types of intensive case management programs, and home-based services for children; and
- Management of specialized services to reduce entry or recidivism in the criminal justice system by individuals with mental illness or co-occurring disorders.

Community mental health programs (CMHPs) provide treatment and coordinate care for people with mental illness, intellectual or developmental disabilities and substance use disorders. All members of a community are permitted access to core services, subject to availability of funds. Core services include screening, assessment and referral to providers and community organizations, and emergency or crisis services. The screening, assessment and referral process serves as a portal to services for people who are eligible for Medicaid or who meet the state's target population criteria. Core services also include managing the provision of services and conditions of release for individuals under the jurisdiction of the Psychiatric Security Review Board, pre-commitment investigation services for the civil commitment system, and universal services such as education, consultation and prevention activities intended to increase knowledge about mental illness, developmental disabilities, and addictive disorders. Core or safety net services are provided to all people who live in a community, regardless of where the money comes from.

Community mental health and developmental disabilities programs provide services as defined in Oregon law (ORS 430.630 [a] to [b]) to persons in the following order of priority:

1. Those at risk of immediate hospitalization for the treatment of mental or emotional illness or in need of continuing services to avoid hospitalization, those at risk of hurting themselves or others, and those under the age of 18 who are at risk of removal from their homes for treatment;
2. Those least able to obtain assistance due to the nature of their illness, geographical location or family income; and
3. Those who will not require hospitalization.

Coordinated care organizations are networks of all types of health care providers who have agreed to work together in their local communities for people who receive health care coverage under the Oregon Health Plan (Medicaid).

Coordinated care organizations are responsible for coordinating all of the mental, physical and dental care for Oregon Health Plan members through collaborative community relationships. They have global budgets to pay for all types of care; this gives them the flexibility to manage their funding, so they can work to keep members healthier in the ways that best meet their members' and community's needs. Performance measurements for coordinated care organizations provide incentives for better care, and they are accountable for addressing avoidable population differences in health care outcomes.

Adverse childhood experiences (ACE): Adverse childhood experiences include verbal, physical or sexual abuse, emotional or physical neglect, or unfavorable family situations such as the presence of an incarcerated, mentally ill or substance-abusing family member; domestic violence in the home; or the separation or divorce of parents.

Affordable Health Care Act: The Patient Protection and Affordable Care Act (PPACA), commonly called the Affordable Care Act (ACA), is a United States federal statute signed into law by President Barack Obama on March 23, 2010. Together with the Health Care and Education Reconciliation Act, it represents the most significant regulatory overhaul of the U.S. health care system since the passage of Medicare and Medicaid in 1965.

Americans with Disabilities Act (ADA): A civil rights law that prohibits discrimination based on disability. It affords similar protections to Americans with disabilities as the Civil Rights Acts did based on race, religion, sex, national origin and other characteristics. In addition, the ADA also requires covered employers to provide reasonable accommodations to employees with disabilities and imposes accessibility requirements on public accommodations.

AMH dashboard: A set of summary information useful in keeping track of key performance areas for AMH.

Assertive Community Teams (ACT): An evidence-based practice defined by a set of specifications designed to help keep the individual in the community and out of a structured service setting, such as residential or hospital care.

Behavioral health care: An umbrella term referring to a continuum of services for individuals at risk of or suffering from mental, behavioral or substance use disorders.

Behavioral Rehabilitation Services (BRS): A program that provides services and placement-related activities to address psychosocial, emotional and behavioral disorders in a community placement using either a residential care model or therapeutic foster care model.

Centers for Medicaid and Medicare Services (CMS): An agency within the U.S. Department of Health and Human Services responsible for administration of several key federal health care programs.

Civil commitment: A legal process through which an individual with symptoms of severe mental illness is court-ordered into treatment in a hospital (inpatient) or in the community (outpatient).

Co-occurring disorders: The existence of a diagnosis of both a substance use disorder and a mental health disorder.

Culturally and linguistically appropriate services (CLAS): National standards issued by the U.S. Department of Health and Human Services (HHS) Office of Minority Health (OMH) to ensure that all people entering the health care system receive equitable and effective treatment in a culturally and linguistically appropriate manner.

Culturally responsive: The use of the cultural knowledge, experiences, frames of reference and performance styles of diverse students to make learning more appropriate and effective for them.

Diagnostic and Statistical Manual of Mental Disorders (DSM): A manual published by the American Psychiatric Association that covers all mental health disorders for children and adults. It also lists known causes of these disorders; statistics in terms of gender, age at onset and prognosis; and some research concerning the optimal treatment approaches.

Early and periodic screening, detection and treatment (EPSDT): A Medicaid benefit for children and adolescents that provides a comprehensive array of prevention, diagnostic and treatment services for low-income infants, children and adolescents under age 21.

Early intervention: The process of providing services, education and support to young children who are evaluated and deemed to have a diagnosed physical or mental condition or an existing delay, or a risk of developing a delay or special need that may affect their development or impede their education. The purpose of early intervention is to lessen the effects of the disability or delay.

Evidence-based practice (EBP): An interdisciplinary approach to clinical practice founded on the principle that all practical decisions should be based on research studies and that these research studies are selected and interpreted according to specific norms characteristic for evidence-based practice.

Family system navigators: Family members of children or youth in the mental health system who are trained to support or assist other family members, caregivers and guardians to access services.

Federal block grants: A block grant is a noncompetitive grant for prevention, treatment, recovery support and other services to supplement Medicaid, Medicare and private insurance. Recipients must demonstrate compliance with the terms of the grant annually in order to continue to receive the funds.

Fee-for-service: A Medicaid service paid for directly by the state. Some of these services are not covered by a coordinated care organization while others are for individuals who are not enrolled in a coordinated care organization but covered by Medicaid.

Gambling disorders: The range of pathological, problem and excessive gambling, also termed “pathological gambling.” They are characterized by a persistent and recurring failure to resist gambling behavior that is harmful to the individual and others.

Health disparities: A difference in health care opportunities that negatively affects groups of people who have systematically experienced greater social or economic obstacles to health, such as race or ethnicity, religion, socioeconomic status, gender, mental health, sexual orientation or geographic location.

Health equity: A fair opportunity for everyone to live a long, healthy life that is not compromised or disadvantaged because of an individual or population’s race, ethnicity, gender, income, sexual orientation, neighborhood or other social condition.

Intercultural Effectiveness Scale Assessment: An instrument developed specifically to evaluate one’s ability to interact effectively with people who are from other cultures.

Jail diversion programs: Services intended to keep people with mental illness from unnecessary incarceration.

Medication Assisted Treatment (MAT): The use of medications, in combination with counseling and behavioral therapies, to provide a whole-patient approach to the treatment of opioid dependence.

Mental health promotion: A universal prevention strategy to strengthen the determinants of mental wellness: healthy communities, individual skill development, social-emotional competence and strengthening an individual’s ability to cope with adversity.

Mental illness: A medical condition that disrupts a person’s thinking, feeling, mood, ability to relate to others and daily functioning. A mental illness often results in a diminished capacity for coping with the ordinary demands of life and can affect persons of any age, race, religion or income.

Mobile crisis services: A mental health service that includes immediate response emergency mental health evaluations. Evaluations are often requested by hospital emergency rooms or in the community. These services are often available on a 24-hour basis.

Office of Consumer Activities: An AMH office that works to ensure that people who have mental health and addiction histories have a strong voice in the state behavioral health system. The office is dedicated to serving as a conduit for peers to help shape behavioral health policy and service delivery.

Olmstead v. L.C.: In 1999, the United States Supreme Court affirmed that the 1990 Americans with Disabilities Act prohibits the segregation of people with any disability, including those with mental illness or intellectual disabilities. The court further found that states have an obligation to provide services and supports in the most independent and integrated settings possible.

Opioid dependence: Physical and psychological dependence on the opioid class of drugs (for example, heroin, morphine, codeine, oxycodone, hydrocodone) marked by an inability to stop use, including tolerance and physical withdrawal symptoms following an attempt to stop use.

Patient-centered primary care homes (PCPCHs): An integrated health care team or clinic, as defined in ORS 414.655, that has been recognized through the process established by OAR 409-055-0040.

Peer-delivered services (PDS): An array of agency- or community-based services and supports provided by peers and peer support specialists to individuals or family members with similar lived experience.

Prevention: Integrated strategies designed to prevent substance misuse and associated effects, regardless of the age of participants. They are designed to reduce risk factors and increase protective factors associated with substance misuse.

Psychiatric acute care services: A psychiatric service for adults age 18 and older with severe psychiatric disabilities in a designated region of the state. It includes 24-hour psychiatric, multi-disciplinary, inpatient or residential stabilization, care and treatment.

Ready to place or ready to transition: A determination by an interdisciplinary team that an individual no longer requires hospital-level care and may be discharged to a community setting with appropriate supports.

Recovery-oriented system of care (ROSC): A coordinated network of community-based services and supports that is person-centered and builds on the strengths and resilience of individuals, families and communities to achieve abstinence and improved health, wellness and quality of life for those at risk of alcohol and drug misuse.

Severe and persistent mental illness (SPMI): Adults with SPMI are defined as individuals age 18 or older, who have one or more mental illnesses recognized by the DSM IV, excluding substance use disorders and addiction disorders, and a score of 40 or less on the Global Assessment of Functioning (GAF) scale as a result of such illnesses. The illnesses include the following diagnoses:

Schizophrenia and Other Psychotic Disorders: 295.xx – 297.3 – 298.8 – 298.9

Major Depression and Bipolar Disorder: 296.xx

Anxiety Disorders: 300.3 – 309.81

Schizotypal Personality Disorder: 301.20 Borderline Personality Disorder: 301.83 OR

Substance Abuse Prevention and Treatment Block Grant: A program that provides funds and technical assistance to states to plan, implement and evaluate activities that prevent and treat substance use disorders and promote public health.

Substance use disorders: Disorders related to the taking of a “drug of abuse” including alcohol, as well as side effects of a medication or toxin exposure. The disorders include substance dependence and substance-induced disorders, including substance intoxication, withdrawal, delirium and dementia.

Trauma-informed care: An approach to care that evaluates and considers the role trauma plays in the lives of people seeking mental health and addiction services. The traumas it considers includes the effects of misdiagnosis and coercive treatment. Services are delivered in a way that recognizes trauma survivors’ vulnerabilities, avoids inadvertently re-traumatizing them and helps individuals take a hand in directing their own services.

Wellness Recovery Action Plan (WRAP): A recovery action plan that is developed by the person and cannot be mandated. The plan’s values include the belief that people do recover and there is hope, and are based on a person’s right to self-determination, personal responsibility and self-advocacy.

Wraparound services: A team-based planning process involving a youth and the youth’s family that results in a set of community services and supports individualized for that youth and family to achieve a set of positive outcomes.



This document can be provided upon request in an alternate format for individuals with disabilities or in a language other than English for people with limited English skills. To request this publication in another format or language, contact Addictions and Mental Health Division at 503-945-5763 or 1-800-375-2863 for TTY.

Investments in Community Behavioral Health

Health Systems Division REPORT

Prepared for the Oregon Legislature
Legislative Emergency Board
per House Bill 5526 (2015)
December 1, 2016



HEALTH SYSTEMS DIVISION

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Executive summary

This report summarizes the Oregon Health Authority’s oversight of new investments in the state’s community behavioral health system. The investments were initially made by the Legislature during its 2013 session, with additional investments approved by the 2015 session. OHA oversees these investments through its Health Systems Division (HSD).

The investments in the adult community mental health system have been guided by the 2007 “Community Services Workgroup Report.” This workgroup was formed to address the State Hospital Master Plan’s stipulation that the development of a new state hospital should be accompanied by funding for the community mental health system. The workgroup had broad stakeholder participation including consumers, legislators, law enforcement representatives, directors of community mental health programs (CMHPs), acute care hospitals, representatives of the National Alliance on Mental Illness in Oregon (NAMI Oregon) and county commissioners.

The workgroup identified services that constitute a responsive mental health system and estimated the resources it would need. It calculated the funding required to close the gap between existing resources and these comprehensive services, and spread those investments over four biennia.

The workgroup’s report was provided to the Legislature and has formed the basis of the mental health investments since 2013. The strategy for making investments contemplated transformation efforts that have helped shape the health care system since the original workgroup report was developed, including the implementation of coordinated care organizations (CCOs) and the Affordable Care Act.

In 2013 an unprecedented investment was made in mental health services, with almost \$40 million going to the community mental health system. Specific services and system expansions focused on promoting community health and wellness, keeping children healthy and helping adults with mental illness live successfully in the community.

Building on these developments, as directed by the 2015 Legislature, additional investments included \$22 million in new community mental health services and \$6 million in new addiction services.

A majority of the new adult mental health investments relate to categories of interest for the United States Department of Justice (USDOJ) Performance Plan. Through these investments Oregon will provide services and supports that help individuals with serious and persistent mental illnesses avoid intensive and restrictive environments including Oregon State Hospital and intensive residential services. These new investments will also help individuals with mental health and substance use disorders avoid involvement in the criminal justice system.

The purpose of the new investments is to fill gaps in the mental health and addictions system and promote the health and wellness of children, youth, adults and our communities.

2013 investments and outcomes

OHA Health Systems Division is administering these investments with an emphasis on accountability, outcomes and system integration. The new investments provide an opportunity for the Oregon Health Authority to work with new partners and respond to the changing landscape of behavioral health and the advent of CCOs. OHA is committed to building strong partnerships among CCOs, CMHPs, people in recovery, consumers, and service providers.

Several of these investment categories received additional funding during the 2015 legislative session as well as the initial funding from 2013.

Outcomes measured thus far indicate progress toward OHA's investment goals to:

- Improve child functioning and parenting responses for young children who are identified early with behavioral issues;
- Respond proactively along the crisis and criminal justice continuum to avoid unnecessary incarceration and hospitalizations;
- Promote better inter-agency partnerships among local child- and family-serving entities;
- Build additional capacity to screen and provide interventions at all levels where supports are needed;
- Provide an opportunity for tribes that had not yet implemented mental health services to meet the growing needs among the populations they serve;
- Increase the workforce so that more help is available to children, families and

-
- individuals; and
 - Increase the knowledge base for practitioners in order to equip them to implement evidence-based practices for assisting people who have experienced psychological trauma.

Investments were made in the following areas:

Promotion and prevention

This focus folds mental health promotion and prevention into the existing prevention system so communities can identify early indications of problems. Existing partners – including community mental health programs (CMHPs) and CCOs – were able to compete for grants.

Mental health promotion and prevention

The Mental Health Promotion and Prevention funds have been allocated to 18 projects spanning 20 counties. While each of the 18 projects is unique, many implemented consistent service models that include: Mental Health First Aid, Collaborative Problem Solving, parenting programs, bullying prevention programs, suicide prevention programs, culturally specific services, and mental health promotion activities. In addition, two projects are designed to create and promote social marketing messages to reduce stigma and promote public awareness of mental health issues. In all, more than 22 FTE throughout Oregon have been funded for mental health promotion and prevention.

Child and young adult investments

Children’s investments were used to develop statewide programs that emphasize prevention, early identification and intervention, and training and technical assistance for health care providers.

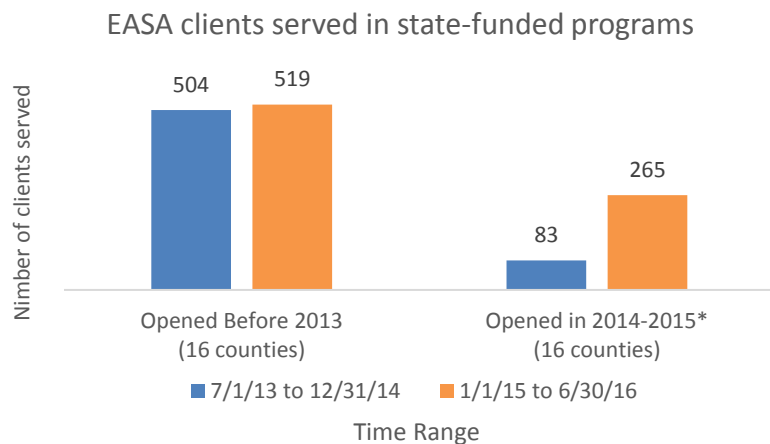
Early Assessment Support Alliance (EASA)

This investment expanded Oregon’s Early Assessment and Support Alliance (EASA) statewide by adding an additional 16 sites. EASA is an intensive team-based early intervention service aimed at reducing or eliminating the progression of psychosis and bipolar disorders in individuals aged 12 to 25 regardless of health care coverage. Early identification and treatment is proven to help young adults with psychosis avoid higher levels of care and other costly social risks while learning how to successfully live in society while managing their disorder.

Additionally, this investment created the EASA Center for Excellence. The center trains professionals and provides technical assistance for each EASA provider. Over 673 staff have been trained and over 3,000 hours of technical assistance provided since 2014.

Expanded the EASA program statewide to provide young adults with early identification and treatment for psychotic disorders through new and amended contracts with current partners.

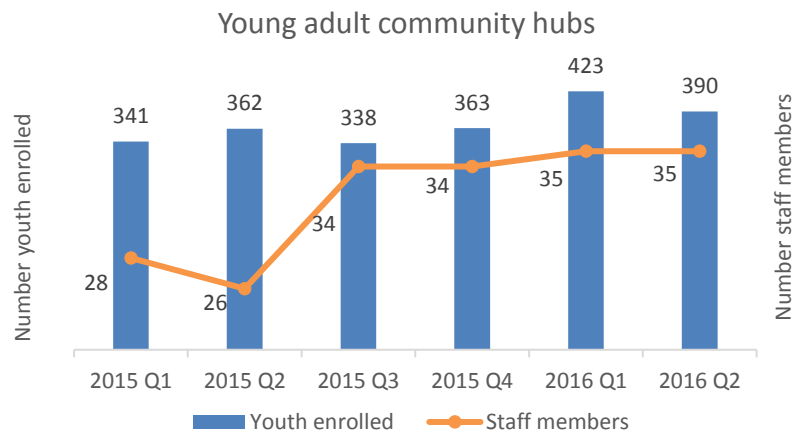
***Remaining four counties to be added in 2016-17**



Young Adult Community Hub programs

Young Adult Hubs are an extension of the Early Assessment Support Alliance (EASA) programs providing community-based services and supports for young adults and to those individuals who may not qualify for EASA. Community hubs are based in 12 counties and have had 389 young adults in services as of June 2016. All young people, regardless of health care coverage, are eligible to access services through hub programs. Young adult hubs link vulnerable young people ages 14 to 25 and their families to interventions and supports that are peer- and strength-based, age-appropriate and culturally responsive. The programs offer community-based and culturally appropriate services and activities to build education and employment skills that meet the young person's individual needs. Young adult hubs specifically reach out to marginalized and vulnerable young adults with an emphasis on providing peer-to-peer services, improving positive and healthy connectivity to others, and increasing connections with community supports and services. Young adults receiving services through hubs are most likely to be connected to a prescriber, community mental health providers and schools. One of the most critical elements of hubs are their ability to provide a "warm handoff" or transition to services. This increases the likelihood that a young person will welcome and use services and supports they need into the future.

Provides statewide outreach and supports to young adults with mental health challenges who do not qualify for EASA.



Family and youth peer-delivered statewide leadership and training

Young adult peer-delivered services and youth engagement

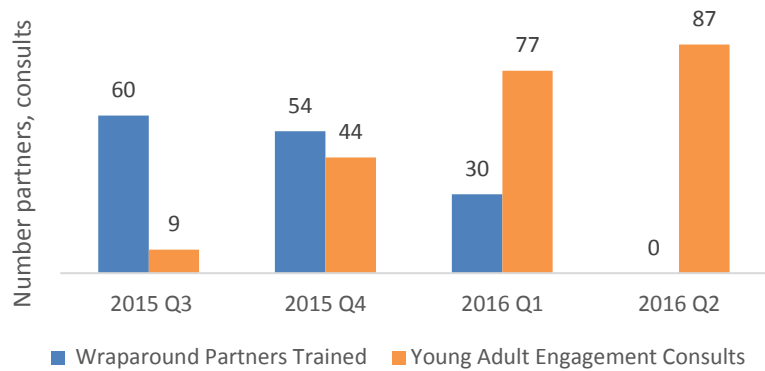
Youth M.O.V.E. Oregon (YMO) was founded in 2009. “M.O.V.E” stands for Motivating Others through Voices of Experience. It is a statewide peer-led organization devoted to helping young adults successfully transition into adulthood. Its mission is to unite and empower a diverse collective of young adults and assist them in creating personal, community and system change. These funds expanded the existing YMO contract to ensure statewide development of young adult peer-delivered services and meaningful youth engagement. YMO partners with OHA’s Health Systems Division to expand System of Care development and Wraparound. YMO trains and consults with CCOs and communities on meaningful youth engagement within policy, governance structures and at the local community level. In addition, YMO engages directly with youth to prepare them for participation in System of Care governance structures and as youth peer support partners in child and family teams.

Family/parent peer-delivered support services

This investment expanded the contract with the Oregon Family Support Network (OFSN) to increase statewide peer support services. OFSN recruits, trains, employs and supervises family support specialists to provide peer-delivered services requested by family members who parent a child, youth or young adult experiencing behavioral health needs. Peer-delivered services help families understand the behavioral needs and services available for their children and help them navigate the multiple systems of services including primary health, behavioral health, social services and education. They also help families to prepare for and participate in service planning meetings, to access formal services and informal natural supports in the community and even best practices for everyday parenting from the perspective of someone with shared lived experience. With offices in Eugene, Salem and Bend, OFSN is able to provide services statewide. It also works alongside clinical professionals as the first point of contact for family members seeking assistance. In addition, all 16 CCOs receive consultation and training from OFSN to ensure meaningful family involvement in System of Care governance structures within the high-fidelity Wraparound process.

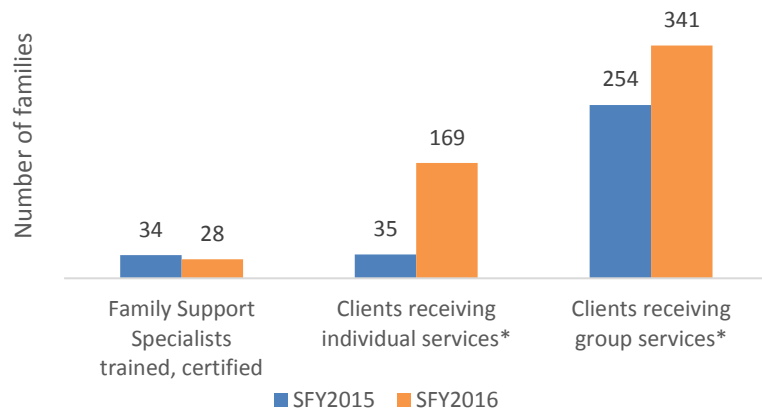
Increased peer-delivered supports and services for young adults throughout Oregon. HSD expanded the existing contract with the Oregon Family Support Network, with Youth M.O.V.E. as a subcontractor.

Peer support and young adult engagement



Increased peer-delivered supports and services to families of children with behavioral challenges. HSD expanded the existing contract with the Oregon Family Support Network (OFSN).

Family support services



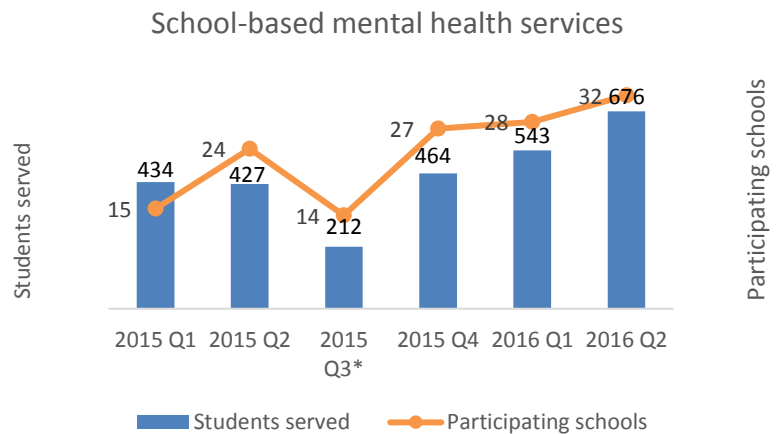
*Non-Medicaid individual and group services

School access to mental health services

These funds place mental health professionals in school-based health centers (SBHCs) and in schools without SBHCs. This integrated approach to mental health services co-located in schools is a collaboration among OHA’s Health Systems Division and Public Health Division, the community mental health programs, and public schools. This investment created a Public Health Division mental health coordinator that has strengthened the infrastructure of school-based integrated health. School-based services are shown to increase access to physical health and mental health services as they reduce barriers such as location, transportation and stigma. In addition to providing services to individuals, mental health professionals positioned in schools train school staff and assist schools in screening for mental health issues; consult with and support school personnel; promote mental health and influence a positive school environment.

Enhanced the availability of mental health services to students by bringing professionals into schools and building on existing school-based infrastructure. HSD partnered with the Public Health Division and other state and local government and provider agencies, inclusive of rural and frontier communities, to distribute funds.

*Excludes participating schools that did not provide services during summer



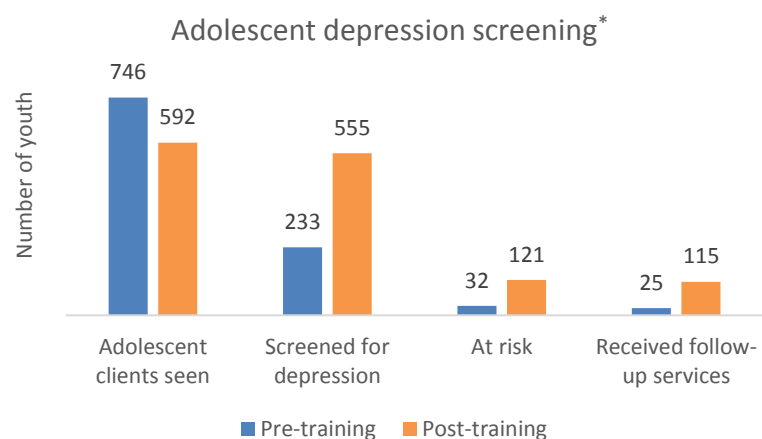
Adolescent depression screening

These funds were contracted to the Oregon Pediatric Society (OPS) to increase early detection and treatment of depression in young people statewide. It does this by integrating routine depression screening into primary care clinics. When young people are assessed for depression during routine doctor visits for physical health needs, mental health issues are more likely to be detected and treated early. OPS to date has trained 169 primary care providers and 148 clinic and school-based health center staff (in five school clinics) in their Adolescent Depression Module. Child and adolescent health providers trained include the Portland metro region and eight counties, stretching from Coos to Clatsop to Malheur.

Provider trainings included how to complete a depression screening tool, and signs and symptoms of depression in adolescents. The screening also included questions for initial assessment of suicide risk. Representatives of local behavioral health providers were invited to participate in a panel at each training to facilitate referrals between medical and behavioral health providers. Additionally, providers and clinic staff participated in a call-based learning collaborative to access additional training and implementation guidance. As a result of the training, the number of youth identified to be at risk of depression increased as did the number who received follow-up services.

Provides consulting for primary care providers on the use of an adolescent depression screening tool. HSD contracted with the Oregon Pediatric Society.

***Combined results for 38 providers (11 clinics) that received training and support through OPS during 2015-2016**

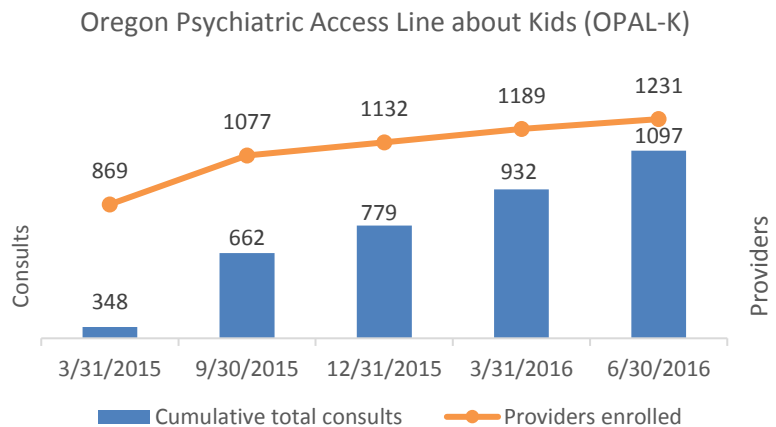


Oregon Psychiatric Access Line about Kids (OPAL-K)

These funds were contracted to Oregon Health & Science University (OHSU) to create OPAL-K. Through a partnership among OHSU's Division of Child and Adolescent Psychiatry, OPS and the Oregon Council of Child and Adolescent Psychiatry (OCCAP), the OPAL-K call center is a free service available Monday through Friday to medical practitioners so that they may treat youth (up to age 18) with mental health issues immediately rather than placing them on waiting lists. Earlier intervention may decrease complications of untreated mental disorders including hospitalization and suicides. OPAL-K also provides tele-psychiatry appointments for children who are in the foster care system and have been prescribed complex psychiatric medications.

OPAL-K has received more than 1,200 calls from medical providers throughout Oregon. OPAL-K has therefore reached its goal of receiving 1,000 calls by its second anniversary in June 2016. At least 1,231 medical providers have enrolled, with numbers increasing daily. Many enrolled providers use this service regularly. Post-service surveys indicate user satisfaction.

Gives primary care physicians access to child psychiatric consultation for children up to age 18. HSD contracted with OHSU to build the infrastructure for this new statewide service.

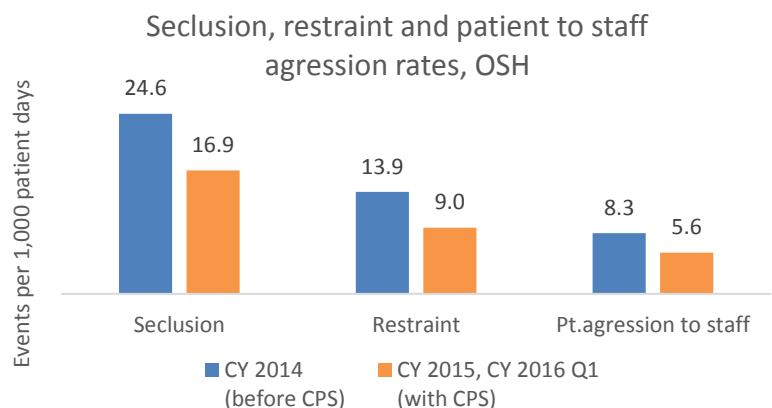
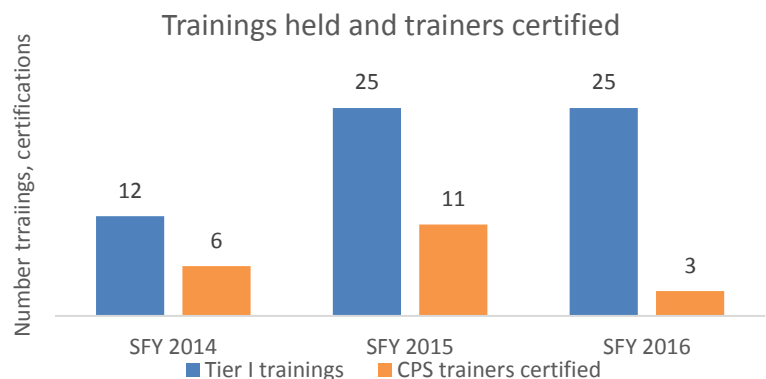


Collaborative Problem Solving (CPS)

These investment funds allowed OHSU to increase its capacity to provide Collaborative Problem Solving (CPS) training and expertise to health care and other professionals around the state. CPS is an evidence-based model that reduces the use of seclusion and restraint in child programs and improves parent-child communication and conflict resolution. The CPS model works in a variety of settings including homes, schools and hospitals. Training is available for parents and professionals including foster families, hospitals and residential programs. The CPS team at OHSU provides training and consultation to multiple organizations across the state to increase effective interventions that improve outcomes for children and families. At Oregon State Hospital (OSH), CPS has been piloted in four treatment wings to assess its applicability in an adult setting. Since “Tier 1 training” launched at the hospital about three years ago, nearly 1,000 OSH staff have been trained. The hospital has reported a significant reduction in aggression and assaults by residents on the units implementing CPS. As a result, the hospital has committed to implementation of CPS across all OSH units.

Builds on the current efforts to advance this practice, which reduces the use of seclusion and restraint in child programs. HSD amended its existing contract with Oregon Health & Science University to provide greater outreach to rural providers.

In a pilot study with 4 units at Oregon State Hospital, the rates of seclusion, restraint, and patient to staff aggression dropped sharply after introduction of CPS.

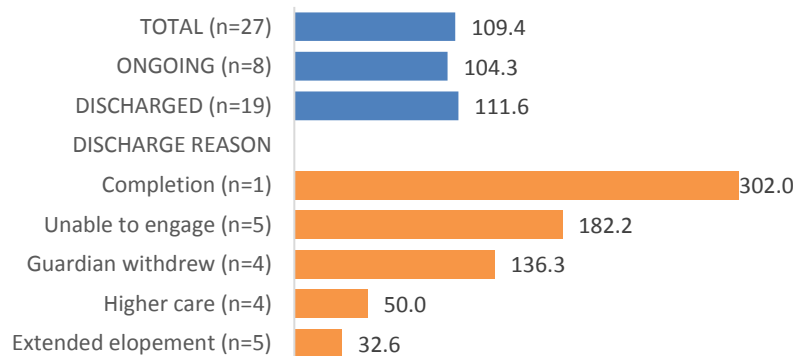


Program for youth victims of sex trafficking

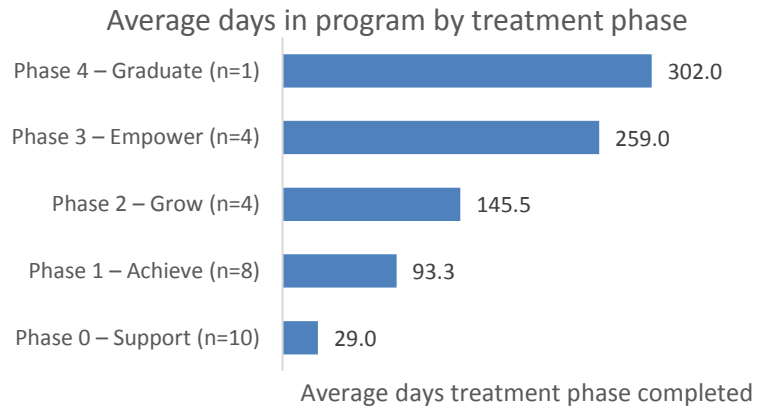
This funding established a statewide residential treatment service for commercially sexually exploited children (CSEC). OHA contracted with Morrison Child and Family Services, which submitted the successful proposal, to provide these services. Morrison’s SAGE program is a 12-bed CSEC residential facility located in the Portland metro area. It provides facility-based services with an average length of stay of 11-14 months, to youth who identify as female aged 11 through 16 who are victims of or are considered at high risk for commercial sexual exploitation. Youth receive CSEC-specific education, trauma-specific treatment interventions, on-site public education, medical and dental services, mental health and addiction services and vocational and skills training. SAGE collaborates with law enforcement, DHS child welfare, Oregon Youth Authority, faith-based organizations, advocacy and mental health service providers, survivors, and advocates. The goal is to ensure that victims of CSEC are safe and removed from “the life” of exploitation, allowing them to focus on their care and treatment in preparation for healthy re-integration into the community with family and natural supports. In addition, a portion of this funding was transferred to DOJ to support the hiring of a DOJ CSEC Coordinator.

At discharge the average length of stay in CSEC is 3.6 months. Average length of stay differs according to the reason clients leave the program.

Average days in program by treatment status



\$2.3 million for a program for victims of youth sex trafficking.



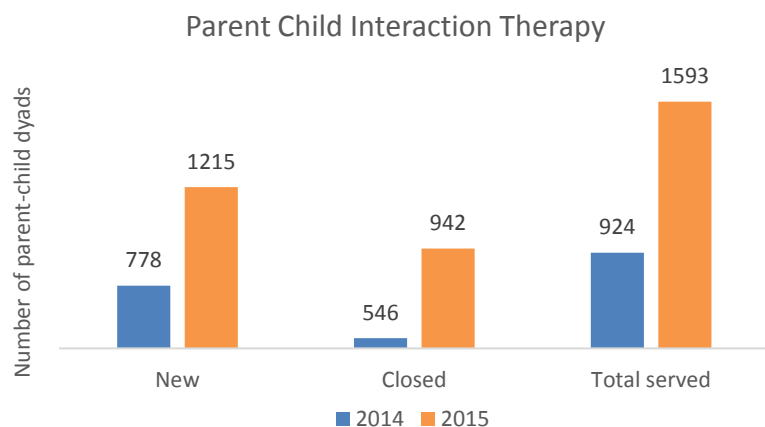
Parent Child Interaction Therapy (PCIT)

- *Increased access to high-fidelity PCIT services*
- *Funded Early Childhood workforce development*

These funds increased access to Parent Child Interaction Therapy (PCIT), making services available in 16 counties and 37 physical locations across Oregon. An Oregon PCIT training site was established in Jackson County in 2015 to address the on-going training and consultation needs of PCIT clinicians across the state. The training site has provided training, supervision and consultation to 49 therapists since its inception. PCIT is a high-fidelity mental health service that has demonstrated positive outcomes for at-risk children. This intervention focuses on families with children aged 2 to 8 years who have significant social-emotional and behavioral problems. Therapists work with parents and children to improve the parent-child relationship and to teach safe, consistent behavior management skills. The practice is proven to decrease behavioral problems and to improve behavior at school and with untreated siblings. In 2015, of those families who participated in PCIT for at least one month, 76 percent showed a statistically significant improvement in symptoms.

Additionally, this funding created higher education scholarships to increase the number of qualified early childhood mental health professionals in Oregon. Twenty candidates received scholarships and completed Portland State University's one-year Infant and Toddler Mental Health Graduate Certificate Program in the 2015-2016 academic year, and another 10 candidates have been selected to receive scholarships for the 2016-2017 academic year. Twenty individuals with cross-cultural experience who are working in community mental health programs in Oregon have received graduate study scholarships and reimbursement.

Replicated this younger-child service that has demonstrated positive outcomes for children at risk. Enables programs to cover the cost of infrastructure in implementing evidence-based practices co-located in early childhood settings.

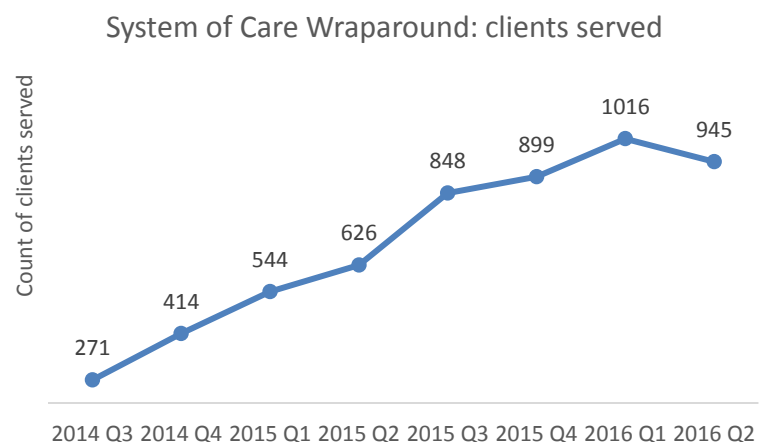


System of Care: Wraparound Initiative

This funding expanded the System of Care Wraparound Initiative (SOCWI) by providing previously unfunded CCOs with an infrastructure payment and an increase to the per-member per-month reimbursement rate for all CCOs providing Wraparound. All 13 CCOs that submitted a proposal were awarded these initial investment funds. The system of care model is an organizational philosophy and framework that involves collaboration across agencies, families, and youth. Its purpose is to improve services and access, and expand the array of coordinated community-based, culturally and linguistically competent services and supports for children and youth with a serious emotional disturbance and their families. High Fidelity Wraparound is a team-based, strengths-based planning process that organizes a youth- and family-driven care planning process. It uses intensive care coordination for youth with emotional and behavioral disorders who are involved in multiple systems, which may include mental health, addictions, Department of Human Services (child welfare and intellectual and developmental disabilities), juvenile justice, Oregon Youth Authority, primary care, and education.

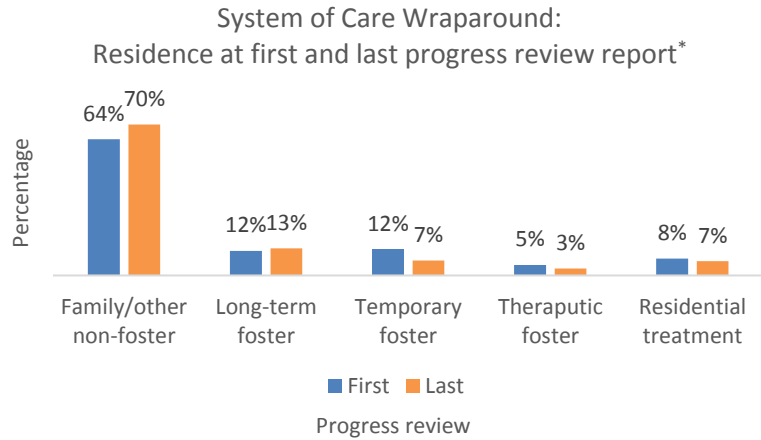
CCOs continue to engage in training, consultation and technical assistance funded by OHA to ensure the delivery of high-fidelity wraparound and the creation of local system of care governance structures to ensure that youth with intensive needs and their families have access to services, supports and care coordination necessary for positive outcomes. In January 2017 SOCWI will be statewide with 16 CCOs funded and participating. The expansion has served about 1,535 children and youth ages 0 through 17 since July 1, 2014.

Increased the availability of Wraparound services in the state, providing intensive care coordination for children with emotional and behavioral disorders. HSD channeled funding through Medicaid to build on existing contracts with CCOs. PSU, Youth M.O.V.E. and OFSN provide technical assistance.

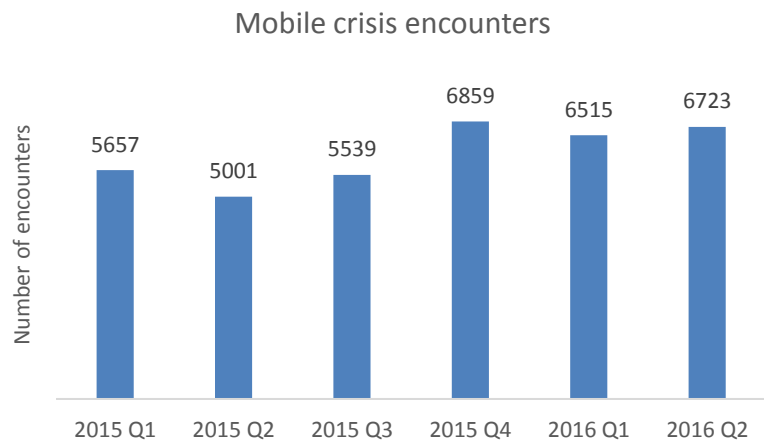


Increased the availability of Wraparound services in the state, providing intensive care coordination for children with emotional and behavioral disorders.

*Wrap clients served between 1/1/2015 and 6/30/2016 with at least 60 days between first and last progress review.



Improved mental health crisis response services including mobile response and crisis respite services, helping avoid hospitalization or incarceration. HSD partnered with CMHPs and encouraged regional responses to develop services based on a statewide gap analysis.



- Young Adult Co-occurring Disorder Treatment**

New investment funds were used to develop a statewide resource that created additional access to sub-acute services and increased access to appropriate levels of care for youth 17 years of age and under with co-occurring mental health and substance use disorders. Co-occurring disorders can be difficult to diagnose due to the complexity of symptoms; many times youth receive treatment for one disorder while the other disorder remains untreated. Building integrated capacity in Oregon’s subacute system was important, as it allows for ongoing early detection and treatment for youth with co-occurring disorders.

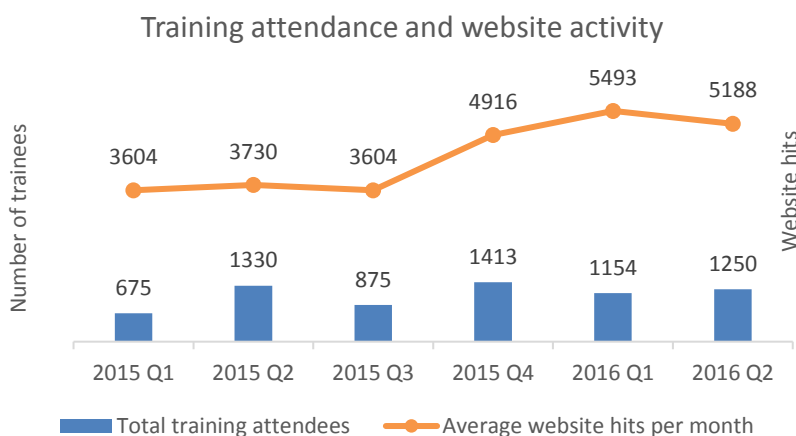
- 52 individuals received co-occurring sub-acute services

- 156 individuals served with reported family history of substance use disorder issues
- 3 individuals received detoxification services
- 9 individuals received post-subacute co-occur substance use disorder treatment
- 4334 total subacute days for youth with co-occurring

Trauma Initiative

This investment established Trauma Informed Oregon (TIO), a collaboration among PSU (which holds the contract), OHSU, Oregon Pediatric Society and OHA. TIO is a statewide collaborative aimed at preventing and ameliorating the impact of adverse experiences on children, adults and families. TIO works to promote and sustain trauma-informed policies and practices across physical, mental, and behavioral health systems and to disseminate promising strategies to support wellness and resilience. Evidence shows early-life traumatic experiences can have a direct, significant and lasting impact on brain development and health outcomes later in life. Trauma Informed Oregon is a resource for state, county and local policymakers across systems and to service providers, with the goal of achieving trauma-informed service delivery in Oregon. Additionally, these funds supported targeted technical assistance for policymakers statewide by Laura Porter, a national expert in the application of the neuroscience research relating to adverse childhood experiences.

Trains health care providers to screen for traumatic experiences such as abuse, neglect or other adverse childhood experiences (ACEs) and contributes to a trauma-informed system of health care. Created a statewide trauma framework to support strategies for reducing ACEs and to address the impact of ACEs from a trauma-informed perspective.



Community and adult behavioral health investments

Adult investments focus on strengthening community mental health services and helping people with mental illness live successfully and independently in the community.

Crisis services

Previous investments improved mental health crisis response services, including mobile response and crisis respite services, helping individuals in mental health crisis avoid hospitalization or incarceration. HSD partnered with CMHPs and encouraged regional responses to develop services based on a statewide gap analysis. A portion of the funding was used to develop the Crisis Intervention Team Center of Excellence (CITCOE). Significant investments in crisis services were appropriated in both the 2013 and 2015 legislative sessions; \$3.7 million and \$7 million respectively. Competitive solicitations were issued for both investments. The 2013 crisis intervention investment was awarded to 12 community mental health programs that serve 18 counties. While most of the funding supported the development of mobile crisis programs, a few CMHPs were awarded funding to staff and expand walk-in crisis services.

The additional investments supporting the 2015 crisis services solicitation were designed to increase mobile crisis capacity statewide and alleviate the high use of emergency departments by providing funding support for crisis respite services. As directed by the Legislature, HSD issued a request for grant proposals for two types of possible awards for crisis services: a maximum award of \$750,000 for programs that previously had not been awarded in the 2013 solicitations; and a maximum award of \$210,180 for programs that had been awarded in the 2013 solicitation but required supplemental funding to expand services. Sixteen CMHPs submitted proposals to provide services in 20 counties; nine proposals for new funding and seven for supplemental funding. Only two of the proposals did not include mobile crisis services with supplemental crisis respite services. Two programs proposed using the funds to staff crisis respite facilities (Yamhill is developing a secure crisis respite facility and Jefferson is using a regional approach serving Jefferson, Crook and Deschutes counties).

The 2013 investment in mobile crisis services has proved effective, increasing mobile crisis contacts statewide overall.

As a result of the expansion and creation of new mobile crisis programs in 2014, the number of crisis encounters increased by 19 percent from January 1, 2015 (six months

after the implementation of the 2013 mobile crisis investment) to June 30, 2016. This increase represents more than 1,000 contacts in the three-month reporting period.

The last three calendar quarters of the January 1, 2015 – June 30, 2016 reporting period saw stabilization in the number of mobile crisis encounters, varying by an average of 276 mobile crisis encounters per quarter, statewide. As more mobile crisis programs develop, it is anticipated that mobile crisis encounters will increase and eventually stabilize when more individuals who require mental health services are enrolled in on-going services.

Mobile crisis services in Oregon vary from county to county in both breadth and scope. Until recently, mobile crisis services were not defined. Some counties elect to provide traditional mobile crisis response (e.g., co-response with law enforcement or in lieu of law enforcement response in an identified mental health crisis event). Others considered mobile mental health crisis response as mobile outreach (e.g., outreach to individuals who are enrolled in a CMHP's outpatient services and have been identified as in potential crisis).

- ***Crisis Intervention Team Center of Excellence (CITCOE)***

To support jail diversion and mobile crisis services statewide, HSD partnered with the Department of Public Safety Standards and Training (DPSST) and the Eastern Oregon Human Services Consortium to provide technical assistance, coordination and training to developing crisis intervention teams (CITs) across the state. DPSST and EOHSC have established a Crisis Intervention Team Center of Excellence (CITCOE). To date, DPSST has expanded its offering of crisis intervention training at its facility in Marion County and EOHSC has worked with six counties on crisis intervention team development and helped to implement crisis intervention training programs in an additional six counties.

Jail diversion

This investment expanded services to divert people with mental illness from unnecessary incarceration in local jails. OHA partnered with city and county law enforcement agencies to provide pre- and post-booking diversion strategies including crisis intervention training, and to build outcomes into the entire jail diversion system.

The increasing involvement of persons with serious mental illness in the criminal justice system has enormous fiscal, public safety, health and human costs. Diverting individuals

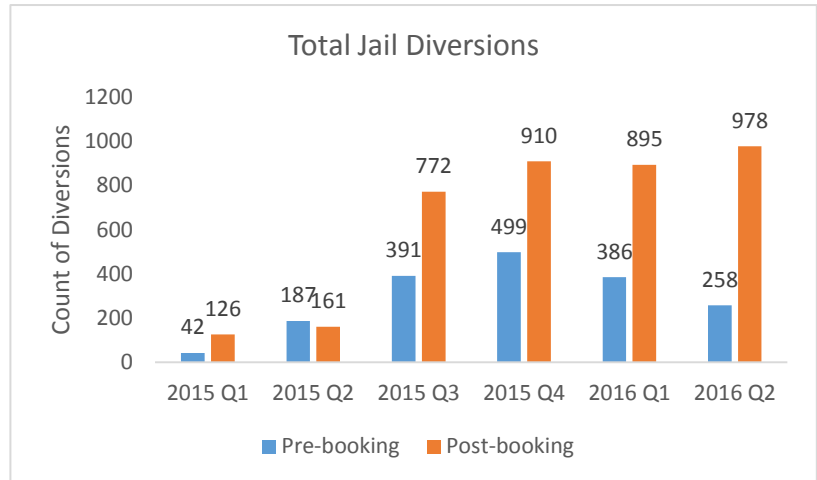
with mental illness away from jails toward more appropriate community-based mental health treatment has emerged as an important component of community mental health programs and the criminal justice system to provide effective mental health care; to enhance public safety by making jail space available for violent offenders; and to provide judges and prosecutors with alternatives to incarceration.

The 2007 Legislature authorized \$4 million to be distributed equitably among 32 community health programs serving 36 counties statewide to move persons with severe mental illness who don't pose a public safety risk out of jail and into community-based treatment programs. The 2013 Legislature expanded jail diversion services by appropriating \$3 million as part of the 2013 Mental Health Investments. The 2013 funding was awarded through a competitive solicitation. Twelve CMHPs were awarded jail diversion investment dollars to expand services in 15 counties.

The 2015 Legislature authorized an additional \$6.5 million for jail diversion services. As directed by the Legislature, HSD issued a request for grant proposals for two types of possible awards for the jail diversion program: a maximum award of \$500,000 for programs that previously had not been awarded in the 2013 solicitations; and a maximum award of \$100,000 for programs that had been awarded in the 2013 solicitation but required supplemental funding to expand services. Eighteen CMHPs submitted proposals: nine for new funding and nine for supplemental funding. Because HSD received fewer proposals than expected, the nine programs previously offered a maximum award of \$100,000 were able to submit amended proposals with expanded services for an additional maximum award of \$200,000.

Eighteen jail diversion programs received Mental Health Investment funding. From January 1 to December 31, 2015, they submitted individual data on 5,864 clients. While programs vary across the state, the 5,864 individuals received services that included individual and group therapy, peer-delivered services, referrals to outside community resources, respite services, and case management.

Expanded services to keep people with mental illness from unnecessary incarceration in local jails. HSD partnered with city and county law enforcement agencies to provide pre- and post-booking diversion strategies, including crisis intervention training, and to build outcomes into the entire jail diversion system.



Assertive Community Treatment (ACT) and case management

The 2013-2015 investment increased capacity to provide case management and ACT services to help people avoid hospitalization or shorten hospital stays. Through partnerships with CCOs, CMHPs, and other community partners, HSD contracted with CCOs to develop 10 ACT teams, one of which focuses on individuals with severe and persistent mental illness who are involved in the criminal justice system and one with a culturally specific specialty.

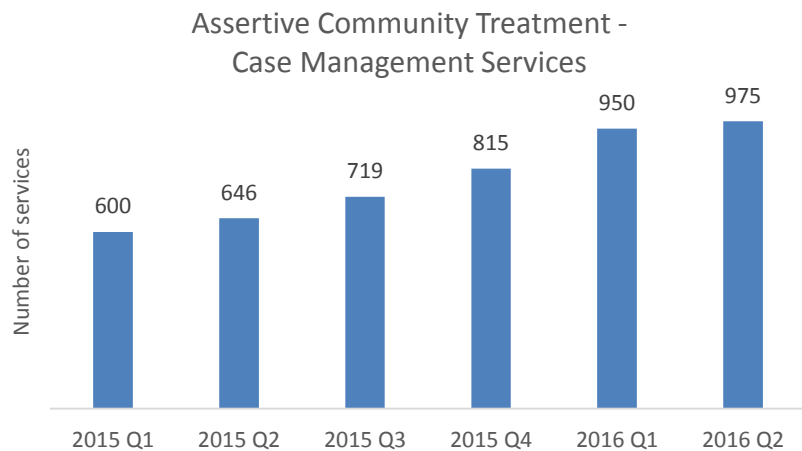
HSD issued a request for grant proposals in September 2016 to expand access and create infrastructure for the ACT program. During the past several years, Oregon has engaged in a significant effort to transform its community mental health services to provide comprehensive, community-based care to meet the needs of Oregonians diagnosed with severe and persistent mental illness (SPMI). With the state's commitment to implement a performance plan with USDOJ, HSD has developed a strategy that will both provide greater access to services and meet the goals of the USDOJ Performance Plan. The grants will provide coordinated care organizations with infrastructure funding to create ACT teams to serve individuals who require ACT services but currently do not have access to the program due to insufficient capacity.

The roll-up funding utilization:

- Approximately \$7 million is dedicated to the expansion and infrastructure grants to CCOs and to increase the capitation to CCOs to account for the expansion of services. The solicitation is structured to comply with the USDOJ Performance Plan (based on staffing a high-fidelity ACT team) and with an emphasis on ACT provider development. The ACT program must have the capacity to serve at least 2,000 individuals by June 30, 2018, with no more than 10 individuals on a waitlist to receive ACT services in any given service region for more than 30 days before capacity is expanded to serve them.

- Approximately \$300,000 is dedicated to statewide program development and oversight. This funding is being used to expand the Oregon Center of Excellence for Assertive Community Treatment (OCEACT) contract to comply with the USDOJ Performance Plan’s program requirements for ACTs. Those requirements include data collection, technical assistance, program monitoring, and compliance and outcome improvement.

Increased capacity to provide case management and assertive community treatment to help people avoid hospitalization or shorten hospital stays. Through partnerships with CCOs, CMHPs and other community partners, HSD contracted with CCOs to develop 10 regional ACT teams, one of which focuses on individuals with SPMI who are involved in the criminal justice system and one with a culturally specific specialty.



Supported housing and peer support services (rental assistance)

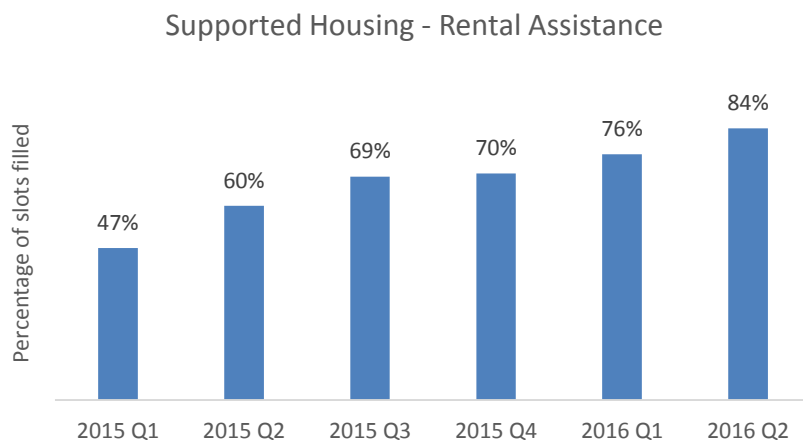
The OHA Health Systems Division's Rental Assistance Program supports individuals with a serious mental illness to live independently by securing affordable rental housing. This program awarded funding to providers that successfully applied through solicitation. The first programs began during the 2013-2015 biennium.

Eligible individuals receive services from a residential housing specialist and a peer support specialist that are employed by the funded providers. Rental assistance includes barrier removal and move-in assistance costs, monthly rent subsidies and optional housing rent-ready services. These housing services are available to the program participants but are not required.

As of February 2016, 21 rental assistance programs are in operation offering 972 housing slots with some capacity in every Oregon county. Beginning in October 2016, an additional seven rental assistance programs for veterans and young adults were scheduled to begin operation, offering an additional 152 housing slots. With the October program addition there will be a total of 1,154 rental assistance housing slots statewide.

Results from the original 20 rental assistance programs show that the number of housing slots occupied or filled has steadily grown from 47 percent during January-March 2015, to 84 percent in the second quarter of 2016 (April-June).

Increased supported housing and peer-delivered services for additional people with mental health conditions. HSD partnered with CMHPs to provide rental assistance for scattered-site supported housing.



Mental health housing development

A budget note in HB 5201A dedicated \$5 million in tobacco tax funding as an investment for mental health housing. HSD worked with the National Alliance on Mental Illness (NAMI) Oregon and the Oregon Residential Providers Association to develop housing options for individuals with mental illness.

This partnership resulted in a total of 11 projects. Ten are supported housing projects and one provides respite care.

The supported housing projects reflect 33 total units of housing, with the intent to add three more due to the increase in units allowed under Oregon's performance plan with the USDOJ. The respite care project provides five beds.

Supported employment services

This investment expanded supported employment services statewide through contract amendments with community mental health programs. The funding was distributed in three tiers, based on program readiness. The Oregon Supported Employment Center for Excellence (OSECE) provides on-going technical assistance.

HSD has almost accomplished the goals of the initial 2013 investment by providing high-fidelity supported employment services statewide. Only two counties, Clatsop and Lake, currently do not have high-fidelity supported employment programs. Clatsop is experiencing challenges with staffing and Lake has yet to develop a program.

Current status of the supported employment program:

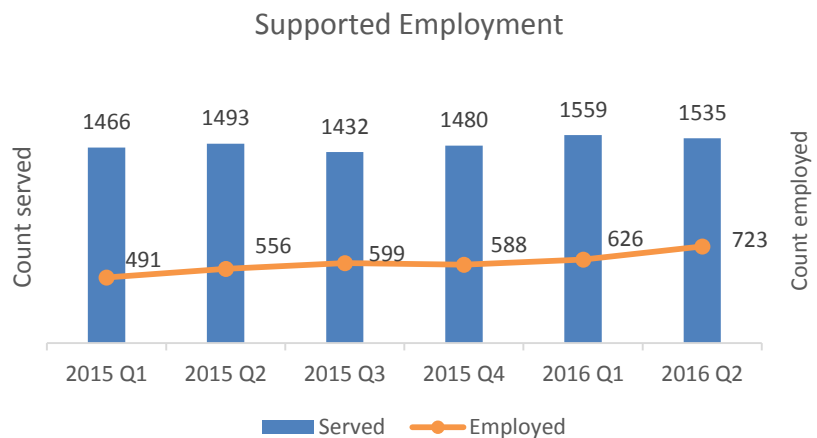
- 32 qualified or provisionally qualified programs in the state
- 5 percent increase in the number of individuals served since investments were made in 2014
- 1,535 individuals received supported employment services in the April-June 2016 reporting quarter, an increase of 892 over the same period in 2013, when 643 individuals were served prior to the mental health investments

During the past several years, Oregon has engaged in a significant effort to transform its community mental health services to provide comprehensive, community-based care to

meet the needs of Oregonians diagnosed with severe mental illness. With the state’s commitment to implement a performance plan with USDOJ, HSD will uphold fidelity review requirements that include data collection, technical assistance, program monitoring, and compliance and outcome improvement.

While the number of individuals served in each quarter has stabilized, only showing an average increase of 1 percent over time, the percent of individual participants who are in competitive, integrated employment as a result of supported employment services has increased significantly; from 33 percent in the January-March 2015 period to 47 percent in the April-June 2016 period. The increase in the percentage of those employed is indicative of mature programs that are past the implementation phase of development.

Expanded supported employment services statewide through contract amendments with current providers. HSD distributed funds in three tiers, based on program readiness. Technical assistance is provided by the Oregon Supported Employment Center for Excellence.



Tribal investments

With the goal of increasing the mental health of individuals and families, HSD has dedicated funding to Oregon's nine federally recognized tribes. These funds are being used to implement strategies for tribal-based mental health services. Each tribe submits an implementation plan, which proposes services that align with the funding areas. They report bi-annually on the progress made toward their outcomes. The plans use the following strategies, based on community need:

- Mental health promotion and prevention
- Crisis services
- Jail diversion
- Supported housing and peer-delivered services
- System of care and care coordination
- School access to mental health services

By using these funds, tribes have increased their capacity to provide mental health services by adding staff in a number of different roles, including a mental health coordinator, mental health therapist, psychiatrist and family nurse practitioner.

Tribes have seen successes in the area of mental health promotion and prevention by providing mental health first aid trainings and implementing the Conscious Discipline Model with parents, school and community. Tribes have completed mental health retreats that combine talking circles and guest speakers who discussed termination, historical trauma, and mental health stigma. Others focusing on alleviating the effects of historical trauma have used Healing of the Canoe/Canoe Family, a tribal best practice. Some tribes have held GONA (Gathering of Native Americans) trainings focusing on community wellness, de-stigmatizing mental health issues and understanding boarding school trauma.

For jail diversion, one community is implementing a Wellbriety Program to which clients are referred by the court. The program provides intakes, and develops and implements a behavioral health treatment plan in cooperation with the client.

Those tribes providing school access to mental health services have increased the number of referrals, successfully had mental health counselors participate with prevention staff to build relationships with children in a less formal clinical setting,

increased outreach, and engaged more children at the middle school and elementary school levels.

For some tribes this investment represents the first mental health program in the community and the first opportunity to provide support and coordination to its tribal members. One goal is to raise the tribal communities' understanding of mental health and wellness and to reduce the stigma associated with mental illness and support those in need with appropriate and culturally relevant treatment options.

2015 investments and strategic direction

The additional investments provided to OHA in the 2015 session have continued to support the outcomes and expand services for multiple investment areas described above. Also in 2015, funds were allocated to enhance Oregon's system of care and safety net for people dealing with substance use disorders.

Sobering centers

House Bill 2936, signed into law in September 2015, increased legal protections for proposed new sobering centers throughout Oregon. Sobering centers are a safe place for individuals during periods of acute intoxication lasting four to 48 hours. The sobering center facility's main goal is to provide a safe environment in which acutely intoxicated individuals can stay while the chemical effects of the intoxicant subside. It also serves as a point of contact and intervention for individuals with substance use disorders, as well as a resource center to provide information on a variety of social service options the clients may wish to access upon discharge from the facility.

The Legislature provided \$1 million in funding for development of sobering centers; \$500,000 has been provided to create a currently operational facility in Josephine County (Grants Pass), and an additional \$250,000 per facility has been set aside to create similar facilities in Douglas and Klamath counties. The Grants Pass facility is being operated by the Grants Pass Sober Center Board, a non-profit organization, and the proposed facilities in Klamath and Douglas counties will be operated by Klamath Basin Behavioral Health and Adapt, respectively.

Peer-delivered services

OHA expects outcomes that include improved health, shorter lengths of stay in treatment, and cost savings from the \$1.5 million invested to increase the number of people receiving peer-delivered services (PDS). Peer-delivered services are a vital part of health care transformation, benefitting Oregonians with substance use disorders, their families and communities. Peer-delivered services and peer-run organizations serve as recovery centers, which are an essential link between people who live with behavioral health conditions and the behavioral health services they need.

The funding was awarded through a competitive solicitation process. Funds were distributed to successful applicants in October 2016. Seven counties in three regions will develop the capacity to provide enhanced peer-delivered services. They also will be able to provide technical assistance and training for peer delivered services in substance use disorder recovery. They will provide technical assistance to regional partners including behavioral health service programs, health professionals, CMHPs or LMHAs, coordinated care organizations, interested consumers, family members, youth under 17 and young adults 18 to 25, and those in recovery from mental health disorders, substance use disorders, and problem gambling.

The training and technical assistance will increase the number of people receiving peer-delivered services. OHA's performance plan with the USDOJ calls for increasing these services by 20 percent in 2016-2017. The investments will focus on increasing peer-delivered services to the following underserved populations: people involved in the criminal justice system, people without homes, people in medically assisted treatment, people in poverty in rural Oregon, older adults, and young adults in transition.

Residential Substance Use Disorder Treatment

The agency implemented fee-for- services rate increases to substance use disorder treatment residential rates in the Medicaid program and aligned the non-Medicaid residential rates to be the same as the Medicaid rates. This rate increase has been implemented effective October, 2016

Success stories

The following are success stories from providers who are now able to provide services and community supports as a result of the new investments.

Peer-delivered services:

In June we had a local 19-year-old male overdose on alcohol/drugs and wind up in the intensive care unit. He was a former alcohol/drug client who had dropped out of services. When we learned that he had experienced a near-fatal overdose, our alcohol and other drug (AOD) treatment clinician and recovery mentor (peer support specialist) went to see him at the hospital and checked on him every day until he was discharged. The 19-year-old individual engaged in our intensive outpatient day treatment program and is working with our male recovery mentor who has helped him get to community-based 12-step meetings, provided transportation when needed, and been available by business cell phone to provide support to this client, all in addition to his intensive AOD treatment services (each day he attends four hours of treatment). The client is still fully engaged in treatment services and is doing well and getting healthy. He had not succeeded in treatment before without the support of a peer.

Oregon Family Support Network (OFSN) – A parent’s success story:

My son has showed signs of learning disabilities since I adopted him at age 3. He was a victim of physical abuse previously and had even suffered a significant blow to his head. He had been placed in several foster homes before coming to us.

It’s always difficult for a child that’s 3 years old to enter a new home. He had a hard time trusting me and his new family, but we had the help of a professional counselor to smooth the transition. The beginning of school was also difficult because it meant he had to trust more strangers – a huge feat after knowing so much abuse, hurt and pain.

Throughout his life, counselors were of some assistance; however, I was not prepared for the chaos of adolescence. It seemed we had one new agency after another, new meetings, and new service plans with every new problem my son faced. Even as a “professional mom” having worked with other special needs kids, I couldn’t manage all the meetings and expectations put solely on me.

Help finally arrived when I turned to a family support specialist for help. This person knew what I was experiencing, and I liked that. She helped me find a Wraparound team that organized difficult and hard-to-find services and included many of the people I was

already working with. It was like I had a village to help my family. The team never took over for me but they just helped me find resources I did not know existed. The family support specialist and the team valued me, my family's ideas and, most importantly, reminded us that we could take care of ourselves.

I don't know what the future holds for my son, and he still has significant challenges brought on by serious trauma and abuse as a child. He is not like most kids. I do know that whatever the future holds, we are better prepared for it thanks to Wraparound and we are able to handle what he needs right now.

CSEC/SAGE success story:

Before the age of 15, one young woman was facing seemingly unsurmountable obstacles. She had only sporadic contact with her family and often that contact would turn violent. She was no longer in school and had become heavily involved with gangs. She felt hopeless. She met an adult man who she began to live with and soon began selling and abusing drugs. She was sexually exploited, being forced to perform services in an illegal lingerie modeling/sex performance business.

She entered the Morrison Child and Family Services SAGE program for victims of commercial sexual exploitation of children in early spring of 2016, at age 15. She told the staff at the program that she believed her only real future was prison. Working with any youth with such a high degree of trauma, abuse and hopelessness is never easy; however, with the consistency, structure, support and encouragement this program offered this youth was eventually able to start developing supportive relationships. Relationships with SAGE staff were powerful and the anger and anxiety she had felt so much of the time began to subside. She started feeling better and began to learn new skills that she had never had the opportunity to fully develop. She began attending school and treatment groups and eventually became a positive and active leader in the program helping other young women. This youth successfully graduated from the SAGE program within six months.

This young woman, who previously could only envision a life in prison, enrolled in an academic program to further develop herself and her innate skills. For the first time in many years, she is optimistic and enthusiastic about her education and her life. Her participation in the program allowed her to acknowledge the horrific abuses she had experienced in her life, and she has chosen not to allow those abuses to define her.

This youth now defines herself in many wonderful ways. She became a positive leader while in the program ,and she has now agreed to continue to provide peer support within

her community in service to others like her who need help. This young woman is now working toward repairing her relationship with her family and they are excited to be finally reunified.

Jail diversion:

There is a gentleman who has had multiple trips to jail and ultimately to Oregon State Hospital (OSH). He had a mental health provider whom he liked and would engage with. Then he would use meth, and the spiral down would start again. It would begin with contacts with law enforcement and encouragement to get reconnected with his counselor, but he would stop going to see his outpatient provider. He was difficult to find because he wouldn't be able to stay at his grandmother's house, and would end up in jail with misdemeanor A or felony C charges. He would go to OSH, be found never able to assist in his own defense, and returned to the jail only to be released and have the cycle start again.

He might go a week or a month, but within two months he would start the cycle again. He would often be at OSH at least yearly and sometimes twice a year. Once he had cleared of the meth, he was very pleasant to work with, but it was taking longer and longer for him to clear from the meth. Many interventions had been tried, elevating his services to the ACT team, stepping him out of jail to a transitional housing option, all to no avail.

What could we do differently? Well, as much as he likes living with his grandmother, he had relatives that would also frequent that location and would encourage him to use meth with them. He would also be bored in housing and would walk away. His only community was those he used with. What else could we try?

To start, we asked what we could do at the housing that would make it more comfortable for him to stay. He stated he has some money saved and he thought if he could buy a gaming system he would have something to do. We said okay, we will work with you to do that. What else? I need to see my grandmother he would say. Great, we will work with your ACT team to make sure you have regular visits. We worked with the grandmother to plan the visits when the relatives that were using were not there.

“What else can we do?” I get lonely sometimes. “Of course you do. How about if the peer support specialist from your ACT team takes you to meet some other folks and to check out some groups at some of the peer-run organizations in the county?” Okay.

The person has been with our program for four months next week, out of jail and building community supports. He just moved into a more permanent home with one of the local housing agencies. And he still visits his grandmother regularly. Between the time in the jail, at OSH and in our program, he has more than a year of no meth use.

It is a small victory, but for this moment we have broken his cycle and he has successfully stayed out of the criminal justice system and been engaged in mental health treatment for the last four months – something he has not done in the last four years.

Tribal investments:

naanok ?ans naat sat'waYa naat ciwapk diceew'a "We help each other; We will live good"

We are the Klamath Tribes, the Klamaths, the Modoc and the Yahooskin. We have lived here in the Klamath Basin of Oregon, from time beyond memory. In 1954, the Klamath Tribes were terminated from federal recognition by an act of Congress. This single act of Congress had devastating effects on the Klamath Tribes. From the years of 1956 to 1986 this federal policy resulted not in assimilation and self-sufficiency, but a severe loss of identity and relationship with land, and ultimately to trauma, death, alcoholism, violence, and incarceration rates that rivaled large cities. Through concerted grassroots efforts, Klamath tribal people began fighting for restoration and in 1986, the Klamath Tribes were successful in regaining restoration of federal recognition; however, our land base was never returned.

For many years, the Klamath Tribes have been offering basic counseling services. While successes could be seen on an individual scale, the healing from the effects of termination needed a strong platform. In 2014 Klamath Tribal Health's Youth & Family Guidance Center for the first time was staffed at capacity to begin addressing traumas in a holistic, culturally defined and therapeutic way. Receiving the Mental Health Promotion dollars allowed them to build a foundation of healing through stigma reduction and promotion.

One project they started was "Restoration of the Spirit," a large-scale project to address stigma around healing and to promote the idea of healing the spiritual self from the effects of trauma related to termination. The project began with wellness retreats using both clinical and tribal best practices. Prayer, ceremony, talking circles, digital storytelling, and photography sessions were held with five generations of Klamath Tribal members, from youth to elders. Attendees were tasked with processing their memories,

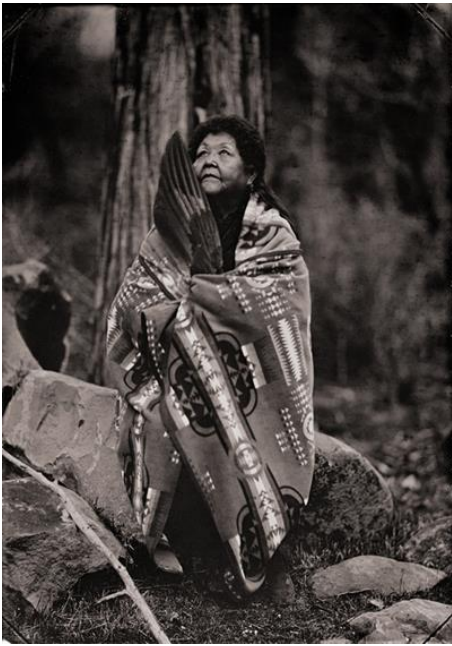
thoughts, and feelings regarding termination of the Klamath Tribes and how it led to stigma. The end result of the retreats were a set of profound photographs capturing the ancestral spirit that continues to thrive despite the trauma as well as a 45-minute documentary titled “Restoration of the Spirit.” (The full-length video can be viewed here: <https://vimeo.com/135413352>.)

Tribal members who have participated in these retreats since then have also reached out for mental health services. Some feedback from the elders was: “I feel like it’s time we began to heal”; “This is the first time I was ever asked how I felt about the hard things I went through during termination”; “I’m starting to see that we need to talk about these hard things in order to heal.”

In May 2015 the documentary “Restoration of the Spirit” premiered at the Ross Ragland Theater in Klamath Falls. There were over 800 attendees including tribal members living in other parts of the state and many non-tribal members living in Klamath Falls. A live cultural show, photography viewing and crowd engagement in a grand finale cultural dance was offered during the large-scale event to spark a sense of hope, pride, and motivation.

Since the documentary premier, self-referral rates in our behavioral health program began to climb. Requests from community partners to screen the film for their agencies began to flood in. In 2015 many community partners, including local nursing students, probation and parole officers, DHS staff, and CASA workers, and mental health agencies have had screenings. It is continuing to be utilized as a cultural training and stigma reduction tool for multiple agencies throughout Klamath County. Over 250 health care and social service employees have been trained about the historical trauma of the Klamath Tribes. “Restoration of the Spirit” was released on social media with over 300 views. The documentary was selected for an award at two Native Independent Film Festivals – the American Indian Film Festival and the LA Skins Film Festival.

This project has given strength to the people to heal from their past and work together to build a better future.





Appendix 1

Community Behavioral Health New Investments as of 2015-17 LAB

Investment Area	Original 13-15 Investments			Final New Investment Funding at 15-17 LAB				
	13-15			15-17 Final @ LAB				
	GF	TTX	Total	GF	TTX/OF	TM/SA	Total	Total
Mental Health Promotion and Prevention	\$ 3,000,000	\$ -	\$ 3,000,000	\$ 4,120,000	\$ -	\$ -	\$ 4,120,000	\$ 4,120,000
Early Assessment and Support Alliance (EASA)	\$ 1,800,000	\$ -	\$ 1,800,000	\$ 2,472,000	\$ -	\$ -	\$ 2,472,000	\$ 2,472,000
Young Adult Community Hubs	\$ 2,250,000	\$ -	\$ 2,250,000	\$ -	\$ 3,090,000	\$ -	\$ 3,090,000	\$ 3,090,000
Young Adult Peer-Delivered Services	\$ 530,000	\$ -	\$ 530,000	\$ -	\$ 545,900	\$ -	\$ 545,900	\$ 545,900
Family/parent Peer-delivered Support Services	\$ 530,000	\$ -	\$ 530,000	\$ -	\$ 545,900	\$ -	\$ 545,900	\$ 545,900
School Access to Mental Health Services	\$ 5,000,000	\$ 1,300,000	\$ 6,300,000	\$ -	\$ 3,171,733	\$ 5,480,267	\$ 8,652,000	\$ 8,652,000
Adolescent Depression Screening	\$ 500,000	\$ -	\$ 500,000	\$ -	\$ 515,000	\$ -	\$ 515,000	\$ 515,000
Oregon Psychiatric Access Line for kids (OPAL-K)	\$ 1,000,000	\$ 500,000	\$ 1,500,000	\$ 1,373,333	\$ 2,186,667	\$ -	\$ 3,560,000	\$ 3,560,000
Collaborative Problem Solving (CPS)	\$ 80,000	\$ -	\$ 80,000	\$ -	\$ 109,867	\$ -	\$ 109,867	\$ 109,867
Program for Youth Victims of Sex Trafficking	\$ -	\$ 2,300,000	\$ 2,300,000	\$ -	\$ 3,158,667	\$ -	\$ 3,158,667	\$ 3,158,667
Parent-Child Interaction Therapy (PCIT)	\$ 2,310,000	\$ 320,000	\$ 2,630,000	\$ -	\$ 493,467	\$ 3,172,400	\$ 3,611,867	\$ 3,611,867
System of Care and Wraparound (SOCWI)	\$ 4,000,000	\$ -	\$ 4,000,000	\$ 5,493,333	\$ -	\$ -	\$ 5,493,333	\$ 5,493,333
Trauma Initiative	\$ 800,000	\$ -	\$ 800,000	\$ -	\$ 1,078,067	\$ -	\$ 1,078,067	\$ 1,078,067
Young Adult Co-Occurring Disorder Treatment	\$ -	\$ 380,000	\$ 380,000	\$ -	\$ 521,867	\$ -	\$ 521,867	\$ 521,867
Crisis Services	\$ 2,730,000	\$ 4,200,000	\$ 6,930,000	\$ 4,100,000	\$ 12,417,200	\$ -	\$ 16,517,200	\$ 16,517,200
Jail Diversion	\$ 3,000,000	\$ -	\$ 3,000,000	\$ 10,620,000	\$ -	\$ -	\$ 10,620,000	\$ 10,620,000
Assertive Community Treatment (ACT)/case management	\$ 5,500,000	\$ -	\$ 5,500,000	2,206,000,		\$ 5,347,333	\$ 7,553,333	\$ 7,553,333
Rental Assistance (Phase I, GF & Phase II, TTX)	\$ 4,310,000	\$ 4,100,000	\$ 8,410,000	\$ 12,919,067	\$ 10,300,000	\$ -	\$ 23,219,067	\$ 23,219,067
Mental health housing development	\$ -	\$ 5,000,000	\$ 5,000,000	\$ -	\$ -	\$ -	\$ -	\$ -
Supported Employment Services	\$ 1,500,000	\$ -	\$ 1,500,000	\$ 60,000	\$ -	\$ 2,000,000	\$ 2,060,000	\$ 2,060,000
Tribal Investments	\$ 900,000	\$ 900,000	\$ 1,800,000	\$ 80,064	\$ 2,391,936	\$ -	\$ 2,472,000	\$ 2,472,000
Sobering Centers	\$ -	\$ -	\$ -	\$ 1,000,000	\$ -	\$ -	\$ 1,000,000	\$ 1,000,000
Peer-delivered Services	\$ -	\$ -	\$ -	\$ 1,500,000	\$ -	\$ -	\$ 1,500,000	\$ 1,500,000
Residential Substance Use Disorder Treatment	\$ -	\$ -	\$ -	\$ 3,500,000	\$ -	\$ -	\$ 3,500,000	\$ 3,500,000
Total	\$ 39,740,000	\$ 19,000,000	\$ 58,740,000	\$ 47,237,797	\$ 40,472,269	\$ 16,000,000	\$ 105,916,066	\$ 105,916,066

**COMMUNITY SERVICES WORKGROUP
REPORT**

for the

OREGON STATE HOSPITAL MASTER PLAN

March 13, 2007

Prepared for the Community Services Workgroup
By: Department of Human Services, Addictions and Mental Health Division
500 Summer Street, NE E-86, Salem, Oregon 97301-1118

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Oregon State Hospital Master Plan Community Services Workgroup

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- Senator David Nelson
- Senator Jackie Winters
- Senator Avel Gordley
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COMMUNITY SERVICES WORKGROUP REPORT
for the OREGON STATE HOSPITAL MASTER PLAN
March 13, 2007

INTRODUCTION

The State Hospital Master Plan Phase II Report released in February 2006 recommended significant investment in community mental health services in Oregon. The report stated, “Without the enhanced community programming, demand for Oregon State Hospital (OSH) beds will substantially exceed projections of size and cost.” To address in more detail the need for both “front end” and “back end” services, the Addictions and Mental Health Division (AMH) convened the Oregon State Hospital Master Plan Community Services Workgroup in September 2006. In support of the findings in the Phase II Report, the Workgroup agrees that there is one mental health system and the full continuum of mental health services needs to be enhanced to successfully improve the quality and efficiency of services. The Workgroup received extensive input into the types of services needed, especially for “front end services” and issues this report to inform the AMH, the Department of Human Services (DHS), the Governor, and the Legislature on the continuum of services required to complement the replacement of the state hospital facilities and to assure the new hospitals’ success. In addition, the report provides a narrative description of each type of “front end” service, systematic estimates of the need for and costs of these services, and a timeline for implementing the services.

The Governor’s Recommended Budget includes the anticipated funds needed for the 2007-09 biennium’s “back end” (or extended care and forensic community services) plus an initial investment of \$14.3 million towards the “front end” services recommended in the Phase II report. Funding to expand eligibility of persons for Oregon Health Plan Standard is also included in the Governor’s Recommended Budget, which will increase access to Medicaid covered mental health services. The recommendations in this report are intended to provide information about the services needed in an effective mental health system and the funds necessary over the next four biennia to

implement those services. The Workgroup acknowledges that the realities of available funding will influence the decisions made in response to this report. Also the Workgroup recognizes that there are not yet sufficient numbers of qualified mental health professionals and other trained staff to fully implement the recommendations in the immediate future. AMH's Behavioral Workforce Development Committee is a key component in the improvement and enhancement of the community mental health system.

VALUES

As has been articulated in many previous reports and recommendations, community mental health services must be developed with values that support individual recovery. The following statements, adapted from the Governor's Mental Health Task Force Report, summarize the values that drive the recommendations in this report.

- Recovery is the goal of all mental health services.
- Treatment and supports must be consumer-directed.
- Services provided by persons who are recovering from mental health problems serve a valuable role in supporting other people in recovery.
- Services must be available in communities where people live.
- Services must be evidenced-based.
- Safe and affordable housing is key to recovery.
- Services must be culturally and age specific.
- Services must recognize the effects of trauma and support recovery from trauma.
- Planning for services best occurs at the local level while the state provides the resources and accountability.
- An effective mental health system coordinates and collaborates with the broader system of community services.

RECOMMENDATIONS FOR COMMUNITY “FRONT END” SERVICES

Services needed in a comprehensive effective community mental health system are outlined in these recommendations. In addition to identifying new services, the expansion of current services to meet the unmet needs is outlined. The costs for this expansion are stated in terms of additional funds needed each biennium from 2007 - 2009 through 2013 - 2015.

General Assumptions

Well-established research into prevalence rates for mental health disorders project that 161,736¹ persons in Oregon currently experience a serious or severe mental illness. Some of these individuals are served in the public system while others receive services through the private sector. An Office of Health Policy and Research 2004² report on uninsured people in Oregon showed that 18.5 percent of adults were uninsured. This would indicate that approximately 29,921 persons with a mental illness are currently uninsured. Of the people now served in the adult outpatient mental health system, 10,699³ people were non-Medicaid eligible. Therefore, there are approximately 19,222 uninsured persons with a serious mental illness that are not being served. This report will use this estimate as the unmet need. These recommendations also assume a three percent population growth per biennium. All funding for services described in this report are General Fund dollars and the funding identified for each biennium is additional funding.

Early Intervention and Prevention Services

The experience of psychosis is remarkably common and frequently devastating. From age 15 to 30 the brain is in its final stages of maturation, with

¹ See 2007 Oregon Mental Health Federal Block Grant Application Prevalence Table as Appendix A

² *Profile of Oregon's Uninsured, 2004*, Oregon Health Policy and Research

³ Addictions and Mental Health Division Client Process Monitoring System

development focusing on the frontal cortex. During this process three out of 100 people will develop a psychosis. More than one in 100 will develop ongoing symptoms of psychosis, which need to be managed.

Early treatment of psychosis with evidence-based practices provides the best opportunity for ensuring long-term recovery. These services focus on early identification, support and treatment for the individual and the individual's family. Educating the person about their illness and assisting them in developing skills to manage their symptoms of the illness are key components of the services. Expanding specialized treatment of this kind will reduce hospitalizations, homelessness, and involvement with the criminal justice system. It will also increase educational achievement and stable, productive employment. Based on epidemiological research and five years of experience with the Mid-Willamette Valley's Early Assessment and Support Team (EAST) project, the statewide need for services is estimated to be 360 new clients and their families per year. About 270 persons per year would require services funded by General Fund monies. The average length of stay in treatment would be 18 months, with 6 months of aftercare or transition. This would mean a General Fund-supported caseload of about 540 persons in the second year of the 2007 – 2009 biennium. The \$5,000 per person per year cost reflected in these recommendations includes psychiatry, case management with moderate outreach, full family support and preliminary community education. This level of funding would produce significantly positive results for the majority of the persons served with EAST services. To include supported education/employment, occupational therapy, highly persistent outreach, nursing and comprehensive community education would raise the cost to \$9,000 to \$10,000 per person per year.

Recommendations for:

2007 – 2009

- Expand EAST services statewide to serve 270 persons the first year and 540 persons in the second year.
 - Cost: \$4.3 million
 - Assumption:
 - \$5,000 per person, per year

- Length of EAST services is two years
- Costs this biennium include contracted technical assistance, project evaluation, statewide project coordination position

2009 – 2011

- Increase funding of EAST services to serve 540 people for the full biennium
 - Cost: \$1.3 million
 - Assumptions:
 - Biennial 3.1% Cost of Living Adjustment (COLA)

2011 – 2013

- Increase funding of EAST services to serve 570 people for the entire biennium
 - Cost: \$160,000
 - Assumptions:
 - Biennial 3.1% COLA
 - Growth of 30 persons to be served

2013 – 2015

- Increase funding of EAST services to serve 600 people for the entire biennium
 - Cost: \$160,000
 - Assumptions:
 - Biennial 3.1% COLA
 - Growth of 30 persons to be served

Crisis Services

Crisis services respond to mental health crises in the community. The services are accessed directly by an individual or indirectly through a community first responder. Communities already have crisis lines that provide at least a minimum crisis response especially for persons whose behaviors have already begun to be dangerous to themselves or others. However, an effective crisis

system includes the ability of a mental health professional to respond much earlier to crises in the field. Mobile crisis interventions, for example, are delivered quickly on site and ensure that a person receives needed services promptly. Most communities have limited ability to provide mobile crisis services, forcing first responders to rely on hospitals or incarceration. This results in persons being served in inappropriately high levels of care or unsuitable settings while they wait for more appropriate and efficient services.

Recommendations for:

2007 – 2009

- Increase crisis funding to Community Mental Health Programs (CMHPs) to serve 25% of the unmet need
 - Cost: \$2.6 million
 - Assumptions:
 - 25% (or 4,806 people) of the unmet population will require crisis services⁴
 - Average of 1.5 episodes per person⁵
 - \$735 per episode⁶
 - Fund 25% of the gap this biennium

2009 – 2011

- Increase crisis funding to CMHPs to serve 50% of the unmet need
 - Cost: \$3 million
 - Assumptions:
 - Biennial 3.1% COLA
 - Growth of 180 people in total unmet need based on population growth

2011 – 2013

- Increase crisis funding to CMHPs to serve 75% of the unmet need
 - Cost: \$3.4 million

⁴ Report to the Governor from the Mental Health Alignment Workgroup, January 2001

⁵ Ibid

⁶ Ibid

- Assumptions:
 - Biennial 3.1% COLA
 - Growth of 180 people in total unmet need based on population growth

2013 – 2015

- Increase crisis funding to CMHPs to serve 100% of the unmet need
 - Cost: \$3.8 million
 - Assumptions:
 - Biennial 3.1% COLA
 - Growth in 180 people in total unmet need based on population growth

Acute Care Service

Acute care services are medically managed mental health services are typically provided in a hospital setting. Currently Oregon has approximately 278 acute care beds distributed among the 16 community hospitals with psychiatric units. Although some sub-acute mental health services can be provided in secure residential settings, Oregon currently has only 25 such beds. The average length of stay for persons in acute care is approximately 10 days.

Rural communities have particular difficulty accessing acute care mental health services due to the considerable distance from hospitals with psychiatric units. Some rural community hospitals are certified to provide emergency short-term care for persons experiencing a mental health crisis. The average length of stay for these hospital holds is two days.

Hospital-based acute mental health care capacity in Oregon has decreased 23 percent in the last eight years. The existence of significant administrative burdens, financial losses, and the shortage of state-owned psychiatric beds have contributed to the closure of hospital acute care beds. It is likely that if both the funding shortfall and the administrative problems are not addressed additional acute care beds will be close, leading to increasing pressure on the remaining

hospital based providers. This part of Oregon's mental health system is at a tipping point.

In addition to the challenges facing hospital-level acute care service, options need to be expanded to provide sub-acute care when appropriate. With only 25 sub-acute beds currently in the state, this opportunity provides less expensive care options for patients who do not need hospital level of care, as well as providing a "step down" for people leaving the hospital. AMH will soon announce a planning process to assess statewide need for both acute care hospital and non-hospital alternatives.

These alternatives include:

- Sub-acute services – acute care services delivered in a small (16 beds or fewer) residential treatment facility that are monitored by a licensed medical practitioner.
- Crisis respite – 24-hour, 7 days per week, mental health support services provided a person outside the home.

The funding recommended below would fund both acute care services and acute care alternatives. As communities develop acute care alternatives, funding can be reassessed so that high cost inpatient services are properly reimbursed and that community alternatives are available whenever they offer the safest and most efficient level of care needed.

Recommendations for:

2007 – 2009

- Increase funding to acute care regions to respond to the gap between acute care costs and acute care payments, develop sub-acute treatment and crisis respite alternatives. Meet 75% of the unmet need.
 - Cost: \$8.37 million

- Assumptions:
 - 35,728 hospital days 2005-2006 fiscal year were for non-Medicaid eligible persons⁷
 - Approximately \$1,200 per day based on Medicaid billed charges data from fiscal year 2005-2006
 - 10% for community alternatives to acute care
 - \$27 million per biennium currently fund indigent acute care services

2009 - 2011

- Increase regional acute care funding to meet 100% of unmet need
 - Cost: \$11.0 million
 - Assumptions:
 - Biennial 5% medical COLA
 - Growth of 810 patient days per biennium
 - Funding for 2009-2011 detox services subtracted from this funding

2011 – 2013

- Increase regional acute care funding to respond to growth
 - Cost: \$3.6 million
 - Assumptions:
 - Biennial 5% medical COLA
 - Growth of 810 patient days per biennium
 - Funding for 2011-2013 detox services subtracted from this funding

2013 – 2015

- Increase regional acute care funding to respond to growth
 - Cost: \$3.8 million
 - Assumptions:
 - Biennial 5% medical COLA
 - Growth of 810 patient days per biennium

⁷ Addictions and Mental Health Division Oregon Patient Residential Care System

- Funding for 2013-2015 detox services subtracted from this funding

Case Management Services

Case management service is the core of an effective adult community mental health system. This service provides an individual with the ongoing support to continue recovery in the community and avoid higher levels of care. Case managers link individuals to treatment services, community services and naturally occurring supports. While some services might occur in a clinic setting, effective case management is delivered in settings outside the clinic in the community.

Not all persons receiving mental health services require the same intensity of service. Approximately 15 percent of persons with a serious mental illness require the intensive level of services of Assertive Community Treatment (ACT). ACT is an outpatient treatment model, adapted from traditional case management methods, for individuals with serious mental illnesses that have not benefited from traditional case management services. A multidisciplinary team with an average caseload size of 10 to 12 people provides the services. Key components of ACT include assertive outreach, team approach, crisis services provided by the team and close work with other community support services. Currently in Oregon, the availability of ACT is limited and caseload sizes vary considerable from one county to the next.

For many persons with a serious mental illness medications are essential to healthy living in the community. However, for persons without medical coverage, medications are too expensive to obtain. Community mental health programs need funding to cover the cost of medications for persons that have a gap in medical coverage and do not qualify for medication scholarship programs. Both medication funding and access to licensed medical professionals who can assess and prescribe medications are a necessity. Rural Oregon experiences considerable difficulty recruiting and retaining licensed medical professionals that can prescribe medications. These regions of the state need to develop networks of psychiatrists and nurse practitioners to meet this

need. Telepsychiatry is a technology that can help meet this need.

While case management and medication services are very important, some individuals need and respond well to counseling services. The funding included in the recommendations that follow is intended to cover counseling services when needed.

When evaluating the unmet need for case management services, the increase needed to meet that demand is immense. So significant is this increase that it is unlikely that the current mental health workforce is sufficient to meet the need. Therefore, the projections outlined in the recommendations for case management services project to meet only 50 percent of the estimated unmet demand for these services after four biennia. As previously noted, AMH's Behavioral Workforce Development Committee is addressing in more detail the future needs and resources to assure a qualified pool of behavioral health staff. As advancements in the growth in the workforce are realized, the projections in the case management recommendations can be adjusted.

Recommendations for:

2007 – 2009

- Develop the equivalent of three ACT Teams statewide to serve 300 adults
 - Cost: \$8.4 million
 - Assumptions:
 - ACT
 - Full ACT teams serve 100 consumers and rural areas of the state would require smaller teams
 - Annual cost per person is \$14,000
 - An estimated 3,000 non-Medicaid eligible persons with a serious mental illness would benefit from ACT
 - 500 people needing the intensive services of ACT would be served through jail diversion funding and 1,300 people would receive services provided through supported housing

- Increase funding to serve 12.5% of case management unmet need
 - Cost: \$10.2 million
 - Assumptions:
 - 85% of the unmet need requires basic case management services
 - \$2,500 per year for basic case management services with medication services

2009 - 2011

- Develop the equivalent of three additional ACT Teams statewide to serve an additional 300 adults
 - Cost: \$11.6 million
 - Assumptions:
 - Same assumptions as 2007-2009 biennium
- Increase funding to serve 25% of case management unmet need.
 - Cost: \$8.7 million
 - Assumptions:
 - Same assumptions as 2007-2009 biennium

2011 – 2013

- Develop the equivalent of 3 additional ACT Teams statewide to serve an additional 300 adults
 - Cost: \$13.2 million
 - Assumptions:
 - Same assumptions as 2009-2011 biennium
- Increase funding to serve 37.5% of case management unmet need
 - Cost: \$8.9 million
 - Assumptions:
 - Same assumptions as 2009-2011 biennium

2013 – 2015

- Develop the equivalent of three additional ACT Teams statewide to serve an additional 300 adults
 - Cost: \$14.9 million
 - Assumptions:
 - Same assumptions as 2011-2013 biennium

- Increase funding to serve 50% of case management unmet need
 - Cost: \$9.2 million
 - Assumptions:
 - Same assumptions as 2011-2013 biennium

Supported Employment and Supported Education

Part of recovery for a person with a mental illness is having a meaningful role in the community. Supported employment and supported education services provide the assistance that a person needs to successfully participate in the community. Supported employment is an evidence-based practice that not only has proven results in employment, but also greatly improves a person's quality of life. Supported education is a practice that is developing and research is underway to establish it as an evidence-based practice. Supported employment and supported education works with the individual and the employer or educator to support success in these environments.

Oregon is a leader in the development of supported employment. However, supported employment is only available in select counties. Studies estimate that 70 percent of persons with a serious mental illness express a desire to work. However, studies are not conclusive regarding the optimum length of supported employment services. For the purposes of this report, it is assumed that at any given time 25 percent of the unmet need should have supported employment services.

Recommendations for:

2007 – 2009

- Provide Supported Employment/Education to fund 25% need
 - Cost: \$11.2 million
 - Assumption:
 - \$3,000 per person, per year
 - Total of 1,870 people served each year

2009 – 2011

- Provide Supported Employment/Education to serve 50% of the need
 - Cost: \$12.8 million
 - Assumption:
 - Biennial 3.1 % COLA
 - Total of 3,875 people served each year

2011 – 2013

- Provide Supported Employment/Education to serve 75% of the need
 - Cost: \$14.4 million
 - Assumption:
 - Biennial 3.1 % COLA
 - Total of 6,015 people served each year

2013 – 2015

- Provide Supported Employment/Education to serve 100% of the need
 - Cost: \$16.1 million
 - Assumptions:
 - Biennial 3.1 % COLA
 - Total of 8,290 people served each year

Jail Diversion and Jail Release Programs

As a result of inadequate resources for non-Medicaid eligible individuals, plus the continuing methamphetamine epidemic in Oregon, law enforcement has had to accept a far more central role in handling mental health crises in the community than it should have to assume. Many individuals end up in our criminal justice system that is ill-equipped to meet the mental health needs of these individuals. Jail diversion services need to be in place to divert people with a serious mental illness from the criminal justice system, and also provide immediate services when a person is released from a local jail. Mental health or treatment courts are emerging as an effective practice for persons with a mental

illness charged with a crime. Those jurisdictions that operate a mental health court rely on the community mental health system to provide the services that the court requires.

Some individuals with a mental illness will require more intensive services when being diverted from the jail or being released from jail. In 2005, the Addictions and Mental Health Division (AMH) in collaboration with the Oregon Jail Managers Association completed a survey regarding persons with a severe mental illness in the jail system⁸. The results from a 100 percent sample of county jails indicated that over 9 percent of the persons in the jail have a severe mental illness. The number of daily jail bookings in Oregon is 540, which means that about 50 people with a serious mental illness are booked every day. Assuming that some of these bookings are repeat offenders, and some individuals can be served in the traditional ACT programs, approximately 500 non-Medicaid eligible people per year will need forensic intensive case management services.

The 2005 Legislature passed SB 913 that allows Medicaid benefits to be suspended instead of terminated when a person with a serious mental illness is incarcerated. The statutory change needs to be fully implemented and advocacy needs to occur at the federal level to permit Medicaid benefits to continue when a person enters a local jail.

Recommendations for:

2007 – 2009

- Provide forensic intensive case management services to people being diverted from jail or upon release from jail. Provide 25% of the estimated need.
 - Cost: \$6.25 million
 - Assumptions
 - Cost is \$25,000 per person, per year
 - 500 people served is estimated need

⁸ Oregon 2005 Jail Survey Results

2009 – 2011

- Provide forensic intensive case management services to people being diverted from jail or upon release from jail. Provide 50% of the estimated need.
 - Cost: \$7 million
 - Assumptions
 - Biennial 3.1 % COLA
 - 515 people served is estimated need

2011 – 2013

- Provide forensic intensive case management services to people being diverted from jail or upon release from jail. Provide 75% of the estimated need.
 - Cost: \$7.9 million
 - Assumptions
 - Biennial 3.1 % COLA
 - 530 people served is estimated need

2013 – 2015

- Provide forensic intensive case management services to people being diverted from jail or upon release from jail. Provide this to 100% of the estimated need.
 - Cost: \$8.7 million
 - Assumptions
 - Biennial 3.1 % COLA
 - 545 people served is estimated need

Co-Occurring Disorder Consultation, Technical Assistance and Detoxification

Studies have have shown that approximately 70 percent of people with a mental illness have a substance use problem. Treatment for co-occurring disorders is most effective when the alcohol and drug services are integrated with mental health services. While outpatient services for co-occurring disorders are widespread, the fidelity for integrated co-occurring disorder services is low.

Residential services for co-occurring disorders are extremely limited and specific detox services for people with co-occurring disorders are essentially non-existent. Communities throughout Oregon have identified co-occurring disorder detox services as a high priority. Last fiscal year, there were 8,130 psychiatric acute care admissions⁹ in the state and one county reported that approximately 45 percent of the persons admitted to inpatient psychiatric services in their county were positive for drugs or alcohol. This would lead to an estimate of 3,659 acute admissions statewide that had drug or alcohol involvement. This estimated need would be met with 100 detox beds.

Recommendations for:

2007 – 2009

- Provide technical assistance to 100 outpatient programs
- Provide specific funding to CMHPs to provide supervision and fidelity monitoring
- Provide indigent funding for 25 community residential co-occurring detox beds
 - Cost: \$6.15 million
 - Assumption:
 - \$1.5 million to be distributed in accordance with a prevalence formula for supervision and implementation
 - \$500,000 for the technical assistance.
 - \$4.15 million for co-occurring detox
 - \$200 per day, per bed
 - \$500,000 for development

2009 – 2011

- Provide indigent funding for an additional 25 community residential co-occurring detox beds
 - Cost: \$4.28 million

⁹ Addictions and Mental Health Division Oregon Patient Residential Care System

- Assumptions:
 - \$200 per day, per bed
 - \$500,000 for development

2011 – 2013

- Provide indigent funding for an additional 25 community co-occurring residential detox beds
 - Cost: \$4.4 million
 - Assumptions:
 - Biennial 3.1% COLA

2013 – 2015

- Provide indigent funding for an additional 25 community residential co-occurring detox beds
 - Cost: \$4.6 million
 - Assumptions:
 - Biennial 3.1% COLA

Housing

A 2005 Housing Survey conducted by AMH reports that approximately 5,270 persons receiving mental health services are in immediate need of affordable housing and 1,940 are in need of supportive housing¹⁰. Resources to develop affordable housing come from a variety of sources and AMH is central to assisting communities connecting with the potential funding. AMH administers the Community Mental Health Housing Fund that supports new development and provides funding for necessary modifications of existing housing. AMH will continue to use designated funds to develop new housing. Numerous people receiving mental health services need housing subsidies to obtain clean, safe housing in the community. The AMH Housing Survey will be conducted again in 2010. This information would measure the progress related to the housing recommendations listed below.

¹⁰ Results of the 2005 OMHAS Housing Survey

Supportive housing for people with serious mental illness has been shown to be effective in promoting residential stability and reducing incidence of hospitalization, homelessness and incarceration. AMH currently has a grant from the Centers for Medicare and Medicaid Services to support work on refining service financing mechanisms to better support people in independent community housing settings. The grant provides funding for technical assistance and development of a resource manual to promote supportive housing services. There is growing evidence in support of the “housing first” model. “Housing first” refers to programs that provide flexible supports and help mental health consumers acquire affordable housing of their choice without having to progress through interim structured housing.

Recommendations for:

2007 – 2009

- Provide monthly housing subsidy to 25% of the need identified in 2005 Housing Survey
 - Cost: \$15.81 million
 - Assumptions:
 - \$500 per month subsidy
- Provide Supported Housing services to 25% of the need identified in 2005 Housing Survey
 - Cost: \$9.36 million General Fund
 - Assumptions:
 - \$1,875 per month for services and rent subsidy
 - 80% Medicaid eligible

2009 – 2011

- Provide monthly housing subsidy to 50% of the need identified in 2005 Housing Survey
 - Cost: \$17.71 million
 - Assumptions:
 - Biennial 3.1 % COLA
 - Growth of 150 people in the identified need group
- Provide Supported Housing services to 50% of the need identified in 2005 Housing Survey

- Cost: \$10.54 million General Fund
- Assumptions:
 - Biennial 3.1% COLA
 - Growth of 60 people in the identified need group
 - 80% Medicaid eligible

2011 – 2013

- Provide monthly housing subsidy to 75% of the need identified in 2005 Housing Survey
 - Cost: \$19.75 million
 - Assumption:
 - Biennial 3.1 % COLA
 - Growth of 150 people
- Provide Supported Housing services to 75% of the need identified in 2005 Housing Survey
 - Cost: \$11.8 million GF
 - Assumptions:
 - Biennial 3.1% COLA
 - Growth of 60 people in the identified need group
 - 80% Medicaid eligible

2013 – 2015

- Provide monthly housing subsidy to 100% of the need identified in 2005 Housing Survey
 - Cost: \$21.94 million
 - Assumption:
 - Biennial 3.1 % COLA
 - Growth of 150 people in the identified need group
- Provide Supported Housing services to 100% of the need identified in 2005 Housing Survey
 - Cost: \$13.14 million GF
 - Assumptions:
 - Biennial 3.1% COLA
 - Growth of 60 people in the identified need group
 - 80% Medicaid eligible

Special Populations

Two special populations require specific attention in the development of mental health resources. The needs of transitional age youth, ages 16 to 24, with a mental illness have long been ignored. These youth are expected to move from the child mental health system to the adult mental health system with nothing more than a referral and without acknowledging their developmental needs. Services delivered at this crucial stage in a person's life are essential to recovery. The goals are to have Transitional Age Youth Coordinators in every Community Mental Health Program (CMHP) to assure the proper transition from child mental health services to adult mental health services when necessary.

Older adults are another special population needing increased attention. Mental health problems among older adults pose a continuing challenge to Oregon's healthcare and social services systems. Addressing this need is critical because of the projected rapid increase in the percentage of older adults in the population. Older adults form 13 percent of Oregon's population now, but the percentage may reach 24 percent over the next 30 years. Although the size of the problem is growing, Oregon has limited specialized outpatient mental health programs that address the specific treatment access, engagement, and retention needs of the older adult population. Geriatric Mental Health Specialists should be placed in each community mental health program.

The mental health services outlined in the previous sections include these populations in the projections. In addition to the recommendation to place age specific specialists in each CMHP, the counties should be directed to include services targeted to these special populations as they develop the array of services.

Transitional Age Youth Recommendations for:

2007 – 2009

- Establish Transitional Age Youth Coordinators in every CMHP
 - Cost: \$6.1 million

- Assumption:
 - 33 Qualified Mental Health Specialists at \$92,226 each for the biennium

2009 – 2015

- No additional funding

Older Adult Recommendations for:

2007 – 2009

- Establish Geriatric Specialists in every CMHP
 - Cost: \$6.1 million
 - Assumption:
 - 33 Qualified Mental Health Specialists at \$92,226 each for the biennium

2009 – 2015

- No additional funding

Peer Delivered Services

Research is mounting that demonstrates the effectiveness of peer delivered services and people receiving mental health services voice the positive effect of services provided by people that have had similar experiences. Peer delivered services can and should be included in all the categories described above. For example, ACT services are enhanced when the team includes a peer counselor or case manager, and peers can provide support as a person experiences a crisis that might include acute care services. As the mental health services are funded and directed to the CMHPs, peer-delivered services should be incorporated into the development of services. Peer Service Specialists in each CMHP would ensure that peer-delivered services are incorporated into the services array.

An excellent example of peer-supported services is the establishment of Dual Diagnosis Anonymous (DDA) in Oregon. DDA conducts meetings throughout Oregon that are based on the 12 Steps of Alcoholics Anonymous plus 5 steps

that focus on dual disorders of substance abuse and mental illness. In less than 2 years, DDA has grown to over 600 people attending meetings. Further modest financial support would continue the expansion of these valuable meetings.

Recommendations for:

2007 – 2009

- Establish Peer Services Coordinators in every CMHP
 - Cost: \$6.1 million
 - Assumption:
 - 33 Peer Specialists at \$92,226 each for the biennium
 - \$100,000 investment in Dual Diagnosis Anonymous

2009 – 2015

- No additional funding

Local Administration

The community mental health system in Oregon relies on a strong partnership between AMH and the local CMHPs. Nearly all of the community mental health services are contracted through the CMHPs. Frequently when mental health service funding is enhanced, the CMHPs are expected to implement additional services without consideration of the costs associated with the administration of those services. Proper administration ensures that the planning, development, and delivery of mental health services occur with regulatory assurance and quality. Therefore, the following recommendation addresses this often-overlooked aspect of effective mental health system.

Recommendations for:

2007 – 2009

- Fund Local Administration of added mental health services
 - Cost: \$1.6 million
 - Assumption:
 - 4% of the cost of added services

2009 – 2011

- Fund Local Administration of added mental health services
 - Cost: \$4.0 million
 - Assumption:
 - 4% of the cost of added services

2011 – 2013

- Fund Local Administration of added mental health services
 - Cost: \$3.52 million
 - Assumption:
 - 4% of the cost of added services

2013 – 2015

- Fund Local Administration of added mental health services
 - Cost: \$3.5 million
 - Assumption:
 - 4% of the cost of added services

COMMUNITY “BACK END” SERVICES

Community residential programs are often referred to as “back end” services because these are the services that most directly facilitate people leaving the state hospital. The State Hospital Master Plan Phase II Report also emphasizes the importance of a strong residential system as part of an effective mental health system. The report states, “...availability and access to these programs (*community residential*) are keys to 1) reducing the patient population, 2) decreasing the length of stay at the State Hospital, and 3) maximizing mental health services in the community.”¹¹ The table below, based on projections in the Phase II Report, demonstrates the needed residential services by region between 2005 and 2030.

¹¹ State Hospital Master Plan Phase II Report

Community Residential Bed Need by Region¹²

Region	2005 ^a		2011 ^b		2030 ^b	
	Civil	Forensic	Civil	Forensic	Civil	Forensic
North Willamette Valley	749	118	865	233	996	365
South Willamette/Central Coast	356	27	380	51	430	101
North Coast	22	8	38	24	41	28
Southern Oregon	281	11	292	25	318	52
Central Oregon	29	7	67	45	87	66
Eastern Oregon	116	5	119	9	129	20
TOTAL	1,553	176	1,761	387	2,001	632

^a Actual distribution of beds in 2005

^b Assumes 50% civil and 50% forensic development

AMH is projecting the development of 300 community placements in the 2005-2007 biennium and the 2007-2009 Governor's Recommended Budget includes funding for 150 additional civil commitment residential beds and 131 additional forensic residential beds. AMH has determined that the community residential need can be met with funding in the Governor's Recommended Budget and future biennia caseload growth funding. AMH will plan future development to address current disparities in residential bed distribution. Special attention will need to be paid to the Central Oregon region, as it is the region that is most in need for residential development.

FURTHER CONSIDERATIONS

Additional issues were identified that do not have specific recommendations for services and funding that need to be highlighted. The following warrant consideration as "front end" services are implemented:

¹² Ibid

Transportation

Mental health services not only need to be of high quality, but they also need to be accessible. While the large portion of the population is located in areas with a public transportation system, many counties and municipalities have minimal or non-existent public transportation. Also, distances to mental health services are significant in the rural areas. Transportation to available services needs to be addressed as communities plan mental health services.

Rural Costs

Another concern for rural communities is delivering mental health services on a much smaller scale. This often increases the cost of those services. CMHPs would need to work closely with AMH to assure the cost of rural services is considered as new funding is allocated.

Improved Information System Infrastructure

Effective planning for mental health services and effective monitoring of outcomes require information systems that can produce timely meaningful data. Electronic medical records would improve the coordination of individuals care across the system. Funding for the replacement state hospital facilities includes some funding for the Behavioral Health Improvement Project (B-HIP) to replace the archaic data systems upon which the mental health system relies.

Funding Disparities

It is critical that each community or regional system of care in our State have enough resources to fund a set of core services and supports. The Oregon State Hospital Master Plan will not be successful in operating with limited beds, shorter lengths of stay and a manageable occupancy rate if every region is not funded comprehensively and comparably, based on objective analysis of the relative need in each geographic area.

Our current system has great disparity in the level and type of state investment in our regions and communities. Historical precedent, insufficient funding of behavioral health care, significant cuts in indigent and OHP funds in recent years, extraordinary population growth in a handful of counties and an inability to fully address disparity all contribute to the current dilemma. AMH should work with the CMHPs as plans for the allocation of new funds are determined.

AMH and the CMHPs have agreed that the use of the Kessler Prevalence Formula would guide future allocations of new funds.

EASTERN AND CENTRAL OREGON PSYCHIATRIC INPATIENT AND RESIDENTIAL NEEDS WORKGROUP

The Eastern and Central Oregon Psychiatric Inpatient and Residential Needs Workgroup has been meeting since August 2006 to focus on the special mental health system needs of those regions. It was from this Workgroup that the Central Oregon region initiated a local comprehensive community mental health planning process. Central Oregon has developed a detailed report that outlines their particular needs and that draft report informed the Eastern and Central Oregon Workgroup as well as this Community Services Workgroup. While the Eastern and Central Oregon Workgroup was directed to focus on residential and inpatient needs, the Workgroup also reviewed the broader mental health system needs and the Central Oregon Regional Plan is attached as Appendix B.

IMPLEMENTATION OF COMMUNITY “FRONT END” SERVICES

As stated above, the Central Oregon Region initiated an indepth planning initiative to develop a plan for regional community mental health services. The comprehensive Central Oregon Regional plan was presented to this Workgroup in December 2006. The value of local planning was highlighted in that presentation. The state needs to provide the overall direction of a statewide system of mental health services and the local communities need the opportunity to plan the implementation of those services to meet the particular needs of the citizens of that community. Clear guidelines for local planning of community mental health service enhancements should be provided to the counties or regions by the state. The values delineated in the beginning of this report need to guide the local planning process. Performance indicators related

to the values and service enhancements need to be identified for the local community and statewide.

In each of the service funding areas, there are discrepancies in the distribution of funding across the counties. Any additional funding should address these disparities while meeting the statewide mental health system needs. The Kessler Prevalence formula should be used to determine the allocations to counties and regions.

Recommendations for Implementation:

- AMH should require local plans for each of the service area associated with service enhancement funding.
- Statewide Performance Indicators associated with each service area should be developed by AMH.
- AMH should monitor the implementation of the local plans.

CONCLUSION

The Oregon State Hospital Master Plan Phase II Report focuses on the replacement of hospital facilities. However, the recommendations in the report are predicated on the significant enhancement of the community mental health system. Without the investment in these “front end” services, the demand for state hospital beds will exceed the number of beds included in the new state hospital facilities. This report informs the Governor, the Legislature and DHS what services are needed to support the new state hospital.

Community Services Workgroup Report
 Services and Additional Funding by Biennium
 Summary Table – Amounts in Millions

SERVICE	07/09 Biennium	09/11 Biennium	11/13 Biennium	13/15 Biennium
EAST	\$4.3	\$1.39	\$0.16	\$0.16
Crisis	\$2.65	\$3.0	\$3.4	\$3.8
Acute	\$8.37	\$11.0	\$3.6	\$3.8
Case Management (50%) ^a	\$18.6 (\$28.8)	\$20.3 (\$32.0)	\$22.1 (\$35.3)	\$24.1 (\$38.9)
Supported Employment/Education	\$11.2	\$12.8	\$14.4	\$16.1
Jail Diversion/Re-Entry	\$6.25	\$7.0	\$7.9	\$8.7
Housing	\$25.17	\$28.25	\$31.55	\$35.08
Co-Occurring	\$6.15	\$4.28	\$4.4	\$4.6
Transition Age	\$6.1	\$0	\$0	\$0
Older Adult	\$6.1	\$0	\$0	\$0
Peer Specialist	\$6.2	\$0	\$0	\$0
Local Administration	\$4.0	\$3.52	\$3.5	\$3.85
AMH Administration				
TOTAL	\$105.09	\$91.54	\$91.01	\$100.19

^aThese funds will only provide outpatient services to 50 percent of the unmet need by 2015. These funding projections were reduced due to concern that the behavioral workforce would not be sufficient to deliver the services at the fully funded level. The funds needed to fully meet all case management needs are in parentheses.

APPENDICES

- A - 2007 Oregon Mental Health Federal Block Grant Application
Prevalence Table
- B - Central Oregon Regional Plan
- C - List of Needs and Barriers
- D - Acronym Guide

APPENDIX A

2007 Oregon Mental Health Federal Block Grant Prevalence Table

2007 Oregon Mental Health Federal Block Grant
Prevalence Table

Oregon Population and Special Population Estimates

	State Fiscal Year												
	1993-94	1994-95	1995-96*	1996-97*	1997-98*	1998-99*	1999-2000*	2000-2001*	2001-2002*	2002-2003*	2003-2004*	2004-2005*	2005-2006*
Adults													
Population	2,225,278	2,285,317	2,323,697	2,362,617	2,393,047	2,481,340	2,520,805	2,574,873	2,615,068	2,670,114	2,665,710	2,698,507	2,732,030
Prevalence (SMI)	133,819	135,550	137,641	139,897	141,668	146,895	149,232	152,432	154,812	158,071	157,810	159,752	161,736
Prevalence (SPMI)	63,148	63,989	65,062	66,153	66,981	70,470	71,591	73,126	74,268	75,831	75,706	76,638	77,590
Medicaid Eligibles	200,573	317,169	332,299	288,336	289,978	310,733	308,341	327,843	367,892	371,095	332,090	309,448	285,625
Percent	8.9%	13.9%	14.3%	12.2%	12.1%	12.5%	12.2%	12.7%	14.1%	13.9%	12.5%	11.5%	9.7%
Enrolled in OHP managed care	76,815	209,137	267,137	273,721	259,361	271,616	267,572	276,111	301,462	301,248	278,792	220,396	210,643
Percent of eligibles	38%	66%	80%	95%	89%	87%	87%	84%	82%	81%	84%	71%	79%
Adults served in MH system	37,773	43,096	45,213	48,137	52,769	56,259	59,692	67,712	71,135	69,918	61,178	72,043	71,820
Percent of demand	28%	32%	33%	34%	37%	38%	40%	44%	46%	44%	39%	45%	44%
Children													
Population	782,722	796,683	808,363	818,363	823,953	866,330	881,479	846,526	857,798	869,886	875,790	884,008	899,302
Prevalence (Moderate)	93,927	95,602	97,004	98,206	98,874	103,960	105,777	101,583	102,936	104,386	105,095	106,081	107,916
Prevalence (Severe & Persistent)	6,575	6,692	6,790	6,874	6,920	7,277	7,404	7,111	7,206	7,307	7,357	7,426	7,554
Medicaid Eligibles	207,806	245,166	255,941	239,513	221,112	248,246	252,633	274,154	279,132	281,131	314,139	282,706	289,053
Percent	26.5%	30.8%	31.7%	29.3%	26.8%	28.7%	28.7%	32.4%	32.5%	32.3%	35.9%	32.0%	32.1%
Enrolled in OHP managed care	79,585	161,659	205,753	210,823	196,271	223,880	231,300	238,379	249,049	248,889	268,732	262,974	264,427
Percent of eligibles	38%	66%	80%	88%	89%	90%	92%	87%	89%	89%	86%	93%	91%
Children served in MH system	23,815	25,498	26,750	28,192	23,932	24,451	27,938	28,875	29,024	28,356	29,199	33,220	37,467
Percent of demand	25%	27%	28%	29%	24%	24%	26%	28%	28%	27%	28%	31%	35%

*Note: To minimize duplication of effort, CPMS reporting requirements for Oregon Health Plan providers are less stringent than for non-OHP providers. Managed care encounter data has not yet been fully integrated with existing mental health information systems. Beginning with fiscal year 1995-96, counts of clients understate the actual number served for community outpatient and crisis programs, particularly for children. Projection methodology was altered during this time period to account for significant changes in Medicaid eligibility. Further, due to welfare reform, actual numbers of people eligible for Medicaid declined significantly. This decline in total eligibles resulted in fewer people accessing the publicly-funded mental health system. As Oregon's economy has declined over the last year, the number of Medicaid eligibles increased.

Data Sources:

Population- 1992-93 through 2002-03: Center for Population Research and Census, Portland State University, 2002-2003; US Census Bureau
2002-2003: Department of Administrative Services, Office of Economic Analysis

All other data Produced by the Program, Analysis and Evaluation Unit, Office of Mental Health and Addiction Services

APPENDIX B

Central Oregon Regional Plan

A Regional System to Support the Oregon State Hospital Master Plan

Critical Community Service Needs & Plans For Central Oregon 2007-2013

*Serving and supporting the recovery of people with mental illness
In Crook, Deschutes and Jefferson Counties*

December 2006

Adopted by:

- Cascade Healthcare Community Board of Directors
- Crook County Court
- Crook County Mental Health Board
- Deschutes County Board of Commissioners
- Deschutes County Mental Health, Alcohol & Drug Advisory Board
- Housing Works
- Jefferson County Mental Health Advisory Board
- NAMI of Central Oregon

"The need for investment in community residential and other settings is pivotal to Oregon State Hospital (OSH) projections. Without community residential investment ... the beds needed at OSH could exceed those projected, increasing the size and cost of replacement facilities. This increase in hospital beds would occur largely because of unnecessary admissions and longer lengths of stay, both caused by lack of enhanced community resources"

- Oregon State Hospital Master Plan Phase II Report

Thank You

Special thanks to the following people and organization that supported this work.

77 Respondents to the Central Oregon Needs Survey – A wide range of perspectives including consumers, family members, public safety officials, elected officials, practitioners and advocates

Susan Battles, Intake/Referral Coordinator, Psychiatric Emergency Services, St. Charles Medical Center, **Seth Bernstein**, Accountable Behavioral Health Alliance, **Bree Burch**, Case Manager, Sage View at St. Charles Medical Center **Karen Bird**, Deschutes County Support Staff, **Linda Boyce**, Crook County Consumer and Advocate, **Cindy Cook**, Housing Works, **Heather Crow-Martinez**, BestCare / Jefferson County Mental Health Services, **Jim Denman**, Deschutes County Community Support Services, **Kathy Drew**, Deschutes County Senior and Developmental Disabilities Services, **Jeff Emrick**, Accountable Behavioral Health & Deschutes County Chemical Dependency Org., **Sarah Haefele**, Deschutes County Support Services and Housing, **Robin Henderson**, Director, Behavioral Health Services, Cascade Healthcare Community, **Lori Hill**, Deschutes County Adult Mental Health Services, **Cathy Howes-Yates**, Community Outreach Worker, BestCare, Consumer and Advocate, **Scott Johnson**, Deschutes County Mental Health, **Toni Kelleher**, BestCare Jefferson County Consumer and Advocate, **Angela Kimball**, Association of Oregon County Mental Health Programs, **Alison Lowe**, Deschutes County Advisory Board Member, Consumer and Advocate, **Tim Malone**, Deschutes County Senior Services, **Mike Morris**, Addictions & Mental Health Division, **Judy Odil**, Crook County Consumer and Advocate, **Kristin Powers**, Manager, St. Charles Medical Center, Psychiatric Emergency Services, **Beth Quinn**, Deschutes County Advisory Board, ABHA, Consumer and Advocate, **Roger Olsen**, NAMI of Central Oregon President and Family Member, **Terry Schroeder**, Deschutes County Crisis Assessment Team, **Nick Sundstrom**, Case Manager, Sage View at St. Charles Medical Center, **Rick Treleaven**, BestCare Treatment Services (County Mental Health Provider, Jefferson County), **Nancy Tyler**, Lutheran Community Services NW (County Mental Health Provider, Crook County), **Olivia Wilson**, Deschutes County Consumer and Advocate, **Eugene Zinzer**, Crook County Consumer and Advocate.

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Overview

In recent years, there has been growing recognition among State Officials, mental health advocates, consumers, family members, hospitals, County mental health programs and other local providers that the condition of the current Oregon State Hospital system has reached crisis proportions and cannot be improved without a complete overhaul. It is recognized that this effort must begin immediately. It will require extraordinary effort, investment and innovation, both at the State level and within Oregon communities.

This past summer, Governor Kulongoski, Senate President Peter Courtney and House Speaker Karen Minnis jointly agreed to move forward in implementing the Oregon State Hospital Master Plan Phase II Report by KMD Architects dated February 28, 2006. A Site Selection Committee and process has begun.

Of equal importance, the Report recognizes that the new hospital services must be used wisely, that some people can benefit from more appropriate and less costly treatment alternatives at the local level and that people ready for discharge from the State Hospital must have community options. Furthermore, the Report states clearly that projections and goals of the Report, including bed need, length of stay estimates and critical occupancy rates cannot be realized without significant investment at the community level.

Purposes of this Report

1. To reach consensus within Central Oregon among our key stakeholders about how to best strengthen and improve our local mental health systems for adults with significant mental health needs to complement development of the new Oregon State Hospital System.
2. To inform elected officials, locally and statewide, as well as the Governor's Office and the State Department of Human Services.
3. To describe critical investments in this new system, both at the State and local level, to assure maximum benefit for residents of Central Oregon and the entire State of Oregon.
4. To strengthen local services and supports for adults with mental illness and addictions consistent with the State Hospital Master Plan and decisions of the 2007 Oregon Legislature.

The Oregon State Hospital Plans - Our Goals for Central Oregon

Goal One: Create a true system of care, with continuity of services between Central Oregon communities and the Oregon State Hospital that supports collaboration between County mental health, community hospitals, and the State Hospital staff.

Goal Two: Increase access to preventative care, outpatient and case management services while limiting more costly acute and State hospital levels to times of urgent need.

Other Considerations

- This report represents our best thinking in December 2006 at the start of a dynamic legislative session. We anticipate a dialogue about the future of the mental health system in Oregon. We will represent our region in this process, adjust these recommendations as warranted and advocate for improvements we believe most benefit residents of our region and our State.
- We have other responsibilities as well and will continue to balance these interests with our efforts to help children with mental health challenges, people with addictions and people with developmental disabilities.
- Final decisions on investments will depend on funding levels, state expectations, the most critical needs identified after the 2007 Legislative session and future assessments of need and capacity.

A Local System to Support the Oregon State Hospital Master Plan Critical Community Service Needs & Plans in Central Oregon 2007-2013

Executive Summary

Overview

This report recognizes that the 2007 Oregon Legislature and the Governor's Office are expected to proceed with the development of a new and improved State Hospital System for adult Oregonians with significant mental health issues. Given the likelihood that a key source document for this effort will be State Hospital Master Plan Phase II (KMD Architects, February 28, 2006), we have crafted a report endorsed by key groups in Central Oregon, that details essential community investments that must occur for this project to be successful. We urge the State to invest in communities and to provide the best possible care, as close as possible to each person's community, families and friends. These recommendations have been developed by a Coalition including Jefferson, Crook and Deschutes counties, areas hospitals, consumers, family members and mental health advocates.

A foundation for our work:

- Recovery oriented practices.
- Integration of services and routine collaboration between County mental health programs, the hospital system, primary care physicians, jails / law enforcement.
- An integrated electronic medical records system (long term).
- Most effective level of care for all populations served to support recovery.

All regions of our State, including Central Oregon have unique needs

Central Oregon (Crook, Deschutes and Jefferson counties) has 200,000 residents and is the fastest growing region in Oregon. The strengths of our mental health system include the cooperation between our County Mental Health Programs and area hospitals, a shared affiliation with a single Mental Health Organization to help members of the Oregon Health Plan, acute care services that include five psychiatric emergency services hold rooms and a 15-bed secure residential facility (Sage View—that will soon be licensed as acute care) and an engaged housing authority, Housing Works.

Our challenges include State funding levels that lag significantly behind other regions in Oregon, a decline in Oregon Health Plan funding, an inability to fully meet the mental health and alcohol/drug treatment and support needs of uninsured residents of our region, the projected erosion of current service levels in the next biennium and the limited residential programs and affordable, supported housing options for people in needs of such services.

Oregon State Hospital Community Services Recommendations

The Master Plan reaches 25 years into the future and also calls for significant improvements in the community system in six regions in our State, including Central Oregon. Our full report details a number of recommendations that build on our current assets and help correct our current limitations.

Our most urgent and essential recommendations contained in the Report are:

1. **SUSTAIN AND ENHANCE CORE SERVICES, ADJUST FOR GROWTH** – Fund critical mental health needs in Oregon’s fastest growing region at levels, computed annually, that are comparable to other state regions. Services will decline as growth continues and costs increase without State aid, reducing the likelihood the State Hospital Plan will work in our region. To meet the added challenge of the State Hospital Master Plan we will need to significantly enhance these core services.
2. **INCREASE RESIDENTIAL AND HOUSING OPTIONS** - Expand residential programs, affordable housing options and supported housing (staff support). Assure appropriate level of care, prevent unneeded hospitalizations; help transition and support people returning to our community from State hospital or community acute care placements. Provide resources for development and operations of more than 100 new beds.
3. **DEVELOP RESPITE OPTION(S) TO COMPLEMENT PSYCHIATRIC EMERGENCY SERVICES (PES) AND SAGE VIEW** – Reestablish one or more respite options to support people in crisis that do not need a secure hospital setting. In addition, provide a step-down option for people who can be discharged from a higher level of care to respite setting supported by mental health professionals. Provide resources for the development and operations of new respite beds in two development stages.
4. **IMPROVE OUR CRISIS RESPONSE** – Improve the responsiveness, consistency and capacity of the region’s mental health crisis system by establishing a mobile crisis team modeled after Project Respond in Multnomah County and other similar models.
5. **CREATE A ROBUST ADDICTION TREATMENT SYSTEM** – Expand and strengthen dual disorder detox capacity, and enhance community addiction treatment capacity to serve dually diagnosed individuals.

We ask for the opportunity to participate in this planning and development process and for inclusion of this report and its recommendations in the State plans.

For more information, contact:

- **Crook County Mental Health:** Nancy Tyler, Director, Lutheran Community Services NW
Phone: 541-447-771 or ntyler@lcsnw.org
- **Deschutes County Mental Health:** Scott Johnson, Director, Deschutes County Mental Health
Phone: 541-322-7502 or scott_johnson@co.deschutes.or.us
- **Jefferson County Mental Health:** Rick Treleaven, Director, BestCare Treatment Services
Phone: 541-504-9577 or rickt@bestcaretreatment.org
- **Acute Care / Hospital System:** Robin Henderson, Director of Behavioral Health Services
Cascade Healthcare Community, Phone: 541-322-2791 or rhenderson@scmc.org

Central Oregon Plan Timeline

	2007												2008												2009												2010												2011											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Update need projections with current data																																																												
Crisis Intervention Training																																																												
Technical Assisatance for Residential Development																																																												
Assess and develop plan for forensic/PSRB																																																												
Extended care at Sage View																																																												
Develop and implement a Mobile Crisis Team																																																												
Residential Development Specialist																																																												
Fund documented need																																																												
Stabilize essential core services																																																												
Develop and implemente Crisis Respite Services																																																												
Bring first three Housing Projects on line																																																												
Develop Secure Transport option																																																												
Develop 10-bed Dual Dx Detox																																																												
Bring second three Housing Projects on line																																																												
Develop Hold Rooms in Redmond																																																												
Remodel Hold Rooms in Prineville																																																												
Develop Consumer Run Crisis Respite																																																												

Findings

1. **The State Master Plan recommendations are seriously flawed without community investment over the next six years.** The Phase II Master Plan includes an expectation that State funding for community program development will significantly increase prior to 2011. At this time, the Community Mental Health system in Central Oregon is not robust enough to provide significant diversion options from the State Hospital system. Without significant community investment, including investment in Central Oregon, the State Master Plan will fail.
2. **A regional approach is essential to complement State Hospital development.** The Master Plan call for a focus on six regions, including Central Oregon. This framework is well reasoned and beneficial as we share numerous regional organizations and projects.¹ It is not as practical or cost effective to undertake a significant amount of this work on a county or city basis. It is also not practical to consider a state wide approach to complement development due to the vast regional differences in our State.
3. **Current County systems are fragile; limited services make access difficult.** We face an increasing gap between the needs of our community and access to publicly supported mental health and addiction services. In particular, low income people with mental illness and addiction issues and without health insurance are at risk. Without investment, services will decline even further.
4. **Our plans must include improvements in communities throughout Central Oregon.** Each County's mental health program must be strengthened in this process. The hospital system must operate in a complementary fashion. Most importantly, adult consumers in each community, from Madras to LaPine, Sisters to Prineville must have better access to needed help.
5. **Growth in Central Oregon is extraordinary, dramatically increasing the need.** This decade, the population in Central Oregon will rise by 57,000 people, up 37%. Between 2004 and 2005, the population in Crook County rose 10% and the population in Deschutes County rose 6%. In 2006, Crook County became Oregon's fastest growing county, up almost 8%, with Deschutes not far behind at 6.4%. Deschutes grew by the second largest number of people overall in Oregon. Based on current projections, 335,000 people are expected to live in this region by 2030.
6. **The disparity in need-based funding is striking and particularly problematic in Central Oregon.²** This gap in the funding of need will jeopardize the Oregon State Hospital assumptions about local capacity and responsibility and could give rise to higher levels of referrals to OSH in the future as well as greater difficulty in transitioning people (ready for discharge) to the community.

¹ Regional use of 5 psychiatric emergency services hold rooms at St. Charles Medical Center, Housing Works (regional housing authority), a Regional Mental Health Acute Care Council, Sage View (secure 16-bed residential treatment facility), NAMI of Central Oregon and regional planning for the Children's System of Care Initiative.

² The listed examples are based on 2005 population figures and will likely be more pronounced based on 2006 actual data and estimates for 2007, 2008 and 2009. Examples of other Counties which may be affected include Washington County and Jackson County.

- **State indigent acute care funding lags behind most Oregon Counties**
State high \$9.48 per capita, State average \$8.32 per capita; \$6.18 in Central Oregon. ³
- **State addictions treatment funding lags behind most Oregon Counties, Deschutes 35th**
State high \$17.28 per capita, State average \$8.30
Deschutes ranks 35th of 36 \$2.87, Crook 27th \$6.00, Jefferson 24th \$7.00 ⁴
- **State crisis services funding, adult mental health treatment funding and children’s mental health funding lags behind the State average based on need and population.**
- **Residential housing resources in Central Oregon are significantly lacking. The Phase II Master Plan indicates the region should have 95 more residential beds by 2007-09, a 300% increase from current levels.**

An additional \$8.4 million in state funds would be needed in 2007-2009 simply to bring the Central Oregon region up to the average of needs based funding to Oregon counties to fulfill their responsibilities under Oregon Statutes and Administrative Rules.

Central Oregon Plan Costs 2007-2009

Equity to sustain current operations:	\$ 1,148,795
Additional Funding for Residential Beds:	3, 658,168*
Residential Development Costs:	903,450+
Recommended system improvements:	1,300,000
Dual Diagnosis Detox (capital & operations):	1,100,000
<u>Hold Rooms in Redmond & Prineville (capital & operations):</u>	<u>350,000</u>
TOTAL 2007-2009	\$ 8,460,413

* adjusted percentage based on OSH Master Plan estimates
+ figure taken directly from the OSH Master Plan estimates

7. **State investments need adjusted at least annually to address areas of greatest need.** The DHS Addictions and Mental Health Division lacks a method to use the most current demographic information and the Kessler formula and fund community mental health needs.
8. **The mental health regions in our State are as diverse as Oregon itself.** Services, needs and resources vary. It is impossible to develop community systems to complement the new State Hospital with a one-size-fits-all approach. Local stakeholders, including consumers, family members, governments, hospitals and health systems must develop responsive local systems.

Note: it is recommended that the equity analysis be calculated in December of each year with state grants adjusted the following to account for changes in need and demographics.

³ Source: Oregon DHS Addictions and Mental Health Div. Only Lane County is lower at \$5.72 per capita.

⁴ Source: Oregon DHS Addictions and Mental Health Division.

Recommendations (in priority order)

Caution: this list of projects are in priority order based on a current assessment of needs that most closely relate to the Oregon State Hospital Phase II Master Plan and the associated needs at a community and regional level. Priorities may vary over time. These priorities should be reassessed on an annual basis, and may need adjustment. There are other critical community needs that also need to be addressed over this six year period including services to children and families, help for people with developmental disabilities, addiction treatment and other human service needs and conditions that affect Central Oregon and its citizens and that are normally the responsibility of local governments, hospitals and community groups.

Immediate Priorities – January thru June 2007

1. **Update need projections based on most current data.** The timing of this report required us to use outdated population data. Projections should be updated based on the December 2006 population data as certified by the Population Research Center at Portland State University as well as the certified data for Deschutes County. The funding and need gap in any applicable region of the State, including Central Oregon, should be documented as part of that exercise ⁵ Once completed, these financial needs should be reported to all constituents.
2. **Provide Central Oregon technical assistance to aggressively launch residential development.** We are asking the DHS Addictions and Mental Health Division to offer a workshop in Central Oregon to a) inform us about residential options, their characteristics and advantages, b) assist us in matching these options to our local needs, and c) help us understand related development, licensing and oversight requirements at the local and State level. We ask that this workshop include local practitioners who can describe how these models were developed. Data from the State suggests we need to add 76 beds at a development cost of \$903,450 and with operating expenses (for total beds) totaling \$5,900,263.
3. **Allow for Extended Care at Sage View.** Gain the maximum service benefit of Sage View including the availability of Post Acute Intermediate Treatment Services (PAITS-extended care).
4. **Develop a Mobile Crisis Team and hire team members. Pursue a new model for crisis response.** Strengthen the region's acute care psychiatric response with dedicated specialists in lieu the current "on call" arrangement in each County. The team would consist of three master's level clinicians to respond to psychiatric events within the tri-county area. Extensive cross training would occur with first responders in each County. Estimated cost: \$280,780, partially offset by current on call budget. Long term, a reduction of 1.5 admissions to St. Charles Psychiatric Emergency Services Unit or Sage View would cover these costs. Evaluate the Project Respond model in Multnomah County and the program in Missoula County Montana.
5. **Offer Crisis Intervention Training** through collaboration with law enforcement, the hospital(s), the counties, consumers and family members. Critical need to provide for the proper management of crisis situations in the community as well as law enforcement officer safety.

⁵ We are asking that this calculation and needs analysis include Service Elements 20 (adult services), 22 (children's services), 24 (indigent acute care services, 25 (crisis services) and 66 (indigent addiction treatment services).

6. **Seek commitment of State funds for a Residential Development Specialist.** The State Hospital Master Plan identifies Central Oregon as the region that most seriously lacking in residential programming and housing supports, a region that needs as much as 76 additional residential beds over the next four years. State investment in a local development specialist, effective July 1, 2007, will help us aggressively pursue these State targets.
7. **Assess and develop a plan for forensic/PSRB needs** through collaboration with law enforcement, the hospital(s), counties, consumers and family members. The first step of this process is to convene all local interests in these issues with representatives from the PSRB to develop a better understanding of the processes, resources and development potentials that may not currently be understood or utilized in Central Oregon. The second step is to assess what our current forensic capacity is, what it is projected to be, and to develop a comprehensive plan for this population to be added as a recommendation to this report.

Intermediate Term Priorities July 2007 – June 2009

1. **Fund documented need (similar to other regions) and account for growth.** Receive assurances from the State that need will be assessed and resources adjusted at least annually. Set population forecasts prospectively with projections for the next biennium used in each Kessler formula.
2. **Stabilize essential core services first.** Sustain key components of the Central Oregon mental health system including outpatient treatment for indigent residents, 24/7 crisis services and intensive case management, supported employment particularly for people who are seriously mentally ill. Review the results of the community survey and consider those priorities in any investment plan.
3. **Develop and contract for a Crisis Respite Model serving adults in Central Oregon.** The lack of viable, short term respite options for people in crisis can result in the use of more costly alternatives and extended lengths of stay, occupying precious acute care resources. This project will fill a gap between community outpatient treatment / case management and acute or sub-acute care such as Sage View. The region will seek a residential provider to develop this option in a 5-bed foster home type setting or other alternative. Average length of stay is expected to be 1-9 days. The region will contract for room and board, supervision and medication management while providing mental health support through a County Mental Health Program. Early cost estimates: provider (\$120,000), mental health staff (\$85,000) per year.
4. **Bring at least three Housing Projects on line including at least one in each County.** Implement the results of the January 2007 workshop; collaborate with a private residential provider, expanding residential options with at least one additional project in each County during the 24 month period. Hire a residential development specialist to work full time on the development of these projects. Assure adequate, additional staff capacity to support additional residential programs and housing options. Goal: Bring on line 64 beds during the 2007-2009 biennium; the State Plan calls for 76 additional beds (Phase II Plan). The balance will be brought on line in 2009-2011.
5. **Develop a consistent Secure Transport option.** Consult with local law enforcement and consider contracting with one or more transport companies. Contractual options include an hourly rate or an annual rate with assurances of unlimited transports throughout the tri-county area. Procurement process to include an open bid process for qualified providers.

6. **Expand current 4-bed Detox capacity (4-bed) in Redmond, to a 10-bed enhanced Dual Diagnosis Program.** The proposed facility would be a 10-bed capacity on the "Visions of Hope" campus in Redmond. The facility would house 5 beds for men and 5 beds for women. Expected stays would be between 5 and 14 days. Clinical goals for this program would be behavioral stabilization, medically monitored detox, starting and/or adjusting of psychiatric meds (if appropriate), co-occurring assessment, brief motivational intervention, and engagement in co-occurring outpatient services.

The outcomes would be diversion of co-occurring clients from emergency services, diversion of co-occurring clients in jail, and greater client engagement in outpatient treatment. Cost estimates: capital (\$400,000) and operations (\$354,000). Note: modeled after the Bridgeway Detox program in Salem, Oregon.

Preliminary Residential Development Plan

Subject to further work at January 2007 Workshop – *will be modified to include recommendations for forensic/PSRB populations*

Current capacity within Central Oregon

- Adult foster home – 3 homes, 15 total beds (includes PSRB and ECMU all located in Deschutes)
- Supported housing – Emma’s Place with 11 beds (Bend), Prairie House with 8 beds in Prineville.
- Transitional housing – Horizon House with 14 total beds

Type	2007-09	2009-11
PAITS (complete b/w Jan-June 06)	3	
Short term crisis / respite	5	5 consumer run
Long term residential housing		
Residential tx home secure/PSRB/ECMU/GEROPSYCH	5	5
Residential tx home non-secure/PSRB/ECMU/GEROPSYCH	5	5
Foster care	10 5 Crk; 5 Jeff	10
Slots for high need mental health clients in SPD licensed homes (non ECMU)	15	15
Slots for individual apartments for supported housing (if apts AND vouchers are available)	5	
Supported housing		
Redmond	8	
Jefferson	8	
Bend		8
Prineville		8
Short term transitional/emergent housing (90 day)		
Jail / hospital priority		14
SUBTOTAL RESIDENTIAL	64	70
Affordable Housing thru Housing Works*	*	*

* Housing Works is unable to determine any specific number of units due to funding limitations.

Staff Needs:

- Regional residential development staff (1.0 fte)
- Supported housing case management staff (1.0 fte 2007-2009; 2.0 total fte 2009-2011)
- Residential treatment housing support staff (determine provider and county duties) 1.0 fte

Foster care one staff person per County (offset through open card revenue)

- PSRB one staff person for treatment and .5 fte for coordinator 2007-2009; 2.5 total fte 2009-11
- On site staff for transitional housing project (hours from 5:00pm-8:00 am) –2009-2011

AFFORDABLE HOUSING

Affordable housing is a major issue across the region. The regional Housing Authority is dependent on the availability of funds to build such housing. Currently there is no specific funding available in the next biennium for additional affordable housing. There are two projects that will be completed in that timeframe- one in Bend and one in Madras. In addition, it is unknown when there will be additional vouchers available. Both these issues present serious barriers to Central Oregon's ability to adequately house individuals with mental illness. Success in the future for projects such as our proposed transitional housing project, are dependent on the availability of housing resources for individuals to transition to. In addition, in order for more individuals to successfully access the limited affordable housing that is available, a program such as "Fresh Start" is also needed. This program can help assist individuals in reducing barriers to housing such as bad credit history, criminal history, etc.

Long Term Priorities July 2009 – June 2011

1. **Bring at least 3 Housing Project(s) on line including at least one in each County.** Continue residential development as outlined in the previous table, including bring on an estimated seventy (70) additional beds.
2. **Develop Hold Rooms in Redmond.** The St. Charles Medical Center Redmond Hospital (SCMC-R) is centrally located for Madras and Prineville and has room to grow. It also has the ability to have an exempt psychiatric unit. It could also be an excellent location for mobile crisis team and is also located near the detox facility for support. Two-three rooms could be built off the emergency room at SCMC-R in the redesign. Staffing would consist of 4.2 FTE RNs to staff and use an existing ER tech to supplement. Psychiatric support could be through tele-medicine. County mental health would also provide support. Cost involved in development could run \$25,000 per room. Costs for staffing \$275,000 per year. SE-24 monies may be available for indigent care. SCMC-R is also an ideal location for a gero/medical psychiatric unit with 8-10 beds. This can be scoped into the 7-10 year plan. Cost to develop would be approximately \$1.0 – 1.5 million.
3. **Remodel Hold Room in Prineville.** Pioneer Memorial Hospital closed its hold room almost two years ago. Significant remodeling is needed for the room to open safely, along with funding of telepsychiatry to support patients who are there. Costs for remodel and additional staff support and training would be \$100,000.

Supporting Material #1

Association of County Mental Health Programs – Essential Elements

The Central Oregon plan is consistent with the AOCMHP Oregon State Hospital Masterplan recommendations. These essential services are as follows:

- A range of housing from specialized residential care to affordable and supportive independent housing.
- 24/7 mobile crisis services and acute, sub-acute, and / or crisis respite care
- Assertive community treatment (ACT) teams that provide intensive “wraparound” services
- Care coordination and effective client-driven treatment services
- Supported employment
- Supported education
- Early intervention programs like EAST
- Integrated treatment for co-occurring disorders
- Illness self-management and recovery programs
- Effective, affordable medications and medication management (including access to psychiatrists)
- Family and community education
- Suicide prevention programs
- Peer-delivered supports and services
- “Gatekeeper” programs and mobile outreach services for older adults, the homeless, and other at-risk individuals
- Diversion and re-entry from criminal justice systems, such as through Mental Health and Treatment Courts and jail diversion and re-entry programs
- Mental health and substance use expertise and collaborative care in school-based clinics, federally qualified health clinics, and other primary care locations
- Transportation to services
- Dual diagnosis detox facility and services

Supporting Material #2

Request for assistance from the DHS Addictions and Mental Health Division

1. **At least biennially, provide comparative data on financial need in each region of Oregon as well as comparative data with other systems throughout the United States.**

Data is needed on the level of State investment in the mental health system in all regions of the State using the Kessler Formula. To begin, we are requesting AMHD calculation of funding levels based on December 2006 certified data from the Portland State University Population Center and an estimate of need (i.e. funding at the State average) based on 2007-09 population projections.

2. **Early in 2007, provide a workshop(s) and technical assistance for residential development.**

AMHD sponsorship of a workshop in Central Oregon would a) inform us about residential options, their characteristics and advantages, b) assist us in matching these options to our local needs, and c) help us understand related development, licensing and oversight requirements at the local and State level. This workshop should be organized based on projected resources for our region as outlined in the State Hospital Master Plan.

3. **Early in 2007, convene a summit to discuss, plan and implement needed changes to the handling of the PSRB clients and those who potentially could be involved in PSRB in the future, with recommendations for facility and service development.**

Convening a summit of mental health, law enforcement, judicial and state interests to investigate this issue is essential to the success of this plan. There are significant opportunities for handling this population more effectively with training and program development. This summit provides an opportunity to understand the problem from a variety of perspectives, gain insight and information into solutions and integrate these recommendations into the overall plan.

4. **Work with the Governor and the Legislature to craft legislation detailing plans and accountability measures for the State Hospital and necessary community services over the next 6 years.**

Considerable work is needed at the community level to develop and strengthen local and regional systems. This work cannot be accomplished entirely during one biennium nor can the necessary financial investment be made in that time period. It will require sustained effort, cooperation between the State of Oregon, local communities and key coalitions, and a commitment to financial investment and significant improvements in local services and our capacity to help.

5. **Invest significantly in community services in all six regions of the State, beginning in July 2007.**

Target investment in community services in all regions to help assure that the bed, occupancy rate, length of stay and transition to community assumptions contained in the OSH Master Plan can be achieved. Use new resources to balance this invest so all regions have sufficient and comparable resources to meet the need in their area. Include use of population projections, the Kessler Formula, housing / residential capacities and need and expectations for individuals under the jurisdiction of the Psychiatric Security Review Board.

Supporting Material #3

Our Population – The Impact of Growth on Need

Population Projections for Central Oregon ⁶

County	2000	2005	2010	2015	2020	2025	2030	% Change 30 years
Crook	19,300	21,035	23,051	25,249	27,590	30,125	32,796	70%
Deschutes	116,600	143,053	166,572	189,572	214,145	240,811	270,797	132%
Jefferson	19,150	20,491	22,168	24,079	26,065	28,298	30,831	71%
Central Oregon	155,050	184,579	211,791	238,900	267,800	299,234	334,424	116%

Special note: The Deschutes County population projections, adopted in September of 2005 are markedly higher than the data published by the office of Economic Analysis in April of 2004.

⁶ Deschutes County projections are based on Deschutes County's adopted coordinated population forecast as adopted by the Board of Commissioners in September 2005. The 2030 estimate is based on the % increase from 2020 to 2025; no 2030 figure is included in the forecast itself. Crook County and Jefferson County projections are based on data reported by the Office of Economic Analysis in a Report released in April 2004.

Supporting Material #4

Portland State University Comparative Population Data by County

Area	April 1, 2000 Census Count	July 1, 2003 Certified Estimates	July 1, 2004 Certified Estimates	July 1, 2005 Certified Estimates	% change 2004 to 2005	July 1, 2006 Certified Estimates	% change 2005 to 2006
Oregon	3,421,399	3,541,500	3,582,600	3,631,440	1.4%	3,690,160	1.6%
BAKER	16,741	16,500	16,550	16,500	-0.3%	16,470	-0.2%
BENTON	78,153	80,500	81,750	82,835	1.3%	84,125	1.6%
CLACKAMAS	338,391	353,450	356,250	361,300	1.4%	367,040	1.6%
CLATSOP	35,630	36,300	36,400	36,640	0.7%	37,045	1.1%
COLUMBIA	43,560	45,000	45,650	46,220	1.2%	46,965	1.6%
COOS	62,779	63,000	62,700	62,695	0.0%	62,905	0.3%
CROOK	19,184	20,300	20,650	22,775	10.3%	24,525	7.7%
CURRY	21,137	21,100	21,150	21,190	0.2%	21,365	0.8%
DESCHUTES	115,367	130,500	135,450	143,490	5.9%	152,615	6.4%
DOUGLAS	100,399	101,800	102,350	102,905	0.5%	103,815	0.9%
GILLIAM	1,915	1,900	1,900	1,890	-0.5%	1,885	-0.3%
GRANT	7,935	7,650	7,750	7,685	-0.8%	7,630	-0.7%
HARNEY	7,609	7,300	7,650	7,660	0.1%	7,670	0.1%
HOOD RIVER	20,411	20,500	21,050	21,180	0.6%	21,335	0.7%
JACKSON	181,269	189,100	191,200	194,515	1.7%	198,615	2.1%
JEFFERSON	19,009	19,900	20,250	20,600	1.7%	21,065	2.3%
JOSEPHINE	75,726	78,350	78,600	79,645	1.3%	81,125	1.9%
KLAMATH	63,775	64,600	64,800	65,055	0.4%	65,455	0.6%
LAKE	7,422	7,400	7,500	7,505	0.1%	7,540	0.5%
LANE	322,963	329,400	333,350	336,085	0.8%	339,740	1.1%
LINCOLN	44,479	45,000	44,400	44,405	0.0%	44,520	0.3%
LINN	103,069	104,900	106,350	107,150	0.8%	108,250	1.0%
MALHEUR	31,615	32,000	31,850	31,800	-0.2%	31,725	-0.2%
MARION	284,838	295,900	298,450	302,135	1.2%	306,665	1.5%
MORROW	10,995	11,750	11,750	11,945	1.7%	12,125	1.5%
MULTNOMAH	660,486	677,850	685,950	692,825	1.0%	701,545	1.3%
POLK	62,380	64,000	64,950	65,670	1.1%	66,670	1.5%
SHERMAN	1,934	1,900	1,900	1,880	-1.1%	1,865	-0.8%
TILLAMOOK	24,262	24,900	24,950	25,205	1.0%	25,530	1.3%
UMATILLA	70,548	71,100	72,250	72,395	0.2%	72,190	-0.3%
UNION	24,530	24,650	24,850	24,950	0.4%	25,110	0.6%
WALLOWA	7,226	7,150	7,150	7,130	-0.3%	7,140	0.1%
WASCO	23,791	23,550	23,900	23,935	0.1%	24,070	0.6%
WASHINGTON	445,342	472,600	480,200	489,785	2.0%	500,585	2.2%
WHEELER	1,547	1,550	1,550	1,550	0.0%	1,565	1.0%
YAMHILL	84,992	88,150	89,200	90,310	1.2%	91,675	1.5%
Bend	52,029	62,900	65,210				
Madras	5,078	5,370	5,430				
Prineville	7,358	8,500	8,640				
Redmond	13,481	17,450	18,100				

Supporting Material #5

Oregon State Hospital Central Oregon Bed Needs

Projected Bed Needs @ 85% occupancy ⁷

Note: The data in this table comes directly from the Oregon State Hospital Framework Master Plan Phase II Report as prepared by KMD Architects, February 28, 2006. Central Oregon has made no attempt to test this data or offer alternative estimates. We are concerned that KMD may have underestimated the population growth in our region and, as a result, the geriatric and forensic needs. If that is in fact the case, the actual need, without a significant State investment in community services, could be higher.

	2011			2021			2030		
	Adult	Neuro-psych	Forensic	Adult	Neuro-Psych	Forensic	Adult	Neuro-psych	Forensic
Central Oregon	4	4	14	3	6	17	3	9	19
Rest of Oregon	126	113	604	125	159	659	122	206	701
Totals @ 85%	130	117	618	128	165	676	125	215	720

Projected increase in total bed need (derived from Table No. 1)

	2011	2021	2030	% Change 2011-2030
Central Oregon	22	26	31	41%
Rest of Oregon	843	943	1,060	26%

⁷ Page 9 Oregon State Hospital Framework Master Plan Phase II

Supporting Material #6

Residential Needs Greatest in Central Oregon

Note: The data in these tables comes directly from the Oregon State Hospital Framework Master Plan Phase II Report as prepared by KMD Architects, February 28, 2006 and data provided to the Central & Eastern Oregon Community Services Work Group. Central Oregon has made no attempt to test this data or offer alternative estimates. We are concerned that KMD may have underestimated the population growth in our region and, as a result, the geriatric and forensic needs. If that is in fact the case, the actual need, without a significant State investment in community services, could be higher.

In addition, we are particularly concerned with the acute need for affordable housing options in several communities in Central Oregon. Those costs may compromise our ability to move at the accelerated pace suggested by the data below. **At the same time, we are in complete agreement that affordable housing options, residential facilities and supported housing are urgently needed in our region.**

	2005-07	2009-11	2011-13	2030	% Change 2005-2030
Central Oregon	36	104	112	153	325%
Rest of Oregon	1,693	1,952	1,995	2,480	46%

State reported estimated OPERATING COSTS of community beds by region

	2005	2007-2009		2009-2011		2011-13	
	Beds	Bed Need	Cost	Bed Need	Cost	Bed Need	Cost
Central Oregon	36	95	\$5,900,263	104	\$6,753,083	112	\$7,167,681
Total Beds	1,729	1,959	\$130,480,035	2,056	\$136,922,004	2,147	\$142,537,842

State reported DEVELOPMENT COSTS for new beds by region

	2007-2009	2009-2011	2011-2013
Central Oregon	\$903,450	\$190,100	\$172,500
Rest of Oregon	\$9,520,400	\$1,901,550	\$1,673,850

Supporting Material #7

Need / Funding Shortfall in Central Oregon

Source: Oregon DHS Addictions and Mental Health Division

Indigent acute care funds (Service Element 24) are used to help provide access to emergency and short term psychiatric services and support for uninsured residents of Central Oregon who have an acute need for mental health services. Current and recent investments include Psychiatric Emergency Services at St. Charles Medical Center, secure residential psychiatric services at Sage View (Bend), secure transports, intensive case management to divert (where appropriate) people from more restrictive and costly care and to help people transition back to more appropriate community options upon discharge.

The Central Oregon Regional Acute Care Council projects that current services are NOT sustainable and that funding for current services, at current levels, will run out in 2008-2009.

Oregon State Grant No.	Formula Amount IF equity	Actual State Grant 2005-2007	Deficit / Surplus
------------------------------	--------------------------------	---------------------------------------	----------------------

Crook County (Lutheran Community Services NW)

SE 20	143,549	146,248	(2,699)
SE 22	73,319	64,869	8,450
SE 25	112,444	103,819	8,625
Sub total	329,312	314,936	14,376

Key for grants

SE 20 = Adult Services
SE 22 = Children's Svcs.
SE 24 = Acute Care
SE 25 = Crisis Services

Deschutes County Mental Health

SE 20	988,723	881,942	106,781
SE 22	380,842	362,448	18,394
SE 25	693,377	593,639	99,738
Sub total	2,062,942	1,838,029	224,913

Jefferson County (BestCare Treatment Services)

SE 20	133,653	143,557	(9,904)
SE 22	82,396	78,264	4,132
SE 25	113,923	89,187	24,736
Sub total	329,972	311,008	18,964

CO SE 24 1,649,066 1,166,630 **482,436**

Grand Total	4,371,292	3,630,603	740,689
1 year amt.	2,185,646	1,815,302	370,344

Central Oregon population increase '05 to '06	6.1%
Oregon population increase 2005 to 2006	1.6%

2007-2008 need to sustain access and quality	2,318,970
2008-2009 need to sustain access and quality	2,460,427

Biennial amount needed in 2007-2009	\$ 4,779,398	(current services)
Increase above current amt. to reach state avg	\$ 1,148,795	
Does NOT include funds for new services to support new State Hospital Master Plan		

Notes:

- * Other mental health / addiction grants: other grants of importance that are NOT included in this analysis include a) Service Element 35 - seniors mental health services, Service Element 66 - addiction treatment for low income, c) Service Element 60 (addiction special projects).
- ** COLA - Figures do NOT include any cost of living increase in 2007-2009.

Supporting Material #8

Indigent Acute Care Funding per capita by Region

Source: Oregon DHS Addictions and Mental Health Division

Indigent acute care funds (Service Element 24) are used to help provide access to emergency and short term psychiatric services and support for uninsured residents of Central Oregon who have an acute need for mental health services. Current and recent investments include Psychiatric Emergency Services at St. Charles Medical Center, secure residential psychiatric services at Sage View (Bend), secure transports, intensive case management to divert (where appropriate) people from more restrictive and costly care and to help people transition back to more appropriate community options upon discharge.

The Central Oregon Regional Acute Care Council projects that current services are NOT sustainable and that funding for current services, at current levels, will run out in 2008-2009.

Region	Funding Per Person
Portland Metropolitan Area	\$9.48
Southern Oregon	\$8.90
Statewide Average	\$8.32
Mid-Valley Communities	\$7.57
Central Oregon ⁸	\$6.68
Lane County	\$5.72

⁸ Central Oregon includes Crook County, Deschutes County and Jefferson County.

Supporting Material #9

Addictions Treatment Funding by County

Source: Oregon DHS Addictions and Mental Health Division

Continuum of care services for people who are indigent

County	A & D \$ Per Cap	July 2006 Pop	% of Pop.	% Tx. \$	State Grant AD66	State Grant AD60	Total
Josephine	\$16.96	81,125	2.20%	4.57%	\$709,609	666,538	\$1,376,147
Morrow/Wheeler	\$16.69	13,690	0.37%	0.76%	\$228,514	-	\$228,514
Columbia	\$16.21	46,965	1.27%	2.53%	\$171,060	590,130	\$761,190
Wallowa	\$15.54	7,140	0.19%	0.37%	\$110,962	-	\$110,962
Harney	\$14.87	7,670	0.21%	0.38%	\$114,090	-	\$114,090
Grant	\$14.76	7,630	0.21%	0.37%	\$112,630	-	\$112,630
Lake	\$14.44	7,540	0.20%	0.36%	\$108,874	-	\$108,874
Mid-Columbia**	\$12.79	49,155	1.33%	2.09%	\$471,384	157,426	\$628,810
Multnomah	\$12.75	701,545	19.01%	29.68%	\$7,627,622	1,315,618	\$8,943,240
Malheur	\$12.41	31,725	0.86%	1.31%	\$393,602	-	\$393,602
Klamath	\$12.07	65,455	1.77%	2.62%	\$504,008	286,320	\$790,328
Baker	\$11.23	16,470	0.45%	0.61%	\$184,950	-	\$184,950
Douglas	\$11.18	103,815	2.81%	3.85%	\$722,950	437,776	\$1,160,726
Umatilla	\$11.08	72,190	1.96%	2.65%	\$477,568	322,080	\$799,648
Curry	\$10.04	21,365	0.58%	0.71%	\$214,438	-	\$214,438
Lincoln	\$9.26	44,520	1.21%	1.37%	\$329,490	82,790	\$412,280
Jackson	\$8.52	198,615	5.38%	5.62%	\$898,856	793,332	\$1,692,188
Benton	\$8.46	84,125	2.28%	2.36%	\$439,472	272,240	\$711,712
Yamhill	\$8.26	91,675	2.48%	2.51%	\$465,574	291,986	\$757,560
State average	\$8.16						

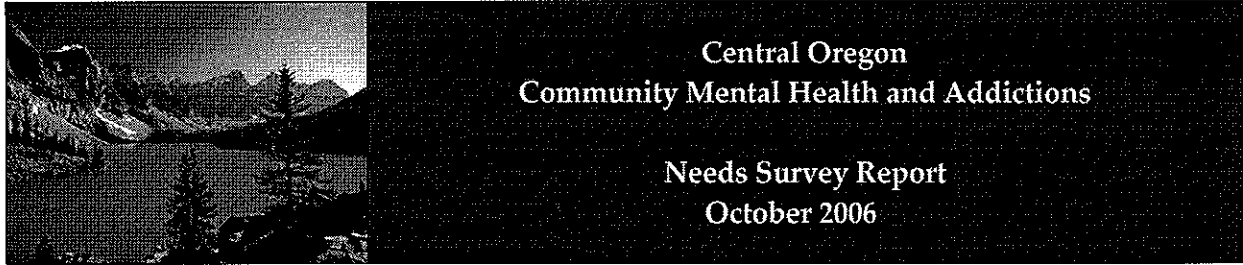
Counties in high need / below per capita state average

Marion	\$7.42	306,665	8.31%	7.55%	\$1,974,856	300,000	\$2,274,856
Jefferson 25th	\$6.84	21,065	0.57%	0.48%	\$144,132	-	\$144,132
Lane	\$6.05	339,740	9.21%	6.83%	\$1,761,276	295,276	\$2,056,552
Linn	\$5.66	108,250	2.93%	2.03%	\$387,852	224,821	\$612,673
Crook 28th	\$5.57	24,525	0.66%	0.45%	\$136,620	-	\$136,620
Clatsop	\$5.52	37,045	1.00%	0.68%	\$204,358	-	\$204,358
Washington	\$5.34	500,585	13.57%	8.87%	\$1,553,346	1,118,544	\$2,671,890
Tillamook	\$5.26	25,530	0.69%	0.45%	\$134,220	-	\$134,220
Union	\$4.81	25,110	0.68%	0.40%	\$120,764	-	\$120,764
Clackamas	\$3.97	367,040	9.95%	4.83%	\$978,268	477,710	\$1,455,978
Coos	\$3.77	62,905	1.70%	0.79%	\$188,730	48,114	\$236,844
Deschutes 35th	\$2.70	152,615	4.14%	1.37%	\$411,692	-	\$411,692
Polk	\$2.48	66,670	1.81%	0.55%	\$165,118	-	\$165,118
Total	\$8.16	3,690,160	100%	100%	\$22,446,885	7,680,701	\$30,127,586

* Based on 7/1/2005 certified estimates from Population Research Center - PSU

** Mid-Columbia includes Wasco, Sherman, Hood River and Gilliam Counties

Supporting Material #10



Executive Summary

An Oregon State Hospital Master Plan, commissioned by the Oregon Legislature, recognizes the need for a wide range of community-based mental health services and supports to complement new state hospital facilities. To plan for these needed community services, Oregon's Department of Human Services has convened a Community Services Workgroup. Central Oregon representatives on the Workgroup, charged with identifying regional needs, consulted community stakeholders in Crook, Deschutes, and Jefferson counties through both a survey and community forum. The Association of Oregon Community Mental Health Programs helped with this process by producing a needs survey, facilitating a forum, and reporting results that will help frame Central Oregon priorities for community development.

The survey results, as well as key issues from the forum, represent a strong consensus regarding the need for development of a wide range of treatment and support options that create a continuum of care for Central Oregonians with mental illness. Key needs identified in this work include crisis respite options, transportation, access to medications, urgent treatment services, and an array of stable, affordable housing options with various levels of support services to assist persons in maintaining their housing and living successfully in the community.

In addition to the above needs, strong voices emerged for specific expertise for a growing population of older adults with mental health needs, for children, for justice-involved juveniles and adults, and for detox and co-occurring disorder treatment. Also of importance to many is the need for rapid access to benefits for people in need of help, opportunities for meaningful community inclusion, and education for the community, family members, and persons with mental health or co-occurring disorders.

In summary, the Central Oregon needs survey and subsequent community forum illustrated a strong desire amongst three counties to address growing unmet needs for persons with serious mental health or co-occurring disorders. It became clear, from both survey responses and discussion during the forum, that helping persons with serious mental health or co-occurring disorders live successfully in Central Oregon will require not only an array of appropriate and integrated treatment and supports, but will also require cooperation and collaborative planning and development at the local level between multiple systems that play important and inter-related roles, such as hospitals, community mental health programs, public safety systems, housing programs, schools, public assistance programs, and community coalitions and businesses, among others.

Background

The Central Oregon needs survey was developed with thirty questions grouped into four broad areas of care: Urgent/acute care needs, treatment service needs, residential/housing needs, and recovery support

needs for persons with serious and persistent mental health or co-occurring disorders who are at risk of or have experienced hospitalization, incarceration, long-term care or homelessness. Respondents had five possible response check boxes to these questions: strongly disagree, disagree, agree, strongly agree, or don't know. A question regarding priorities followed each grouping. The final portion of the survey posed two open-ended questions intended to give respondents an opportunity to make more specific remarks on community strengths and needs. (To view a copy of the Central Oregon Community Mental Health and Addictions Needs Survey, please see appendix A.)

The needs survey was finalized on September 12th, 2006, and was distributed and collected over a period of ten days, from Wednesday, September 13th through Friday, September 22nd, with tabulated results presented at a community forum on Monday, September 25th. During this time, 77 completed surveys were collected from a wide range of individuals in the three participating counties.

While approximately 38% of surveys were from a range of mental health or addictions professionals, nearly 30% of respondents were persons with a mental health or co-occurring disorder or a family member. In addition, 11% of respondents were primary or specialty medical care professionals, 7% were legal/judiciary or public safety/first responder professionals, another 7% were from advisory or quality assurance councils, 4% from the state Department of Human Services (child welfare, self-sufficiency, etc.), and 4% identified as local government officials or staff. The high response rate in a short turnaround time is notable, and may reflect the sense of urgency a wide range of professions and individuals feel about the need to serve persons with mental health or co-occurring disorders in Central Oregon. (For tabulated survey results, please see appendix B.)

Key Findings

Urgent/Acute Care Needs

*"Crook County is so rural, really the issue is what we have vs. what we lack...
.Finding detox services seems impossible, as detox/acute care/crisis placements are all out-of-county."*

"We need mental health crisis responders available to assist law enforcement on scene or at the hospital."

In answering a question about community urgent/acute care capacity, 65% of respondents felt that their county did not adequately meet urgent or acute care needs. Of the following seven questions around specific urgent or acute care services, the four most strongly stated responses are as follows:

- 65% strongly agreed with need for detox capacity
- 58% strongly agreed with need for urgent access to psychiatrists
- 58% strongly agreed with need for longer-term, 30-90 day facility-based assessment and treatment
- 53% strongly agreed with need for crisis respite/crisis stabilization services.

In reviewing written comments on priorities, the need for detox, crisis respite, and urgent access to psychiatrists were noted often, consistent with the high percentages in the survey result. Significantly, Crisis Intervention Training (CIT) for first responders and public safety officials was a priority for nearly as many respondents. Following CIT training, mobile crisis services and inpatient psychiatric hospitalization were the next most mentioned priorities.

In the September 25th community forum at St. Charles Medical Center following the survey distribution, much of the urgent/acute care discussion centered on the need for facilities that provide step-down care for those who are being discharged from Sage View (psychiatric inpatient care) and the need for mobile crisis services and crisis respite options for those who might not require or want psychiatric inpatient hospitalization.

Treatment Service Needs

"We currently have so many cracks in the system where individuals who don't have the right amount of money, insurance or mental health diagnosis are falling right through. Providing more options for these folks has the potential of not only improving the individuals' lives, but the community as a whole."

"We need to work on the connection between law enforcement and mental health."

"Let us not forget the mental health needs of our seniors in the community."

In general, 72% of survey respondents remarked that community treatment needs for persons with serious mental health or co-occurring disorders are not adequately met in Central Oregon. From a list of ten questions around specific treatment services, the four service needs that generated the highest percentage of "strongly agree" answers are as follows:

- 70% strongly agreed we need free or affordable psychiatric medications
- 48% strongly agreed we need treatment and case management for persons transitioning from incarceration to the community
- 48% strongly agreed we need additional psychiatrist or psychiatric nurse practitioner availability
- 46% strongly agreed we need integrated treatment for co-occurring mental health / substance use disorders.

Written priorities ranged from an emphasis on geriatric services to children's mental health services, but with an overwhelming number focused on the need for access to psychiatric medications—likely reflecting discussion at the community forum regarding the large number of clients who are not eligible for the Oregon Health Plan and its prescription coverage. In addition, a significant number of respondents stated intensive case management as a priority, as well as the need for a range of criminal justice-related services, including sentencing alternatives, services for juvenile departments, mental health assessment and treatment in jails, and services for those transitioning from incarceration to the community.

Residential and Housing Needs

"More facilities like Horizon House [are needed] that are safe, affordable and allow for controlled independent living."

"I think the community of Bend could use more education to not be scared of the mentally ill and that housing the mentally ill is less expensive than having them homeless."

An overwhelming 90% of respondents disagreed or strongly disagreed that Central Oregon has enough safe, decent and affordable housing for persons with serious mental health or co-occurring disorders.

Over 50% of respondents replied “strongly agree” to both a following question about the need for additional specialized/structured residential facilities (more intensive care and supervision) and a question about the need for additional supportive independent or transitional housing (more minimal support for living). In a region where housing and land prices are at a premium, the supply of housing for those clients who have limited or no incomes is a matter of great concern.

In both written comments and at the community forum, no single type of housing (adult foster homes, residential treatment facilities, secure facilities, supportive independent housing, long-term housing, etc.) emerged as a priority. Rather, there was a strong consensus that a range of housing types is necessary to meet widely varying needs, including options that may prevent hospitalization and options that are designed to help an individual transition to life in the community.

Recovery Support Needs

“Transportation!! This is a HUGE barrier.”

“Access to benefits and transportation.”

“What’s working well? The Clubhouse provides a social support network, peer supported counseling and job training opportunities.”

As with urgent/acute care services, 65% of survey respondents did not feel community recovery support needs are adequately met. Out of a wide range of supportive services, the following priorities emerged:

- 60% strongly agreed we need transportation for persons receiving services
- 55% strongly agreed we need opportunities for meaningful community inclusion
- 44% strongly agreed we need easy, rapid access to benefits (e.g. medical assistance, food stamps)

In reviewing written priorities, transportation again received overwhelming support. Notably, though, support groups and education for clients and their families were consistently listed as a priority, along with access to benefits.

In discussion at the community forum, the need for transportation was a topic of intensive dialogue. In contrast to many urban areas in the I-5 corridor, housing appears to be more affordable in rural areas of the region, whereas services and employment are more concentrated in urban areas like Bend. With no public transportation system in the region, access to treatment and other support services is problematic.

Conclusion

The Central Oregon Needs Survey addressed four major components of a continuum of community-based care: Urgent/acute care needs, treatment service needs, residential/housing needs, and recovery support needs. While strong needs were voiced in all areas and across all service and support types, the following seven issues received 50% or more responses of “strongly agree:”

- Free or affordable psychiatric medications (70% strongly agree)**
- Transportation for persons receiving services (60% strongly agree)**
- Longer term (30-90 day) facility based assessment and treatment (58% strongly agree)**

Urgent access to psychiatrists (58% strongly agree)

Opportunities for meaningful community inclusion (55% strongly agree)

Supportive independent, transitional, or minimally structured housing with daily to weekly staff assistance (53% strongly agree)

Crisis respite/crisis stabilization services (53% strongly agree)

It should be noted that while the above seven items may merit special attention in planning, discussion during the community forum indicated that a broad and stable continuum of services is necessary to provide an effective foundation of support for a new state hospital. More specifically, the desire for a 24/7 mobile crisis team trained to provide in-home crisis intervention and to work in collaboration with police/fire/sheriff departments was noted—with an often-corresponding need expressed for additional detox capacity and “user friendly,” home-like respite care as an alternative to hospitalization.

Community forum participants emphasized that a large percentage of Central Oregon residents do not meet narrow Oregon Health Plan eligibility requirements, yet have significant mental health needs. As a result, access to medications is a considerable problem, along with access to benefits and other treatment and support needs. Housing and transportation emerged as persistent barriers to successful recovery for persons with serious mental health or co-occurring disorders. Acknowledging the breadth of issues and the need to develop solutions specific to Central Oregon needs, three sub-committees were formed to meet and compile specific recommendations for phased development. In summary, the Central Oregon needs survey and community forum indicate wide-spread support for development of a cohesive and more comprehensive array of services and support options to meet growing regional needs.

Central Oregon / Oregon State Hospital Community Services Survey

77 Responses from Central Oregon Stakeholders

Section 1: Urgent/Acute Care Needs (for persons with serious and persistent mental health or co-occurring disorders)					
	Strongly Disagree	Disagree	Agree	Strongly Agree	Don't Know
1. Overall, my community adequately meets urgent or acute care needs.	7	43	19	6	2
2. My community needs (additional) acute inpatient psychiatric hospitalization capacity.	1	4	35	32	5
3. My community needs (additional) detox capacity.	2		10	50	15
4. My community needs (additional) capacity for longer term facility-based treatment and assessment (30-90 days).		1	29	45	2
5. My community needs (additional) capacity for crisis respite/crisis stabilization services (1-14 days).		7	24	41	5
6. My community needs (additional) 24/7 mobile crisis response services that go to the individual or family in need.	1	7	26	34	9
7. My community needs (additional) Crisis Intervention Training (CIT) for first responders and public safety officials.		2	27	39	9
8. My community needs (additional) urgent access to psychiatrists.	2	2	22	45	6
What urgent or acute care service would you prioritize for your community?					
3,4,5,6,7,8 _____					

Section 2: Treatment Service Needs (for persons with serious and persistent mental health or co-occurring disorders)					
9. Overall, my community adequately meets treatment needs for persons with serious mental health or co-occurring disorders.	9	46	16	3	3
10. My community needs (additional) intensive early intervention services for young adult's first experiencing psychosis.	1	4	30	34	8
11. My community needs (additional) intensive community treatment teams that provide 24/7 "wraparound" care (e.g. Assertive Community Treatment "ACT" teams).	1	4	35	29	8
12. My community needs (additional) outpatient intensive case management/care coordination.	1	3	34	33	6
13. My community needs (additional) integrated treatment for co-occurring mental health and substance use disorders. 14.		1	33	35	8
14. My community needs greater access to free or affordable psychiatric medications.		2	18	54	3
15. My community needs (additional) bilingual/bicultural mental health and addictions providers.		6	37	21	13
16. My community needs (additional) psychiatrists and/or psychiatric nurse practitioner availability.		4	32	37	4
17. My community needs (additional) mental health and addictions screening and assessment capacity in jails.		2	30	32	13
18. My community needs (additional) sentencing alternatives (e.g. Mental Health/Treatment Courts or day reporting)		7	35	22	13
19. My community needs (additional) case management and treatment for persons transitioning from incarceration to the community (re-entry services).	3	4	26	37	7
What treatment services would you prioritize for your community? _____					

Section 3: Residential/Housing Needs (for persons with serious mental health or co-occurring disorders)					
20. Overall, my community has enough safe, decent and affordable housing to meet needs.	43	26	5	1	2
21. My community needs (additional) specialized/structured residential facilities that provide 24 hour supervision (e.g. residential treatment facilities/homes, adult foster homes, secure facilities, and enhanced care services programs).	3		29	40	5
22. My community needs (additional) supportive independent, transitional, or minimally structured housing with daily to weekly staff assistance.	2	5	25	41	4
What kind of residential facility or housing for persons with serious mental health or co-occurring disorders would you prioritize for your community? _____					

Section 4: Recovery Support Needs (for persons with serious mental health or co-occurring disorders)					
23. Overall, my community meets recovery support needs.	12	38	14	3	10
24. My community needs (additional) competitive supported employment opportunities.	1	3	40	25	8
25. My community needs (additional) consumer peer supports and/or peer-delivered services.		8	29	25	15
26. My community needs easy and rapid access to benefits (e.g. medical assistance, food stamps, etc.)		5	32	34	6
27. My community needs (additional) opportunities for meaningful community inclusion/socialization.		6	20	42	9
28. My community needs access to transportation for persons receiving services.	2	4	17	46	8
29. My community needs child care assistance for persons receiving services.	2	2	25	32	16
30. My community needs (additional) supports/education for family members of persons receiving services.	2	1	29	32	13
What recovery support needs would you prioritize for your community? 26, 28, 29, 30 _____					

Contacts

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APPENDIX C

Issues and Barriers List

DHS/Addictions and Mental Health Division
Oregon State Hospital Master Plan – Community Services Workgroup

Issues and Barriers List

November 20, 2006

- Workforce development
 - Recruitment
 - Retention

- Acute care
 - Retention of current resources
 - Projected Need

- Persons with a mental illness in the criminal justice system

- Benefit gaps
 - Social Security
 - Medicare/Medicaid
 - Housing Subsidies

- Working cross-systems
 - Criminal justice

- Outreach services

- Care involves relationships
 - Continuity
 - Quality/recovery focus
 - Physicians
 - Acute care

- Ready access to services

- Local (cities/counties) commitment to statewide system
 - Planning according to need vs. planning to the resources

- Working on siting residential programs
 - Community collaboration

- Develop strategy that encourages doing the right thing

- Data for planning
- Public operated programs
 - Ongoing commitment
- Issues related to:
 - Small vs. large counties
 - Rural vs. urban counties
- Public/private partnerships
- Issues related to psychiatric hold rooms
 - Telepsychiatry as alternative
- Uninsured
- Other systems that impact mental health system (i.e. A&D Services)
- Look at the “what to do” and “the how to do”
- Services for transition age youth
- Access to medications
- Emergency room pressures
- Crisis centers
- Housing
 - Safe
 - Affordable
 - Supports
- Consumer-based independent advocacy
- Mental health services to seniors
- Mental health services to persons that are developmentally disabled
- Supported employment and supported education

APPENDIX D

Acronym Guide

Community Services Report
Acronym Guide

ACT	Assertive Community Treatment
AMH	Addictions and Mental Health Division
B-HIP	Behavioral Health Improvement Project
CMHP	Community Mental Health Program(s)
COLA	Cost of Living Adjustment
DHS	Department of Human Services
DDA	Dual Diagnosis Anonymous
EAST	Early Assessment and Support Team
OMHAS	Office of Mental Health & Addictions Services (now known as AMH)
OSH	Oregon State Hospital
SB	Senate Bill

Oregon's Performance Plan for Mental Health Services for Adults with Serious and Persistent Mental Illness

A. Recitals:

1. The terms of this Performance Plan for Adults with Serious and Persistent Mental Illness ("Plan") relate to adults with serious and persistent mental illness ("SPMI") in Oregon. This Plan is intended to better provide adults in Oregon with serious and persistent mental illness with community services that will assist them to live in the most integrated setting appropriate to their needs, achieve positive outcomes, and prevent their unnecessary institutionalization.

2. Title II of the Americans with Disabilities Act ("ADA") requires that public entities administer services, programs, and activities in the most integrated setting appropriate to the needs of qualified individuals with disabilities. 42 U.S.C. §§ 12101 *et seq.*; *Olmstead v. L.C.*, 527 U.S. 581 (1999); 28 C.F.R. § 35.130(d). Further, a "public entity shall make reasonable modifications in policies, practices, or procedures when the modifications are necessary to avoid discrimination on the basis of disability, unless the public entity can demonstrate that making the modifications would fundamentally alter the nature of the service, program, or activity." 28 C.F.R. § 35.130(b)(7).

3. Oregon recognizes and supports the Congressional finding that "the Nation's proper goals regarding individuals with disabilities are to assure equality of opportunity, full participation, independent living, and economic self-sufficiency." *See* 42 U.S.C. § 12101(a)(7).

4. Oregon is committed to compliance with the ADA. The Oregon Health Authority ("OHA") is taking steps to improve the lives of Oregonians with serious and persistent mental illness and to resolve the United States Department of Justice's ("USDOJ's") investigation of the State of Oregon's compliance with the integration mandate of Title II of the ADA and *Olmstead v. L.C.*, 527 U.S. 581 (1999), as they apply to adults with serious and persistent mental illness. This Plan is intended to further that progress.

5. OHA does not deliver services directly, but does administer federal and state funds used for services described in this Plan.

6. This Plan is not and shall not be construed as an admission on any issue or as an admission of liability by the State of Oregon. Oregon denies liability. This Plan does not create any third party rights.

7. The measures in this Plan are goals that OHA aspires to meet, and OHA agrees to make diligent efforts to meet them. OHA has begun implementation of a number of improvements since November 2012, the State has invested substantial funds in that effort, and the State's goal through the use of the performance outcome measures below is to make additional system reforms in the next three years.

8. If OHA does not meet any particular target or outcome measure at the end of each year, OHA and the Independent Consultant shall meet to determine the underlying reasons why

the outcome measure was not achieved, whether adjustments need to be made to that measure, whether the State has developed the infrastructure necessary to improve its performance and reach the outcome measure, whether to provide additional time for accomplishment of the measure, and whether to increase the term of this Plan. Any modification shall be in writing.

B. General Terms and Definitions

1. The effective date of this Plan is July 1, 2016.
2. OHA will advocate to the Oregon Health Policy Board (“Board”) and the Oregon Health Plan Quality Metrics Committee established under ORS chapter 413 (“Committee”) that the Board and Committee develop additional metrics consistent with the performance outcome measures in this Plan.
3. OHA shall collect and maintain data and records on each of the provisions of this Plan, in order to document that the requirements of this Plan are being properly implemented, and shall make such records reasonably available to the United States and the Independent Consultant, as set forth in Section F below.
4. This Plan, including the above recitals, shall not be enforceable in any court proceeding. Noncompliance with any provision of this Plan shall not be actionable in court.
5. In the event that responsibility for the provision and oversight of mental health services in Oregon is transferred to another state agency, those obligations of this Plan that run to the Oregon Health Authority (OHA) shall run to OHA’s successor agency.
6. The following definitions are to be used in connection with this Plan:
 - a. An “**Acute Care Psychiatric Facility**” or “**Acute Care Psychiatric Hospital**” is a hospital that provides 24 hour-a-day psychiatric, multi-disciplinary, inpatient or residential stabilization, care and treatment, for adults ages 18 and older with severe psychiatric disabilities.
 - b. “**Assertive Community Treatment**” (ACT) is an evidence-based practice designed to provide comprehensive treatment and support services to individuals with serious and persistent mental illness. ACT is intended to serve individuals who have severe functional impairments and who have not responded to traditional psychiatric outpatient treatment. ACT services are provided by a single multi-disciplinary team, which typically includes a psychiatrist, a nurse, and at least two case managers, and are designed to meet the individual needs of each individual and to help keep the individual in the community and out of a structured service setting, such as residential and/or hospital care. ACT is characterized by (1) low client to staff ratios; (2) providing services in the community rather than in the office; (3) shared caseloads among team members; (4) 24-hour staff availability, (5) direct provision of all services by the team (rather than referring individuals to other agencies); and (6) time-unlimited services.
 - c. “**CCO Region**” means the geographical area served by a CCO.

- d. **“Competitive Integrated Employment”** means full-time or part time work:
- (i) at minimum wage or higher, at a rate that is not less than the customary rate paid by the employer for the same or similar work performed by other employees who are not individuals with disabilities, and who are similarly situated in similar occupations by the same employer and who have similar training, experience, and skill;
 - (ii) with eligibility for the level of benefits provided to other employees;
 - (iii) at a location where the employee interacts with other persons who are not individuals with disabilities (not including supervisory personnel or individuals who are providing services to such employee) to the same extent that individuals who are not individuals with disabilities and who are in comparable positions interact with other persons; and
 - (iv) as appropriate, presents opportunities for advancement that are similar to those for other employees who are not individuals with disabilities and who have similar positions.

e. **“Discharge Planning”** means a process that begins upon admission to the Oregon State Hospital and that is based on the presumption that with sufficient supports and services, all individuals can live in an integrated community setting. Discharge planning is developed and implemented through a person-centered planning process in which the individual has a primary role and is based on principles of self-determination. Discharge planning teams at OSH include a representative of a community mental health provider from the county where the individual is likely to transition.

f. **“Evidence-Based”** refers to well-defined practices that are based directly on scientific evidence and that have been demonstrated to be effective through research studies.

g. **“Fidelity”** means that the ACT provider or supported employment provider is providing services that are faithful to the evidence-based practice model (ACT or Individual Placement and Support) and obtains a satisfactory score from the Oregon ACT Center of Excellence or the Oregon Supported Employment Center of Excellence, as part of their regular reviews.

h. **“Homeless”** as used in this Plan, means an individual with no fixed address, including individuals in shelters. “Homeless,” as used in this Plan, is limited to adult individuals with SPMI who are homeless.

i. **“Jail Diversion Services”** are community-based services that are designed to keep individuals with behavioral health issues out of the criminal justice system and, instead, supported by other community based services, such as mental health services, substance abuse services, employment services, and housing. Jail diversion services are intended to minimize contact with law enforcement, avoid jail time, and/or reduce jail time. These services are

intended to result in the reduction of the number of individuals with mental illness in the criminal justice system or Oregon State Hospital.

j. **“Mobile Crisis Services”** are mental health services for people in crisis, provided by mental health practitioners who respond to behavioral health crises onsite at the location in the community where the crisis arises and who provide a face-to-face therapeutic response. The goal of mobile crisis services is to help an individual resolve a psychiatric crisis in the most integrated setting possible, and to avoid unnecessary hospitalization, inpatient psychiatric treatment, involuntary commitment, and arrest or incarceration.

k. **“Peer-Delivered Services”** are community-based services and supports provided by peers, and peer support specialists, to individuals or family members with similar lived experience. These services are intended to support individuals and families to engage individuals in ongoing treatment and to live successfully in the community. OHA may utilize peer-delivered services in providing other mental health services, such as ACT, crisis services, warm handoffs from hospitals, and services at the Oregon State Hospital.

l. **“Ready to Place/Ready to Transition”** means that, consistent with the scope of the order of commitment, the individual’s discharge planning team has determined that a placement in the community is the most integrated setting appropriate for the individual, and that the individual was subject to a discharge planning process consistent with the definition in this Plan.

m. **“Sequential Intercept Model”** is the model which describes a series of junctures in the criminal justice system where interventions can be made to prevent an individual with mental illness from entering the criminal justice system or from becoming further involved in the system, by instead receiving appropriate community-based mental health interventions, to the benefit of the individual and the community.

n. **“Supported Employment Services”** are individualized services that assist individuals to obtain and maintain integrated, paid, competitive employment. Supported employment services are provided in a manner that allows individuals to work the maximum number of hours consistent with their preferences, interests and abilities and are individually planned, based on person-centered planning principles and evidence-based practices.

o. **“Supported Housing”** is permanent housing with tenancy rights and support services that enables people to attain and maintain integrated affordable housing. Support services offered to people living in supported housing are flexible and are available as needed and desired, but are not mandated as a condition of obtaining tenancy. Tenants have a private and secure place to make their home, just like other members of the community, with the same rights and responsibilities. Supported housing enables individuals with disabilities to interact with individuals without disabilities to the fullest extent possible. Supported housing is scattered site housing. To be considered supported housing under this Plan, for buildings with two or three units, no more than one unit may be used to provide supported housing for tenants with SPMI who are referred by OHA or its contractors, and for buildings or complexes with four or more units, no more than 25% of the units in a building or complex may be used to provide supported

housing for tenants with SPMI who are referred by OHA or its contractors. Supported housing has no more than two people in a given apartment or house, with a private bedroom for each individual. If two people are living together in an apartment or house, the individuals must be able to select their own roommates. Supported housing does not include housing where providers can reject individuals for placement due to medical needs or substance abuse history.

C. Funding Limitation

This Plan on performance outcomes is subject to Oregon law. Nothing in this Plan will be construed as permitting any violation of Article XI, Section 7 of the Oregon Constitution or any other law regulating liabilities or monetary obligations of the State of Oregon. The State will make diligent efforts to obtain the funding, appropriations, limitations, allotments, or other expenditure authority necessary to implement the terms of this Plan.

D. Performance Outcomes

OHA agrees to the following performance outcomes. Unless otherwise specified, the completion date for all provisions is July 1, 2019.

Assertive Community Treatment (“ACT”)

1. OHA will increase the number of individuals with SPMI served by ACT teams. OHA will provide ACT services to everyone who is referred to and eligible for ACT, and will meet the following metrics:

- a. 1,050 individuals will be served by the end of year one (June 30, 2017).
- b. 2,000 individuals will be served by the end of year two (June 30, 2018).
- c. After year two (after June 30, 2018), if 10 individuals in a CCO region have been referred, are eligible and are appropriate for ACT, and are on a waitlist to receive ACT that has lasted for more than 30 days, OHA will take action to reduce the waitlist and serve those individuals by (i) increasing team capacity to a size that is still consistent with fidelity standards, or (ii) by adding additional ACT team(s).
- d. OHA may waive the fidelity requirements regarding the number of individuals served by a team and the proportional reduction in staff for ACT teams in rural areas if the teams are unable to achieve fidelity. OHA shall report on any such waiver to USDOJ.
- e. By July 1, 2016, OHA will develop criteria for admission to ACT consistent with the definition in this Plan and based on national standards and provide them to USDOJ.

- f. Thereafter, OHA will incorporate those admission criteria into administrative rules.
2. Individuals who meet the admission criteria for ACT will be admitted to ACT.
3. OHA will track denials of individuals to ACT teams to determine if denials are based on established admission criteria. OHA shall take corrective action if providers are improperly rejecting individuals for ACT services.
4. OHA will gather the data listed below regarding individuals with SPMI receiving ACT services. These data points will be collected internally as a part of the quality improvement monitoring of ACT programs to determine the effectiveness of individual programs and the statewide effectiveness of ACT. The information will be used to identify areas for technical assistance and training. OHA will establish regular reporting of these metrics, and these reports will be made available to USDOJ.
 - a. Number of individuals served;
 - b. Percentage of clients who are homeless at any point during a quarter;
 - c. Percentage of clients with safe stable housing for 6 months;
 - d. Percentage of clients using emergency departments during each quarter for a mental health reason;
 - e. Percentage of clients hospitalized in OSH during each quarter;
 - f. Percentage of clients hospitalized in an acute care psychiatric facility during each quarter;
 - g. Percentage of clients in jail at any point during each quarter;
 - h. Percentage of individuals receiving Supported Employment Services during each quarter; and
 - i. Percentage of individuals who are employed in competitive integrated employment, as defined above.
5. The services measured in paragraphs D.1 to D.4 are for all services billed to Medicaid, regardless of whether the Medicaid claim was accepted, and for services through OHA that are paid for with state general funds used for treatment of the indigent.

Crisis Services

6. OHA will expand its mobile crisis services as follows: by the end of year two (June 30, 2018), mobile crisis services will be expanded so that they are available statewide.

7. OHA will increase the number of individuals served with mobile crisis services, as follows:
 - a. During year one (July 1, 2016 to June 30, 2017), 3,500 people will be served by mobile crisis.
 - b. During year two (July 1, 2017 to June 30, 2018), 3,700 people will be served by mobile crisis.
8. OHA will track and report the number of individuals receiving a mobile crisis contact.
 - a. By the end of year one (June 30, 2017), OHA will develop a methodology to track dispositions after a mobile crisis contact.
 - b. Six months after the development of the methodology, OHA will begin reporting the number of individuals whose disposition from mobile crisis is admission to Acute Care.
 - c. By the end of year two (June 30, 2018), Oregon will report the number of individuals whose dispositions after contact with mobile crisis result in stabilization in a community setting rather than arrest, presentation to an emergency department, or admission to an acute care psychiatric facility.
9. By the end of year one (June 30, 2017), for areas that are not rural or the frontier, mobile crisis teams shall respond “from the initial call to face to face” within 1 hour.
10. For frontier areas, the following outcomes apply.
 - a. By the end of year one (June 30, 2017), a mobile crisis team member shall respond “from the initial call to face to face” within 3 hours.
 - b. During year two (July 1, 2017 to June 30, 2018), OHA shall review its progress against this standard and against best practices to determine if adjustments are needed.
11. In rural areas, by the end of year one (June 30, 2017), a mobile crisis team member shall respond “from the initial call to face to face” within two hours.
12. In frontier and rural areas, a person who is trained in crisis management (such as a person from a crisis line or a peer) shall call within 1 hour.
 - a. During year two (July 1, 2017 to June 30, 2018), OHA shall review its progress against this standard and against best practices to determine if adjustments are needed.
13. OHA will develop and enforce uniform standards for hotline services and County Crisis Lines.

Supported Housing

14. OHA's housing efforts will include an increase in the number of individuals with SPMI in supported housing, as follows:

- a. In year one (July 1, 2016 to June 30, 2017), at least 835 individuals will live in supported housing.
- b. In year two (July 1, 2017 to June 30, 2018), at least 1,355 individuals will live in supported housing.
- c. In year three (July 1, 2018 to June 30, 2019), at least 2,000 individuals will live in supported housing.

OHA recognizes that individuals may decline housing offered to them. However, OHA will make best efforts to match individuals to housing that meets their needs and individual choices.

15. OHA will collect data regarding the housing stock or inventory that is available for individuals with SPMI. OHA will also continue to track the number of individuals with SPMI receiving supported housing. This information will be used to make a budget request for affordable housing for individuals with SPMI in connection with OHA's 2017- 2019 budget.

Peer-Delivered Services

16. OHA will increase the availability of peer-delivered services, consistent with the definition above, as follows:

- a. By the end of year one (June 30, 2017), OHA will increase the number of individuals who are receiving peer-delivered services by 20%.
- b. By the end of year two (June 30, 2018), OHA will increase the number of individuals who are receiving peer-delivered services by an additional 20%.

17. OHA measures the number of peer-delivered services by using Medicaid billing data. In Oregon, many individuals receive peer-delivered services which are billed under another Medicaid billing code, and which are not captured in this methodology. Accordingly, OHA believes that this methodology significantly undercounts the number of persons actually receiving peer-delivered services in Oregon. Nevertheless, OHA agrees to use this methodology in order to track increases in peer-delivered services and meet the metrics set by this provision. OHA will continue to explore better and more accurate ways to count peer-delivered services. If a more accurate method is identified, OHA may agree to modify the methodology to track the provision of peer-delivered services.

18. The services measured in paragraphs D.16 and D.17 are for all services billed to Medicaid, regardless of whether the Medicaid claim was accepted, and for services through OHA that are paid for with state general funds used for treatment of the indigent.

Oregon State Hospital

19. Paragraphs D.20 to D.26 below apply only to civilly-committed adult individuals at Oregon State Hospital (“OSH”), except to the extent specifically noted in D.26 below.

20. Discharge from OSH will occur as soon as an individual is ready to return to the community, as follows:

- a. By the end of year one (June 30, 2017), 75% of individuals who are Ready to Place/Ready to Transition will be discharged within 30 calendar days of placement on that list
- b. By the end of year two (June 30, 2018), 85% of individuals who are Ready to Place/Ready to Transition will be discharged within 25 calendar days of placement on that list
- c. By the end of year three (June 30, 2019), 90% of individuals who are Ready to Place/Ready to Transition will be discharged within 20 calendar days of placement on that list.
- d. If the last calendar day for a discharge within a timeframe found in subparagraphs (a) through (c) above falls on a weekend or holiday, that timeframe shall be extended to the next business day.
- e. OSH will track and report on discharges that are extended to and occur on the business day following a weekend day or holiday under subparagraph (d) above.
- f. OHA agrees that discharges from OSH of members of a Coordinated Care Organization (“CCO”) should be consistent with the Oregon Administrative Rules. OHA will work with CCOs to help them meet their obligations regarding the discharge of their members from OSH, consistent with the Oregon Administrative Rules.

21. The preferred discharge is one where an individual is discharged from OSH within 72 hours of the determination that the individual is Ready to Place/Ready to Transition.

22. OHA will enter into performance-based contracts to help it pursue paragraphs D.20 and D.21. These contracts may be with Community Mental Health Programs (“CMHPs”), CCOs, or with other entities, as appropriate.

23. OSH will discharge individuals with linkages to appropriate services, as follows:

- a. Everyone discharged from OSH who is appropriate for ACT shall receive ACT or an evidence-based alternative.¹
 - i. OHA shall document efforts to provide ACT to individuals who initially refuse ACT services, and shall document all efforts to accommodate their concerns.
 - ii. OHA shall offer alternative evidence-based intensive services for individuals discharged from OSH who refuse ACT services.
- b. Everyone discharged from OSH who is determined not to meet the level of care for ACT shall be discharged with services appropriate to meet their needs.

24. At the end of year one (June 30, 2017), OSH will discharge 90% of individuals within 120 days of admission.²

- a. As of the effective date of this Plan and continuing thereafter, if an individual is at OSH for more than 90 days, the OHA Director or her designee shall perform a clinical review of the individual's status to determine whether a continued stay at OSH is necessary.
- b. When a review is performed under subparagraph (a) above or (d) below, the justification for the individual's stay shall be clearly documented.
- c. If the OHA Director or her designee determines that there is an appropriate clinical justification for the individual to remain at OSH, the Director or her designee shall approve the extension of the individual's stay for up to 45 additional days.
- d. If an extension has been approved, the OHA Director or her designee shall conduct a follow-up clinical review of the individual's status every additional 45 days.
- e. If the OHA Director or her designee determines that there is not an appropriate clinical justification for the individual to remain at OSH, the Director of OSH shall work to expeditiously identify and move the individual to an appropriate clinical placement.
- f. OHA will review best practices on this issue annually.

¹ Services will be offered to everyone, but this involves an issue of individual choice. OHA shall make diligent efforts to inform each individual leaving OSH who is eligible for ACT about ACT services, in order to understand and address the individual's concerns about ACT and to tailor ACT services to the individual. OHA will provide data to USDOJ about individuals by quarter, who were offered ACT services and refused.

² As of July 2015, the average length of stay at OSH for civilly committed individuals was 7.3 months.

25. Every individual discharged from Oregon State Hospital shall be discharged to a community placement in the most integrated setting appropriate for the individual. Discharge shall be to housing consistent with the individual's treatment goals, clinical needs, and the individual's informed choice. The individual's geographic preferences and housing preferences (e.g., living alone or with roommates) shall be reasonably accommodated, in light of cost, availability, and the other factors stated above. Cost shall not be used as a justification for denying housing. Discharges shall not be to a secure residential treatment facility unless clinically necessary. No one shall be discharged to a secure residential treatment facility without the express approval of the Director of OHA or her designee.

26. If OHA utilizes interim, short-term, community-based housing for exceptional cases where individuals are ready to discharge from more restrictive settings and for whom permanent housing is not yet available, the following limitations shall apply:

- a. OHA may make available interim, short-term, community-based housing for individuals who are ready to discharge from OSH or from secure residential treatment facilities ("SRTFs") and for whom permanent housing is not yet available. OHA may also utilize such housing for individuals who are ready to discharge from acute care psychiatric facilities in accordance with paragraph D.33. Interim housing shall have no more than 5 individuals per unit. An individual's stay in interim housing shall not last more than two months.
- b. Individuals in interim housing shall be moved to long-term integrated housing within two months. Individuals in interim housing shall receive all services specified in their discharge plan.
- c. OHA shall report to USDOJ on all individuals who are placed in interim housing and the steps OHA is taking to place them in long-term integrated housing.
- d. OHA will phase out any interim housing or convert it to long-term integrated housing consistent with this Plan by July 1, 2019.
- e. OHA shall have no more than 20 interim housing slots.

Acute Psychiatric Care

27. All individuals with a serious and persistent mental illness who are discharged from Acute Care Psychiatric Facilities (not including OSH) will have documentation of linkages to timely, appropriate behavioral and primary health care in the community prior to discharge.

28. OHA shall continue with its process to enroll all or substantially all indigent individuals with SPMI not yet enrolled in Medicaid prior to discharge from acute care psychiatric facilities or emergency departments, consistent with state law.

29. All individuals discharged from an acute care psychiatric facility will be presented a “warm handoff” to a community case manager, peer bridger, or other community provider prior to discharge. OHA shall require acute care psychiatric facilities to report to OHA all individuals who refused a warm handoff on a quarterly basis, and OHA shall report this information to USDOJ, beginning with data for the second quarter of year one (October 1, 2016 to December 31, 2016). OHA shall provide this as aggregate data by acute care psychiatric facility. A warm handoff is the process of transferring a client from one provider to another, prior to discharge, which includes face-to-face meeting(s) with the client, and which coordinates the transfer of responsibility for the client’s ongoing care and continuing treatment and services. A warm handoff shall either (a) include a face-to-face meeting with the community provider and the client, and if possible, hospital staff, or (b) provide a transitional team to support the client, serve as a bridge between the hospital and the community provider, and ensure that the client connects with the community provider. For warm handoffs under subparagraph (b), the transitional team shall meet face to face with the client, and if possible, with hospital staff, prior to discharge. Face-to-face in person meetings are preferable for warm handoffs. However, a face-to-face meeting may be accomplished through technological solutions that provide two-way video-like communication on a secure line (“telehealth”), when either distance is a barrier to an in person meeting or individualized clinical criteria support the use of telehealth.

- a. By the end of year one (June 30, 2017), 60% of individuals discharged from an acute care psychiatric facility will receive a warm handoff to a community case manager, peer bridger, or other community provider.
- b. By the end of year two (June 30, 2018), 75% of individuals discharged from an acute care psychiatric facility will receive a warm handoff to a community case manager, peer bridger, or other community provider.
- c. By the end of year three (June 30, 2019), 85% of individuals discharged from an acute care psychiatric facility will receive a warm handoff to a community case manager, peer bridger, or other community provider.

30. OHA will continue to require that individuals receive a follow up visit with a community mental health provider within 7 days of discharge, and OHA will report this data.

31. OHA will reduce recidivism to acute care psychiatric facilities, and OHA will take the following steps.

- a. OHA will monitor and report the 30 and 180 day rates of readmission, by acute care psychiatric facility.
- b. OHA will provide a management plan for contacting and offering services to individuals with two or more readmissions to an acute care psychiatric hospital in a six month period designed to assist the individuals to avoid unnecessary readmission in acute care hospitalization.

32. OHA will identify individuals with SPMI who are homeless and who have had two or more readmissions to an acute care psychiatric hospital in a six month period. OHA or

another system participant will connect these individuals to a housing agency or mental health agency with access to housing, in order to work to ensure that those individuals are linked to housing in an integrated setting, consistent with the individual's treatment goals, clinical needs, and the individual's informed choice.

33. If necessary, OHA may make use of the interim housing described in paragraph D.26 for the individuals described in paragraph D.32 above. If interim housing is utilized for this purpose, paragraph D.26.b does not apply.

34. OHA will work with acute care psychiatric facilities, CCOs, and CMHPs to seek to ensure that individuals with SPMI who are discharged from acute care psychiatric facilities are discharged to housing that meets the individual's immediate need for housing. OHA will establish requirements for acute care psychiatric hospitals to assess the housing needs of individuals with SPMI. OHA shall require that, for all individuals with SPMI who are CCO members, the acute care psychiatric facilities shall consult with the individual's CCO in developing the assessment. The assessment will be documented in a plan for integrated housing that is part of the individual's discharge plan, and will be based on the individual's treatment goals, clinical needs, and the individual's informed choice. The hospital will notify the individual's community provider regarding the plan for housing in order for the provider to facilitate the implementation of the plan for housing.

35. OHA will measure the average length of stay of individuals with SPMI in acute care psychiatric facilities, by hospital. OHA will also report the number of individuals with SPMI in each facility whose length of stay exceeds 20 days.

36. The services measured in paragraphs D.27 to D.35 are for all services billed to Medicaid, regardless of whether the Medicaid claim was accepted, and for services that are paid for with state general funds used for treatment of the indigent.

Emergency Departments

37. OHA will work with hospitals to collect data regarding individuals with SPMI who present to emergency departments for mental health reasons. This data will be analyzed to identify issues related to individuals staying in the emergency department for over 23 hours. OHA will identify reasons for individuals remaining in emergency departments beyond 23 hours and will provide proposals for solutions to address this issue. This analysis will be presented to the Legislature during the next legislative session. This analysis will be provided to the USDOJ. OHA will initiate additional community-based strategies to address this issue, beginning in the fall of 2016.

38. The data in the analysis described in paragraph D.37 will also be used to assess the needs of individuals with SPMI who leave the emergency department and strategies for linking them to services. OHA will initiate strategies to increase the number of individuals with SPMI who are connected to services at the time that they leave emergency departments and will collect data to measure the effectiveness of these strategies.

39. As provided in paragraph D.28, OHA shall continue its process to enroll all or substantially all indigent individuals with SPMI not yet enrolled in Medicaid prior to discharge from emergency departments.

40. OHA will reduce recidivism to emergency departments for psychiatric purposes, by taking the following steps:

- a. OHA will track emergency department readmissions of individuals with SPMI by hospital. Emergency departments include the use of psychiatric emergency services, such as the proposed Unity Center in Portland. OHA will monitor the number of individuals with SPMI with two or more readmissions to an emergency department for psychiatric reasons in a six month period, and will continue to work with CCOs and CMHPs to better address the needs of these individuals in less institutional settings.
- b. OHA shall enter into collaborative efforts with CCOs and CMHPs to develop and implement plans to (a) address the needs of individuals with SPMI with two or more readmissions to an emergency department for psychiatric reasons in a six-month period, and (b) meet their needs in less institutional settings where appropriate. OHA will seek contract amendments to CCO contracts in 2018 that will require that acute care psychiatric hospitals develop and implement plans to address the needs of these individuals and address their needs in less institutional settings.

41. OHA will reduce the rate of visits to general emergency departments by individuals with SPMI for mental health reasons, as follows³:

- a. By the end of year one (June 30, 2017), there will be a 10% reduction from the baseline.
- b. By the end of year two (June 30, 2018), there will be a 20% reduction from the baseline.
- c. By the end of year three (June 30, 2019), OHA will have a quality improvement process to track whether emergency room visits are decreasing.

42. OHA agrees to meet with the Independent Consultant to discuss the use of emergency departments by individuals with SPMI who present to emergency departments for mental health reasons, but an additional performance outcome on this issue will not be added to this Plan or otherwise added as a performance outcome.

43. OHA is working with hospitals to determine a strategy for collecting data regarding individuals with SPMI who are in emergency departments for longer than 23 hours. OHA will begin reporting this information in July 2017, and will provide data by quarter

³ General emergency departments do not include psychiatric emergency services, such as the proposed Unity Center in Portland.

thereafter. OHA will report this information by region. OHA will pursue efforts to encourage reporting on a hospital-by-hospital basis.

44. The services measured in paragraphs D.37 to D.43 are for all services billed to Medicaid, regardless of whether the Medicaid claim was accepted, and for services that are paid for with state general funds used for treatment of the indigent.

Supported Employment

45. OHA will report the following:

- a. The number of individuals with SPMI who receive supported employment services who are employed in competitive integrated employment, as defined above.
- b. The number of individuals with SPMI who no longer receive supported employment services and are employed in competitive integrated employment without currently receiving supportive services from a supported employment specialist (but who may rely upon natural and other supports).

46. OHA will regularly monitor the foregoing data for the purpose of improving Supported Employment services.

47. The services measured in paragraphs D.45 and D.46 are for all services billed to Medicaid, regardless of whether the Medicaid claim was accepted, and for services through OHA that are paid for with state general funds used for treatment of the indigent.

48. Receipt of supported employment services does not guarantee a job or work for a specific number of hours.

Secure Residential Treatment Facilities

49. Civilly committed individuals in secure residential treatment facilities (“SRTFs”) whose clinical needs no longer necessitate placement in a secure facility shall be moved expeditiously to a community placement in the most integrated setting appropriate for that individual.

- a. These moves shall be consistent with the housing provisions in paragraph D.50.
- b. OHA will seek to reduce the length of stay of civilly committed individuals in secure residential treatment facilities, as follows:
 - i. By the end of year one (June 30, 2017), there will be a 10% reduction from the baseline.

- ii. By the end of year two (June 30, 2018), there will be a 20% reduction from the baseline.
- c. OHA will regularly report on the number of civilly committed individuals in SRTFs, their lengths of stay, and the number of individuals who are discharged. Starting at the beginning of year two of this Plan (July 1, 2017), OHA will collect data identifying the type of, and the placement to which they are discharged.

50. Civilly committed individuals who are discharged from secure residential treatment facilities shall be moved to a community placement in the most integrated setting appropriate for that individual. Discharge shall be to housing consistent with the individual's treatment goals, clinical needs, and the individual's informed choice. The individual's geographic preferences and housing preferences (e.g., living alone or with roommates) shall be reasonably accommodated in light of cost, availability, and the other factors stated above. Cost shall not be used as a justification for denying housing.

Criminal Justice Diversion

51. The intent of the following provisions is to reduce the contacts between individuals with SPMI and law enforcement due to mental health reasons. OHA hopes to reduce arrests, jail admissions, lengths of stay in jail, and recidivism for individuals with SPMI who are involved with law enforcement due to a mental health reason.

52. OHA will work to decrease the number of individuals with serious and persistent mental illness who are arrested or admitted to jail based on a mental health reason, by engaging in the following strategies:

- a. OHA will continue to report the number of individuals with SPMI receiving jail diversion services and the number of reported diversions. OHA will require, under new contracts with entities providing jail diversion services, that contract providers report the number of diversions pre- and post-arrest. OHA will include this requirement in all RFPs for any new jail diversion programs.
- b. By July 2016, OHA will begin to work collaboratively with the Oregon Sheriffs' Association and the Association of Community Mental Health Programs to determine strategies to collect data on individuals with SPMI entering jails.
- c. By July 2016, OHA will contract with The GAINS Center to consult on the expansion of the use of the Sequential Intercept Model by local jurisdictions across the State, and will encourage local jurisdictions to adopt and implement interventions in accordance with this model. New funding for jail diversion services will require the county to adopt the Sequential Intercept Model.

- d. As of July 2016, OHA will track arrests of individuals with SPMI who are enrolled in services and will provide data by quarter thereafter.
- e. OHA will provide USDOJ with data quarterly from the jail diversion programs it funds, subject to paragraph F.6 below.
- f. OHA shall continue to collect data regarding individuals with SPMI enrolled in mental health services who are arrested, the county where these individuals encountered law enforcement, existing jail diversion services, the impacts of those services, and obstacles to the success of those services. OHA will provide the results of any mapping and any additional relevant data to USDOJ and will allocate existing funding as necessary to support additional or enhanced jail diversion programs based on the results. OHA-funded jail diversion grants shall prioritize pre-charge diversion activities.

53. OHA shall work with local jurisdictions to develop strategies to share information with jails regarding the mental health diagnosis, status, medication regimen, and services of individuals with SPMI who are incarcerated.

E. Quality and Performance Improvement

1. OHA will continue to develop and implement a quality and performance improvement system specific to the performance outcomes described in Section D of this Plan. The quality and performance improvement system will seek to ensure compliance with these outcome measures and will seek to ensure that the community-based services for individuals with SPMI described in this Plan are offered in accordance with the requirements of the Plan.

OHA will seek to ensure that the mental health and other services and supports for individuals with SPMI addressed in the performance outcomes in Section D of this Plan and funded by the State are of good quality and are sufficient to provide reasonable opportunities to help individuals achieve increased independence and greater integration into the community, and avoid negative outcomes, including harm, hospitalization, contacts with law enforcement, and institutionalization. The quality improvement measures described in this Plan do not, however, establish a level of benefits or standard of care.⁴

The quality and performance improvement system will monitor the following performance outcomes in this Plan:

- Assertive Community Treatment Services (paragraphs D.1 to D.5)
- Crisis Services (paragraphs D.6 to D.13)
- Supported Housing (paragraphs D.14 to D.15)
- Peer-Delivered Services (paragraphs D.16 to D.18)
- Oregon State Hospital (paragraphs D.19 to D.26)

⁴ See Olmstead, 527 U.S. at 603 n. 14

- Acute Psychiatric Care (paragraphs D.27 to D.36)
- Emergency Departments (paragraphs D.37 to D.44)
- Supported Employment (paragraphs D.45 to D.48)
- Secure Residential Treatment Facilities (paragraphs D.49 to D.50)
- Criminal Justice Diversion (paragraphs D.51 to D.53)

2. OHA will maintain a system for accountability for the performance outcomes specified in Section D of this Plan, by including the following elements of OHA's USDOJ Project governance structure:

- a. USDOJ Agreement Stakeholder Advisory Team: composed of a cross section of diverse stakeholders, including a minimum of 20% individuals with lived experience, to review and comment on the progress towards and performance of the outcomes specified in Section D and provide advice to OHA regarding the strategies being employed.
- b. Olmstead Plan Stakeholder Team: composed of membership from the Addictions and Mental Health Planning and Advisory Council's Housing and Olmstead Subcommittee, USDOJ Agreement Stakeholder Advisory Team, OSH Community Reintegration Committee and Oregon Consumer Advisory Council (OCAC) to review and comment on the progress towards and performance of the outcomes specified in Section D and provide advice to OHA regarding the strategies being employed.

3. Additionally, OHA will:

- a. Provide minutes of meetings, formal correspondence and reports, if any, that may issue from the above groups to USDOJ and the Independent Consultant.
- b. OHA may modify the process described in paragraph E.2 above in consultation with the Independent Consultant.

4. OHA will maintain a quality improvement system for behavioral health services that incorporates the following elements:

- a. Data collection and analysis: OHA shall collect and utilize consistent, reliable data regarding services for individuals with SPMI receiving publicly funded behavioral health services in order to:
 - (i). Identify trends, patterns, strengths, successes, and problems at the individual, service-delivery, and systemic levels, including, but not limited to, quality of services, service gaps, accessibility of services, and the success and obstacles to serving individuals with SPMI;
 - (ii). Develop preventative, corrective, and improvement measures to address identified problems and build on successes; and

(iii) Track the efficacy of preventative, corrective, and improvement measures and revise these measures as appropriate.

b. OHA will issue regulations or enter into performance-based contracts with CMHPs and other providers, either directly or through its CCOs, that specifically describe expectations with regard to the outcomes in Section D and the services and supports to be provided to individuals with SPMI consistent with the provisions of this Plan.

c. Supported Employment and Assertive Community Treatment Providers shall continue to be reviewed annually for fidelity to a specific set of standards that demonstrate that the program is following an evidence-based model. Providers may not bill Medicaid or use General Funds unless they are subject to this annual fidelity review. These reviews will include interviews with participants in the program and their families when appropriate. Regardless of a provider's overall fidelity score, if a fidelity review identifies particular areas of weakness, OHA or the Oregon Supported Employment Center for Excellence or the Oregon Center of Excellence for Assertive Community Treatment shall provide technical assistance or other support to the provider, in order to help the provider remedy that deficiency. OHA or the relevant Center for Excellence shall review the provider's implementation of any corrective measures, shall evaluate whether the provider's performance in those areas improves, and shall take further action as necessary to assist the provider in remedying the deficiency.

d. If a CMHP or CCO is acting in a way that OHA believes will frustrate substantial performance of this Plan, OHA will develop a corrective action plan, with timelines for implementation, oversight and monitoring by OHA.

5. To further system transparency, OHA will post on its website semiannual reports regarding its quality improvement efforts under this Section E. OHA will also post reports regarding its performance of mental health outcomes found in other quality improvement initiatives that OHA has already initiated. These are (1) the Special Terms and Conditions of the July 11, 2015 Medicaid Demonstration, (2) metrics established by the Oregon Metrics and Scoring Committee, and (3) external quality reviews of behavioral health services by coordinated care organizations.

6. The activities in this Section E will be used by OHA to direct and measure the implementation of the provisions in Section D. OHA's performance shall be measured by whether it substantially complies with those performance outcomes and the other obligations specified in Section D, and with whether OHA establishes or maintains the quality improvement measures required by this Section E. Section E and the activities that are described in it shall not be used to establish additional performance metrics for which OHA or the State would be responsible.

7. Any review of OHA's performance of this Section E shall be limited to the extent it serves individuals with SPMI.

F. Compliance and Reporting.

1. OHA will contract with Pamela S. Hyde, who shall serve as the Independent Consultant to assess OHA's performance under this Plan. The Consultant's role in assessing OHA's performance shall be limited to assessing whether OHA is meeting the provisions of this Plan. The Consultant's engagement shall terminate three years from the execution of this Plan (July 1, 2019), unless otherwise agreed in a writing signed by the parties.
2. At OHA's specific written request, the Independent Consultant will be available to assist OHA in implementing the provisions of the Plan, including providing training and technical assistance. Such assistance may include recommendations to facilitate implementation, including quality and performance improvement processes, and identifying any obstacles to implementation and strategies to address such obstacles.
3. Every six months, the Independent Consultant shall assess compliance as provided in paragraph F.1 and shall issue semi-annual reports of those assessments. The Independent Consultant shall provide the report in draft to OHA and USDOJ, and OHA and USDOJ shall have 30 days to comment on the draft report. Any report or statement by the Consultant is intended to aid in the resolution of this matter. OHA shall make these reports public.
4. OHA agrees to facilitate the Independent Consultant's access to documents, staff, and other information necessary to assess OHA's implementation of the Plan. OHA shall also make a designated contact person available to respond to requests by the Independent Consultant. Contacts with other staff persons shall be facilitated through this person.
5. If Ms. Hyde is unable to continue to serve as the Independent Consultant during an agreed-upon term of the engagement, or OHA and USDOJ mutually agree to replace Ms. Hyde, OHA and USDOJ agree to jointly select a replacement Independent Consultant. If OHA and USDOJ are unable to agree on a replacement, OHA and USDOJ shall submit three proposed candidates each to the Chief Judge of U.S. District Court for the District of Oregon and ask the Court to appoint a replacement. The Independent Consultant shall have experience administering a state mental health system.

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6. OHA shall provide the data required under this Plan to USDOJ and the Independent Consultant. All data shall be provided quarterly. Additionally, OHA shall provide a semi-annual report about the data. To the extent that quarterly information from third parties, such as from jail diversion providers, is not currently available, OHA shall seek contract amendments in any contract entered into after July 1, 2016 that will require that data reporting be done on a quarterly basis.

STATE OF OREGON, by and through
the Oregon Health Authority

By: 
Lynne Saxton, Director

ED Boarding of Psychiatric Patients in Oregon

A Report to Oregon Health Authority

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October 28, 2016

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Executive Summary

The Oregon Health Authority (OHA) commissioned the College of Public Health and Human Sciences at Oregon State University to conduct a study regarding the problem of “boarding” of patients with mental illness in hospital emergency departments (ED) while patients wait for a bed in an appropriate setting. The report contains a thorough analysis of the breadth of the ED boarding practice; the current system and process, including system capacity, relevant statutes and reimbursements; causes and impacts of the ED boarding practice; and proposals for potential solutions. This report integrates from a comparative perspective results from (a) interviews with mental health experts and key stakeholders in Oregon and (b) analyses of three quantitative databases currently available to study psychiatric ED boarding in Oregon. Discussed below are highlights of results presented in this report.

Extent of Psychiatric ED Boarding Practice in Oregon

To quantify the extent of psychiatric ED boarding in Oregon, we linked and analyzed data from three independently-maintained administrative data sources: the Emergency Department Information Exchange (EDIE); hospital discharge abstracts; and Medicaid claims and enrollment data. The analytic sample contained 690,245 unique ED episodes on 290,181 unique persons from October 1, 2014 through September 30, 2015. This sample, which included only visits found in at least 2 of the 3 datasets, comprised about half of recent annual ED episodes in Oregon.

We estimate that for the one-year period, up to 29,763 ED visits or 2.1% of all hospital ED visits in Oregon were psychiatric ED boarding episodes, based on the definition of an ED boarding as a stay in the ED longer than 6 hours. The rate of psychiatric ED boarding represents 14.6% of all psychiatric ED visits, which is comparable to a national average for year 2008. This estimate of boarded psychiatric ED visits might be slightly overestimated due to psychiatric ED visits being more frequent in the analytic sample than in the overall universe of ED visits in Oregon. The rate of psychiatric ED boarding decreases as the cutoff threshold for the boarding definition is raised. The boarding rates for 8-, 12-, and 24-hour cutoffs were 9.8%, 7.1%, and 3.5%, respectively.

The rate of psychiatric ED boarding increased with the severity of psychiatric conditions identified during the ED visit. Over 24% of all severe-psychiatric ED visits were psychiatric boarding episodes, about twice as large in magnitude as that of non-severe psychiatric ED visits.

Boarding time, defined as the length of ED stay over 6 hours, was greater for psychiatric visits. Among boarded episodes, average boarding time for psychiatric and non-psychiatric visits were 18 and 17 hours, respectively. The severity of psychiatric conditions significantly increased boarding time in Oregon EDs. It was 27 hours for severe psychiatric ED visits, compared to 15 hours for non-severe psychiatric conditions. Therefore, taken together, the rate of psychiatric ED boarding and boarding time in Oregon suggest that the practice of ED boarding in Oregon was concentrated in a subset of ED episodes, particularly those for severe psychiatric conditions.

Among all boarded ED visits, the proportion of psychiatric ED boarding increased gradually over the year while the proportion of non-psychiatric ED boarding episodes continued to decrease. This is because between October, 2014 and September, 2015, the number of boarded ED episodes decreased by 29% while non-psychiatric ED boarding episodes decreased by 35%.

compared to a 13% decrease for psychiatric ED boarding episodes. As a result, the proportion of psychiatric visits among all boarded ED visits grew from 38% to 47% while the proportion on non-psychiatric visits in all boarded ED visits decreased from 62% to 53%.

ED boarding appears to increase expenditure during an ED visit. ED visits on average cost approximately \$424. In comparison, the average cost of boarded psychiatric ED visits was \$695. Psychiatric visits had a higher average per-visit ED cost than non-psychiatric visits for non-boarded patients. However, for boarded visits, non-psychiatric visits had a greater average ED cost than psychiatric visits (\$1,196 vs. \$695).

Causes of Psychiatric ED Boarding Practice in Oregon

Interviews of key stakeholders identified several broad causes of psychiatric boarding in hospital EDs in Oregon, including: lack of outpatient treatment capacity, which increases the probability of psychiatric ED visits; lack of crisis response or other alternative treatment options to ED utilization; barriers to discharge from the ED directly to community destinations ; and limited availability of inpatient or sub-acute care resources for patients with the most severe psychiatric emergencies.

Statistical analyses of the administrative data provided additional insights into potential determinants of psychiatric ED boarding in Oregon. Results show that psychiatric conditions during ED visits on average lead to a two-fold increase in the probability of boarding in hospital EDs. The severity of psychiatric conditions, substance abuse, rural residence, male gender, and hospital locations in the Portland metropolitan and Willamette Valley regions also significantly increased the likelihood of psychiatric ED boarding.

Suggested Solutions to Psychiatric ED Boarding Practice in Oregon

Interview respondents also indicated that an increase in inpatient psychiatric resources alone would not be sufficient to address the boarding problem. Instead, respondents felt that solutions should focus on preventing mental health crises and better managing patient needs in settings other than the ED, suggesting specifically the need to: expand community mental health services to reduce the number of psychiatric ED visits; expand the availability of ED alternatives such as crisis centers or psychiatric emergency centers like the new Unity Center in Portland; change the service delivery environment in the ED such as improved information tools such as Pre-Manage and Emergency Department Information Exchange (EDIE), a dedicated area in the ED for psychiatric care, and peer support services; increase alternatives to inpatient beds such as sub-acute beds and residential services; use alternatives to the State Hospital for the .370 population; improve the availability of services to assist patients discharging from inpatient psychiatric hospitals or the state hospital, such as supportive services, such as housing, in the community; expand alternative payment models for behavioral health care services; and address specific challenges for pediatric populations.

The statistical analysis of quantitative administrative data supported the key results from the stakeholder interviews. Focusing on the effect of county-level mental health capacity and the probability of psychiatric ED boarding, we found that an increase in the capacity of

either inpatient or community-based mental health resources for persons with severe mental illness could lead to a decrease in the magnitude of psychiatric ED boarding in Oregon.

Chapter 1. Introduction

“Boarding” patients with mental illness in hospital emergency departments (ED) routinely occurs across the U.S. A symptom of insufficient inpatient capacity and community mental programs, psychiatric boarding leads to overcrowding in hospital emergency departments. However, little is known about the extent of the problem of the ED boarding or the causes, impacts, or potential solutions in Oregon.

The OHA commissioned the College of Public Health and Human Sciences at Oregon State University to conduct a study regarding the problem of “boarding” of patients with mental illness in hospital emergency departments (ED) while patients wait for a bed in an appropriate setting. The report contains finding from analyses of interviews with key stakeholders who work in the mental health field in Oregon and ED utilization (claims) data retrieved from the Medicaid program, Emergency Department Information Exchange (EDIE), and hospital discharge databases. It presents the ED boarding in Oregon in terms of the breadth of the practice; the current system and process, including system capacity, relevant statutes and reimbursements; determinants and impacts of the boarding; and proposals for potential solutions.

The organization of the report is as follows. Chapter 2 summarizes the literature on boarding of psychiatric patients nationwide in terms of its extent, causes, and impacts as well as suggested solutions. Chapter 3 presents the extent and recent trends in psychiatric ED boarding as well as ED expenditures associated with psychiatric ED boarding in Oregon based on data from the three administrative data sources. Chapter 4 discusses results of stakeholder interviews in terms of the extent, causes and impacts of psychiatric ED boarding in Oregon. It presents data from interviews with a broad group of mental health experts and key stakeholders in Oregon and health systems. Chapter 5 presents results of statistical analysis of the quantitative data on hospital ED utilization in Oregon. We present our findings on determinants of psychiatric ED boarding and the role of mental health system capacity in mitigating the magnitude of the psychiatric ED boarding problem in Oregon. Chapter 6 comparatively synthesizes the national literature and Oregon data from the stakeholder interviews and quantitative data. Finally, Chapter 7 concludes the report.

Chapter 2. Literature Review: Causes, Impacts and Suggested Solutions

2.1. Definitions of ED Boarding in the Literature

The literature describes ‘psychiatric boarding’ in hospital EDs occurs when an individual with a mental health condition is kept in an ED after the decision to admit or transfer to another facility is made because appropriate mental health services are unavailable. Unfortunately, no standard definition exists that defines boarding in terms of the length of stay in the ED.

Alakeson et al. (2010) states, “The term boarding is generally understood to mean the time spent waiting in an emergency room for a hospital bed or for transfer to another inpatient facility.” The Joint Commission similarly defines boarding in their accreditation manual as, “Patients being held in the emergency department or another temporary location after the decision to admit or transfer has been made.” Rabin et al. (2012) defines boarding as, “Patients who remain in the emergency department beyond the time required to implement a timely transfer to an inpatient bed,” but go on to state that, “Definitions of timely transfer vary. Experts often cite a period of less than two hours from the admission order as timely.”

Other researchers and medical groups define psychiatric boarding based on the length of stay in the ED following a disposition decision. For instance, in a 2008 survey of ED directors, the American College of Emergency Physicians (ACEP) defines psychiatric boarding when a patient remains in the ED for 4 or more hours after there was a decision to admit. Nolan et al. (2010) defines boarding as a visit lasting more than 6 hours, Perimal-Lewis et al. (2014) defines boarding as a visit lasting more than 8 hours, and Wharff et al. (2011) as a stay in the ED longer than 12 hours following a decision to admit. The Arizona Hospital Association defines psychiatric boarding as a stay in the ED longer than 24 hours after an admit decision (Arizona Hospital and Healthcare Association, 2015). In a consensus statement from the Emergency Department Performance Measures and Benchmarking Summit (2005), it states that, “an admitted patient for whom the time interval between decision to admit and physical departure of the patient from the ED treatment area exceeds 120 minutes” is considered boarding.

2.2. National Extent and Trends

- The proportion of all ED visits related to mental health and substance abuse (MHSA) increased from 5.4% in 2000 to 12.5% in 2007 nationwide.
- In 2008, 21.5% of all MHSA patients in EDs nationwide experienced boarding. There was an increase in boarding of behavioral patients in EDs for 42% of U.S. hospitals.
- Psychiatric patients were more likely than other patients to stay in the ED for over 24 hours.
- Rates of psychiatric boarding vary across regions of the country.
- 43.4% of homeless MHSA patients nationwide experienced boarding in 2008.

Appendix A Exhibit 1 summarizes findings from the selected literature on the extent of psychiatric ED boarding nationwide and in other states.

Nationally mental health and substance abuse (MHSA) conditions accounted for approximately 12.0 million visits to EDs (12.5% of all ED visits) in 2007, of which MHSA was the primary diagnosis for 4.1 million visits (Owens et al., 2010). Of these visits, over half a million are made by children experiencing mental health problems (Dolan et al., 2011). In 2010, MHSA conditions were among the top 10 leading causes of ED admissions for children, accounting for almost 1.1 million ED visits (Wier et al., 2013). Between 2000 and 2007, the percent of ED visits related to MHSA increased from 5.4% to 12.5%. Nearly 41% of the MHSA visits led to a hospital admission, an admission rate over 2.5 times greater than for ED visits for other non-MHSA conditions (Owens et al., 2010).

Patients visiting EDs for MHSA conditions are more likely to be boarded than ED patients without MHSA conditions. In 2008, 21.5% of all ED visits for MHSA conditions experienced boarding, compared to only 10.3% of ED visits for non-MHSA conditions (Nolan et al., 2015). Furthermore, in a 2008 survey, more than 80% of ED directors reported boarding psychiatric patients; 90% of which reported boarding patients each week and 55% reported boarding patients daily or multiple times a week (American College of Emergency Physicians, 2008).

A 2007 survey of hospitals revealed an increase in boarding of behavioral patients in EDs for 42% of U.S. hospitals (Bender et al., 2008). The proportion of Medicare fee-for-service patients who had behavioral health related ED visits increased from 16% of all ED visits in 2006 to 22% in 2010 (American Hospital Association, 2012). Between 2001 and 2006, the average length of stay in EDs increased by 2.3% annually with mental health patients experiencing stays that were 42% longer than non-mental health patients (Slade, 2010). Similarly, between 2001 and 2008 pediatric mental health patients (median= 169 minutes) experienced significantly longer stays in the ED than non-mental health pediatric patients (median= 108 minutes) (Case et al., 2011). It is also reported that mental health patients were more likely than other patients to stay in the ED for over 24 hours (Stephens, 2014).

Rates of psychiatric boarding vary across regions of the country. An analysis of the 2008 National Hospital Ambulatory Medical Care Survey (NHAMCS) data shows that nearly one-third of MHSA patients in the Northeast region of the U.S. were boarded compared to less than 20% for all other regions (Nolan et al., 2015). In Maryland, psychiatric patients often board for days in the ED, while in Georgia psychiatric patients board in EDs for 34 hours on average (Bender et al., 2008). In 2013, 7% (3,240 patients) of Arizona's psychiatric patients visiting EDs were boarded for more than 24 hours (Arizona Hospital and Healthcare Association, 2015). In California, psychiatric patients were boarded on average 10 hours in 2010 (Stone et al., 2012).

Psychiatric boarding is more common among homeless populations. Approximately 43% of homeless MHSA patients nationwide ever experienced boarding in 2008, compared to 20.5% of persons in private residence and 27.5% nursing home patients (Nolan, 2011). Rural-urban difference in ED boarding is also significant: In 2008, 27.2% of MHSA patients in urban areas experienced ED boarding while only 10.7% of those livings in rural areas were boarded.

Psychiatric boarding also creates difficulties in collaboration between law enforcement and EDs. In a study by Beech et al., (2000) it was found that 9% of psychiatric ED referrals came from police services. Brunero et al., (2007) found that psychiatric patient police referrals were most often for schizophrenia, psychotic episode, and suicide risk, and that those referred by police services were more likely to attend the ED for psychiatric emergencies more often -

between two and three times during the 12-month study period as compared to only once. Kneebone et al., (1995) found that the majority of psychiatric police referrals presenting with psychotic disorder had longer admission times than those who presented for non-psychotic issues.

2.3. Causes Reported in the Literature

Appendix A Exhibit 2 summarizes findings from the selected literature on causes of psychiatric ED boarding.

Person-Level Determinants of ED Boarding

- Person-level predictors of ED boarding include homelessness, urban residence, sex, race/ethnicity, diagnosis of mental illness, substance abuse, suicidal/homicidal ideation, and a history of self-harm.
- Types of health insurance are a potential determinant of ED boarding.

To date, only one study has comprehensively assessed psychiatric boarding at a national level. Nolan et al. (2015) analyzed the 2008 National Hospital Ambulatory Medical Care Survey. The study reported that nationally (a) psychiatric ED boarding is more likely among ‘homeless’ mental health and substance abuse (MHSA) patients than MHSA patients living in a private residence or nursing home; (b) MHSA patients identifying themselves as Asian or multiple race were more likely to board than non-Hispanic whites; and (c) urban residents are more likely than rural residents to be boarded. However, the likelihood of boarding did not vary by patient’s age, sex, insurance type, frequency of ED use, or community poverty and income levels.

The literature does not necessarily agree upon the national-level findings. For example, while Chang et al. (2012) reported homeless patients were more likely to experience ED boarding than non-homeless patients, consistent with Nolan et al. (2015), others found that psychiatric ED boarding was associated with health insurance status (e.g. Chang et al, 2012; Stephens et al., 2014; Misek et al., 2015; Warren et al., 2015). Specifically, publicly insured persons and those lacking insurance were significantly more likely to experience ED boarding than those with private insurance (Chang et al., 2012). Difficulty obtaining insurance authorization or uninsured status adds to the list of reasons for ED boarding of psychiatric patients (ACEP, 2008). In terms of race/ethnicity, Mansbach et al. (2003) reported blacks were more likely to be boarded than non-Hispanic whites.

Psychiatric boarding also appears to be associated with a person’s diagnosis. Psychiatric patients with diagnoses of cognitive or personality disorders are reportedly more likely to experience ED boarding (Warren et al., 2015). In a study of adults on involuntary psychiatric holds, psychiatric boarding was more likely among patients who were intoxicated (Brenneman et al, 2015).

Children also experience psychiatric ED boarding. The likelihood of psychiatric boarding is greater for children experiencing suicidal ideation (Mansbach et al. 2003; Wharff et

al., 2013; Chakravarthy et al., 2015), homicidal ideation (Mansbach et al., 2003), or with a previous history of self-harm (Chakravarthy et al., 2015). Children diagnosed with a psychotic disorder are also more likely than children admitted for a substance-use disorder to experience psychiatric boarding (Chakravarthy et al., 2015). Patient sex in general does not appear to be associated with the likelihood of psychiatric ED boarding for children, except in Chakravarthy et al., (2015) which found females were more likely than males to board. Hispanic children are significantly less likely to board compared to non-Hispanic white children (Chakravarthy et al., 2015).

Strauss et al., (2005) found that psychiatric ED boarders referred by police services were more likely to be homeless, be known to mental health service providers, be male and have schizophrenia. For youth referred to the ED by police services those presenting with psychiatric conditions were more likely to experience domestic violence, poor caregiver competency, higher severity of mental illness, substance abuse, assaultive behavior and destructive behavior as compared to psychiatric youth brought to the ED by other means. Lee et al., (2008), in a study of a 350-bed community hospital, found that the majority of psychiatric ED boarding brought to the ED by police services occurred after working hours and on weekends while mental health services were least accessible.

System-Level Determinants of ED Boarding

- At the health system level, the following factors reported contribute to ED boarding of psychiatric patients:
 - Limited supply of inpatient psychiatric beds;
 - Limited availability and underfunding of community (outpatient) mental health programs;
 - Limited community alternatives to EDs;
 - Lack of care coordination for psychiatric patients;
 - Mental health workforce shortage; and
 - Insufficient training of ED staff.
 - Less generous mental and behavioral health benefits.

Limited Availability of Inpatient Psychiatric Beds. Deinstitutionalization is often cited as an underlying cause of psychiatric bed decline. The process has led to the massive transfer of severely mentally-ill persons out of institutional care in favor of community treatment (Grob, 1994). Data from American Hospital Association's Annual Survey of Hospitals show that between 2003 and 2009 the number of total psychiatric beds in the U.S. reduced by 10 beds per 100,000 persons from 34 beds in 2003.

A crucial aspect of deinstitutionalization involves significant structural changes in the public mental health system. From 1970 to 2000, 'public' psychiatric hospital beds dropped from 207 to 21 beds per 100,000 persons (Mandersheid et al. 2004). Torrey et al. (2012) report that from 2005 to 2010 state psychiatric beds reduced by 14% (from 17.1 per 100,000 in 2005 to 14.1 per 100,000 in 2010), and at least 25% bed reductions occurred in thirteen states. The declining capacity of public psychiatric hospitals has been linked to a greater incidence of psychiatric crisis in the population (measured by suicide rates) and a reduced likelihood of contacts with the

criminal justice system among persons with severe mental illness (Yoon & Bruckner, 2011; Yoon et al., 2014). Importantly, due to the limited number of inpatient psychiatric beds, many psychiatric patients in the ED end up boarding until a bed becomes available. Nesper et al. (2015) reported an average length-of-stay (LOS) in a university-based hospital in Sacramento County, California for psychiatric patients increased from 14.1 hours to 21.9 hours following a reduction in inpatient psychiatric beds. Similarly, LOS in an ED was significantly longer for psychiatric patients who were transferred to a psychiatric facility than for psychiatric patients who discharged home or who were admitted for medical treatment (Chang et al., 2011).

'Private' inpatient psychiatry has played an increasingly important role (Mandersheid et al. 2004). In 2000, private psychiatric and general hospitals accounted for 24 and 46% of all inpatient treatment episodes, respectively, as compared with only 12% in state psychiatric hospitals (Mandersheid et al. 2004). Between 1970 and the mid-1980's, the private share of hospital psychiatric beds, defined as the proportion of private to total psychiatric beds, dramatically increased from 7% to 35% (Dorwart & Schlesinger, 1998). In 2002, private psychiatric beds comprised approximately 65% of all psychiatric beds in inpatient psychiatric facilities (Foley et al., 2006). From 2000 to 2002, the proportion of discharges of patients with severe mental disorders in for-profit general hospitals nationwide increased from 13% to 28% (Wantanabe-Galloway & Zhang, 2007).

It is unclear whether these augmented services through the private sector could substitute for the reduction in public inpatient supply. There is a clear distinction of service clientele across different ownership types. Compared to public psychiatric hospitals, private psychiatric hospitals, particularly for-profit hospitals, preferentially treat insured patients and those with less severe, acute symptoms (Schlesinger et al. 1997; Mechanic 1999). Nonetheless, evidence suggests that private hospitals may increasingly serve patients similar to those of public hospitals (Olfson and Mechanic 1996; Mechanic, McAlpine, and Olfson 1998).

Underfunded Community Mental Health Programs. There has been a gradual growth of community-based mental health programs (Mandersheid et al., 2004). However, community programs have long been criticized for not adequately serving severely mentally-ill patients with a history of dangerousness, co-occurring disorders, or arrests due to its voluntary nature and chronic underfunding (Lamb, Weinberger, and Gross 2004).

The overall capacity of (outpatient) community programs remains limited (Weithorn, 2005). Services that are available may be unaffordable even for insured persons (Mental Health America, 2015). As of 2012, 20.8% of U.S. adults and 39.0% of U.S. children who needed mental health services were unable to access them (Mental Health America, 2015).

In 2012, 24.5% of Oregon adults and 34.2% of Oregon children reported unmet need for mental health services (Mental Health America, 2015). With limited access to community mental health services, mentally ill persons tend to resort to the ED for care (Giliberti, 2001).

Limited Community Treatment Options Alternative to ED Services. The lack of adequate community mental health services, including emergency mental health services, leads patients to seek care in the ED (Bender, Pande, & Ludwig, 2008). Even ambulance companies refusing to transfer psychiatric patients to outpatient facilities reportedly contributes to ED boarding of psychiatric patients (American College of Emergency Physicians, 2008).

Lack of Care Coordination and Management. The failure of the mental health system to provide patients with ‘continuity of care’ following a hospital discharge has been cited as an additional cause of ED boarding (Alakeson et al., 2010). Without continued mental health services following a hospital discharge, psychiatric patients often relapse and become repeat users of the ED (Bender, Pande, & Ludwig, 2008).

Shortage of Mental Health Workforce. A shortage of mental health providers in EDs has also been cited as a cause of psychiatric boarding (Alakeson et al., 2010). Numerous researchers have found that psychiatric patients are more likely to board in the ED on weekends and in the evening when mental health providers are not available to finalize a patient’s discharge or transfer (Arizona Hospital and Healthcare Association, 2015; Mansbach et al., 2003; Warren et al., 2015). A survey of ED directors in California revealed that in 2010 more than 30% of California hospitals did not have access to an around-the-clock psychiatric evaluation service (Stone et al., 2012).

Insufficient Training of ED Staff and Inadequate Assessment. In addition to a lack of mental health providers in the ED, researchers have found that ED staff are generally not specially trained in the management of psychiatric patients (Bender, Pande, & Ludwig, 2008; Alakeson et al., 2010) and that this lack of training may lead to inappropriate care decisions (Stefan et al., 2006), making psychiatric patients unnecessarily wait for an inpatient bed. Stefan et al. (2006) also notes that psychiatric patients visiting the ED may be more likely than non-psychiatric patients to board, because there are few incentives to conduct a proper psychiatric assessment in the ED, and that ED providers may defer to the wishes of family, the police, or group home operators who escort psychiatric patients to the ED and admit the patient for inpatient care, even if the patient does not meet criteria for admission.

Moreover, insufficient training of ED staff may lead to the unnecessary use of restraints. This environment may then exacerbate the mental health crisis and cause the patient to need inpatient care, and thus be boarded in the ED (Stefan et al., 2006).

Lack of Health Insurance. Despite federal and state efforts to expand health insurance coverage, mental and behavioral health benefits have been less generous or more limited than physical health benefits. In many states, the lack of health insurance coverage for mental and behavioral health care limits access to community and inpatient treatments. The growth of managed behavioral health care, with its use of strict medical management techniques, can result in poorer access to care in the community; and increase the likelihood of mental health crises and the use of ED among psychiatric patients (Alakeson et al., 2010).

The 2014 expansion of the Oregon Health Plan (OHP, the state’s Medicaid program) under the Affordable Care Act has significantly reduced the number of Oregonians with mental illness who are uninsured (Williams, 2015). In addition, OHP’s Coordinated Care Organizations (CCOs) are explicitly designed to coordinate mental as well as physical health care for their members.

Legal and Regulatory Determinants of ED Boarding

- Major legal and regulatory factors contributing to ED boarding of psychiatric patients include:
 - Interpretation of Emergency Medical Treatment and Activity Labor Act;
 - State involuntary commitment statutes;
 - Institute for mental diseases (IMD) exclusion; and
 - Mental and behavioral health parity.

Exhibit 2-1 summarizes major statutes and regulations which have been documented or have potential to impact ED boarding of psychiatric patients.

Emergency Medical Treatment and Activity Labor Act. Unnecessary admissions to inpatient services due to ‘legal and liability issues’ have been identified as contributing to psychiatric ED boarding. ED providers may admit psychiatric patients to inpatient settings for the fear of legal repercussions. Liability concerns regarding Emergency Medical Treatment and Activity Labor Act (EMTALA) violations may impact ED physicians’ care decisions of psychiatric patients. EMTALA requires hospitals with EDs that participate in Medicare to provide a medical screening examination to any person who comes to the ED, regardless of the individual’s ability to pay. If a hospital determines that a person has an emergency medical condition, it must provide treatment to stabilize the condition or provide for an appropriate transfer to another facility (U.S. GAO, 2001). For psychiatric emergencies, an individual expressing suicidal or homicidal thoughts or gestures, if determined dangerous to self or others, would be considered to have an emergency medical condition (CMS, 2010).

In a report by the EMTALA Technical Advisory Group, the authors note confusion regarding the interpretation of the law that may be leading ED physicians to unnecessarily admit psychiatric patients for fear of violating EMTALA (Fuller et al., 2012). Consequently, patients who do not need inpatient services may board in the ED waiting for inpatient services to become available.

Stefan et al. (2006) found that providers were more likely to admit psychiatric patients when they considered liability issues. In particular, concerns regarding the potential for future suicidal and homicidal actions pose as potential liability issues for ED physicians, leading them to admit patients who may not medically qualify for inpatient services (Stefan et al., 2006; Lampert et al., 2007).

Civil commitment. State laws regarding civil commitment (involuntary hold) of psychiatric patients are also cited as a cause of psychiatric boarding (Washington State Institute for Public Policy, 2011; Arizona Hospital and Healthcare Association, 2015). In Washington, there have been substantial increases in state laws allowing for involuntary commitment, but the state has not increased funding for inpatient beds, which is cited as reason for seeing increases in psychiatric boarding (Washington State Institute for Public Policy, 2011). A report from the Arizona Hospital and Healthcare Association (2015) warns that a misapplication of numerous statutes and laws dictating the appropriate treatment of involuntarily committed psychiatric patients can lead to psychiatric boarding in the ED.

Between 1983 and 2003, in Oregon, the number of individuals in the civil commitment process grew, but those actually committed radically decreased; during this time civil commitment rates dropped by 50 percent (Bloom, 2006). However, the civil commitment population in Oregon State Hospital has increased since 2010. The annual average daily civil commitment population increased from 121 in 2010 to 138.5 in 2014¹ although it is still lower than 171 in 2002.²

Institutions for mental diseases: Social Security Amendments of 1972 expanded Medicaid coverage to include inpatient services for persons under 21 in 'institutions for mental diseases' (IMDs). An institution for mental diseases (IMD) is a hospital, nursing facility, or other institution that is *primarily* engaged in providing diagnosis, treatment, or care of persons with mental illness, including medical attention, nursing care, and related services (42 U.S.C. §1396d(i)). Later, the Medicare Catastrophic Act of 1988 (Pub.L. 100-360) further defined an IMD as a facility with more than 16 beds.

The result of these amendments is that while Medicaid is currently the largest financier of mental and behavioral health treatments, it does not pay for inpatient treatment of adults aged 21 to 64 in any acute or long-term care institutions with 16 or more beds that are primarily engaged in providing treatment for mental and behavioral health problems. This payment exclusion is referred to as the Medicaid IMD exclusion.

The Medicaid IMD exclusion provided an incentive to shift the cost of care for mental illness to other care modalities and facilities, where Medicaid matching funding was available, and indirectly contributed to the decrease in the number of publicly funded inpatient psychiatric beds available for emergency services. As a consequence, the Medicaid IMD exclusion may be a contributing factor to psychiatric boarding. In addition, facilities for the treatment of alcohol and drug addiction (e.g., community-based residential treatment centers) are unintentionally impacted because substance abuse treatment services are not distinguished from mental health services in statute or regulation.

Mental and behavioral health parity. Financial barriers in general and limited insurance coverage for mental and behavioral health care in particular pose a major barrier to access to treatment among individuals in need of mental and behavioral health treatment in the community. Despite federal and state efforts to expand benefits, coverage for mental and behavioral treatment have been more limited than that of treatment for physical illness in terms of cost sharing and treatment limitations (Busch, 2012).

The passage of the 2008 Mental Health Parity and Addiction Equity Act (MHPAEA) represents a bold step to address these discriminatory restrictions applauded by consumer advocates and the provider community. It prohibits differences between mental/behavioral health benefits and medical/surgical benefits in treatment limits, cost sharing, and in- and out-of-network coverage (Goodell et al., 2014). The MHPAEA rules apply to large group health plans, both fully and self-insured, and also public programs such as Medicaid managed care plans, state Children's Health Insurance Plans, Medicare Advantage plans offered through group health plans, and state and local government plans (Goodell et al., 2014).

¹ Source:

http://www.oregon.gov/oha/bhp/Documents/USDOJ%20Report%20Narrative%20Document_7.1.2015.pdf.

² Personal communication with Michael Morris, Behavioral Health Policy Administrator, Addictions and Mental Health Division, Oregon Health Authority.

The Affordable Care Act of 2010 (ACA) goes beyond the MHPAEA by *mandating* coverage rather than requiring parity only if coverage is provided. The ACA defines coverage of mental and behavioral health treatment as one of the ten essential health benefits (Frank et al., 2014). It applies the MHPAEA to insurers in the individual market and qualified health plans offered through the marketplace, including the small business exchange (Frank et al., 2014). As a result, all health insurance plans in the individual and small-employer market—both inside and outside marketplaces—must include coverage for the treatment of mental health and substance use disorders. Therefore, it is expected that by requiring mental and behavioral health benefits in parallel with medical/surgical benefits and expanding the scope of parity to public insurance programs, the ACA will reach a much larger population, leading to improved access to mental and behavioral health treatments in the public and private sectors.

Exhibit 2-1. Legislation, rules and regulations pertaining to psychiatric boarding

	Description	Impacts on boarding of psychiatric patients in EDs
Emergency Medical Treatment and Activity Labor Act (EMTALA) of 1986	Mandates US EDs accept, treat, and stabilize all patients regardless ability to pay, including those with psychiatric emergencies. It is also known as the patient antidumping statute.	The law is vague regarding the requirement for psychiatric hospitals to accept these patients from EDs after they have been medically cleared and determined to require hospitalization solely for psychiatric treatment. Especially, confusion regarding the interpretation of the law that may be leading ED physicians to unnecessarily admit psychiatric patients for fear of violating EMTALA. Thus, patients who do not need inpatient services may board in the ED waiting for inpatient services to become available.
Civil commitment	Persons with severe mental illness are court-ordered into psychiatric treatment in inpatient or outpatient settings if they are in imminent danger of harming themselves or others	Misapplication of numerous statutes and laws dictating the appropriate treatment of involuntarily committed psychiatric patients can leads to psychiatric boarding in the ED.
Institutions for mental diseases (IMD) exclusion	Medicaid law that prevents federal Medicaid funds from being used by states to reimburse treatment provided to persons aged 21 to 64 years old in institutions with more than 16 beds which specialize in the treatment of psychiatric disorders, known as institutions for mental diseases (IMDs)	The IMD exclusion provides states with a significant fiscal incentive to limit treatment in psychiatric facilities meeting the IMD definition. Also, facilities for the treatment of alcohol and drug addiction (e.g., community-based residential treatment centers) are unintentionally impacted because substance abuse treatment services are not distinguished from mental health services in statute or regulation. Therefore, the IMD exclusion poses a barrier to many who seek appropriate and effective mental health and substance abuse treatment in appropriate inpatient settings and thereby may contribute to psychiatric boarding.

Mental/behavioral health parity	Mandate differences between mental/behavioral health benefits and medical/surgical benefits in treatment limits, cost sharing, and provider network coverage.	The Mental Health Parity and Addiction Equity Act (MHPAEA) prohibits differences between mental/behavioral health benefits and medical/surgical benefits in treatment limits, cost sharing, and in- and out-of-network coverage. The Affordable Care Act (ACA) defines coverage of mental and behavioral health treatment as one of the ten essential health benefits. Together the MHPAEA and ACA can improve access to mental and behavioral health treatments in the public and private sectors.
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2.4. Impacts

- Psychiatric patients receive sub-optimal quality of care in EDs: 62% California ED directors reported that patients boarded in the ED received no psychiatric care before admission or transfer.
- Psychiatric boarding reduces ED capacity and increases pressure on ED staff, thereby negatively affects care of other ED patients.
- Psychiatric boarding places significant financial strains on hospitals.

Appendix A Exhibit 3 summarizes findings from the literature on the impacts of psychiatric ED boarding on patients, ED staff and health system.

Impacts on Psychiatric Patients

EDs are not well-equipped to address needs of psychiatric patients and therefore psychiatric patients receive a sub-optimal quality of care in EDs. Hospital ED staff are generally not trained in psychiatry (Alakeson et al., 2010; Halmer, Beall, Shah, & Dark, 2015) and therefore hospital ED staffing is often unavailable to treat mental health and substance abuse patients in EDs (Bender, Pande, & Ludwig, 2008). The ED environment is loud and hectic, and use of restraints and seclusion are not uncommon, which is counterproductive to de-escalating a mental health crisis (Alakeson et al., 2010; Bender, Pande, & Ludwig, 2008). In a 2008 survey of medical directors of EDs conducted by American College of Emergency Physicians (ACEP), 62% reported that patients boarded in the ED received no psychiatric care before admission or transfer (American College of Emergency Physician, 2010). Psychiatric patients boarding on medical floors have to compromise all quality domains, including safety, efficiency, effectiveness and timeliness of care (Fieldston et al., 2014). Boarded ED patients also face the risk of having medication errors or no treatment for concurrent medical conditions (Bakhsh et al., 2014). The situation does not differ for children. Among pediatric psychiatric patients on involuntary holds, only 6% received counseling and 20% received medication (Claudius et al., 2014). In a small sample of children covered by Medicaid who were boarded, none received any of the psychiatric services Medicaid requires for children (Bender, Pande, & Ludwig, 2008).

Impacts on ED Staff and Other Patients

Boarding of psychiatric patients reduces overall ER capacity because psychiatric patients simply require more resources. In the 2008 ACEP survey, 72% of ED directors reported psychiatric patients in EDs required more nursing and other resources compared to non-psychiatric patients (American College of Emergency Physician, 2010). Also, distressed psychiatric patients may demonstrate violent behavior (American College of Emergency Physician, 2014), such as attacks on nurses. Therefore, the presence of boarded psychiatric patients can distract ED staff, increasing pressure on them. Overwhelmed and frustrated nursing staff may exhibit disrespectful and hostile behavior toward psychiatric patients (Bender, Pande, & Ludwig, 2008) and engage in bed hiding (Katz et al., 2006)

The impact of boarded patients appears to spill over to other ED patients. A reduced availability of ED resources leads to worsening ED crowding and longer ED wait time (American College of Emergency Physician, 2010 & 2014). The 2008 ACEP survey revealed that 85% of ED directors perceived that wait times in the ED would decrease for all patients if better psychiatric services were available (American College of Emergency Physician, 2010).

Impacts on Health System

Psychiatric boarding places significant financial strains on hospitals. Although not well studied, there is some anecdotal evidence that hospitals are not reimbursed for boarding psychiatric patients (Bender, Pande, & Ludwig, 2008). Under the EMTALA, hospitals must stabilize patients, regardless of a patient's ability to pay. Uninsured psychiatric patients thus cost the hospital until the patient is transferred or discharged. Nicks and Manthey (2012) estimated that psychiatric boarding cost an academic medical center ED \$2,264 per patient in 2007-2008. In one pediatric ED, psychiatric boarding costed a hospital \$4,269 per patient in 2010 (Claudius et al., 2014). Arizona Hospital and Healthcare Association estimated that cost of an average psychiatric boarding case was \$6,220 that led to a total state-wide cost of over \$20 million annually (Arizona Hospital and Healthcare Association, 2015)

2.5. Suggested Solutions

- Quantify and monitor the extent of boarding
- Invest in comprehensive community-based psychiatric emergency services such as 24 hour help line, mobile crisis outreach team, emergency walk-in clinic, and crisis stabilization unit
- Increase community mental health services
- Enhance continuity of care in community
- Promote collaboration between EDs and community programs
- Improve care of psychiatric ED patients
- Work with law enforcement
- Increase access to insurance
- Increase inpatient psychiatric care capacity

Quantify and Monitor the Extent of Boarding

Alakeson et al. (2010) suggests that quantifying and monitoring the extent and patterns of psychiatric boarding is the first step to deal with psychiatric ED boarding.

Invest in Community Psychiatric Emergency Services

Increasing comprehensive community psychiatric emergency services (PES)—such as 24 hour public help line, mobile crisis outreach team, 24 hour emergency walk-in clinic, crisis stabilization unit, emergency residential unit, crisis counseling unit—can reduce boarding of psychiatric patients in EDs (Alakeson et al., 2010).

In Alameda, California, psychiatric patients transferred to a regional PES (“regionally dedicated emergency psychiatric facility”) experienced boarding times that were 80% shorter than the state average of 10 hours and 3 minutes (Zeller et al., 2014). Furthermore, the PES can reduce the need of inpatient psychiatric care by stabilizing more than three-quarters of patients experiencing psychiatric crisis. Zeller et al. (2014) also reported that approximately 25% of psychiatric patients transferred to the regional PES were admitted to inpatient services.

Similarly, Gillig et al. (1989) found that PES with 23-hour treatment capacity reduced inpatient utilization by 44%. Wolff et al. (2009) discovered transferring patients to a crisis stabilization program from ED led to 50% decrease in psychiatric hospitalizations. The award-winning Burke Mental Health Emergency Center in Texas began offering a new approach for PES, providing onsite care by counselors and nurses and supervised by psychiatrists via telemedicine. The Burke PES model has led to a 32% decrease in the use of inpatient psychiatric hospital beds in the participating counties.³

Similar suggestions have been made elsewhere. For example, the Arizona Hospital Association recommends expanding community crisis services, and working with law enforcement, group home staff, and other ‘secondary utilizers’ and training them to manage mental health crises prior to ED visits. In this approach, community mobile crisis teams and counselors work with a fire department to assess mental status on site and send patients to appropriate care facilities instead of an ED.

Increase Outpatient Community Mental Health Services

Increasing community outpatient resources and integrating behavioral health services into primary care supported by an alignment of financial incentives have been suggested as a strategy to reducing psychiatric ED boarding (Arizona Hospital and Healthcare Association, 2015). Also, availability of telemedicine services has been recommended to allow access to providers for people living in remote communities (Arizona Hospital and Healthcare Association, 2015).

It is well documented that intensive community programs such as ACT teams and intensive case management are effective in preventing ED utilization among psychiatric patients. For example, analyzing data on clients of full service partnership (FSP) programs in California,

³ Source: <http://www.cepamerica.com/news-resources/perspectives-on-the-acute-care-continuum/april-2015/regional-psychiatric-emergency-service>

which build upon the ACT team model, Yoon et al. (2015) discovered a significant decrease in ED utilization among FSP clients following after the implementation of FSP services.

Enhance Continuity of Care in the Community

Adolescents who received aftercare following their first visit to an ED for psychiatric care were significantly less likely than adolescents who didn't receive aftercare to have a repeat ED visit (Carlisle, 2012). Therefore, Health Homes to enhance continuity of care in community settings can serve as an effective means to reduce ED boarding.

Collaboration between EDs & Community Outpatient Programs

Collaboration between EDs and community mental health programs can reduce psychiatric ED boarding; for example, having community mental health clinicians train ED staff on management and care of patients with severe mental illness; and having a social worker present to connect patients with community services at discharge. McCullum-Smith (2015) reported patients seen in a transitional psychiatry clinic within three days following an ED visit had significantly longer intervals before the next ED visit.

Improve Care of Psychiatric Patients in EDs

Training ED staff in psychiatric services can lead to better ER care of psychiatric patients. A pilot study to train ED physicians to treat boarded psychiatric patients led to increased comfort in working with these patients (Marciano, 2012). ED staff training in St. Anthony Hospital in Oklahoma City led to a decrease in LOS of psychiatric ED patients (Arizona Hospital and Healthcare Association, 2015). Implementation of a 'psychiatric assessment and planning unit' is associated with decreased LOS and reduction in the use of mechanical restraint (Browne, 2011). Likewise, a rapid emergency stabilization program for children is associated with a significant decrease in average ED LOS from 19.7 hours to 10.8 hours and a decrease in the average total ED cost per patient of \$569 (38.7% decrease) (Rogers, 2015).

Telepsychiatry may be used to overcome an ED workforce issue. The use of a telepsychiatry network in South Carolina, for example, provides psychiatric evaluations through telephone and video conferencing for 27 hospital EDs. The program is associated with a reduction in the overall LOS in the hospital and financial savings of \$150,000 in the first 8 months.⁴ Polevoi et al. (2013) documented such a co-management model where attending psychiatrists and residents increased involvement with psychiatric patients in the ED led to a decrease in the median LOS in the ED.

It is also suggested to make more efficient use of existing capacity such as (a) review teams to improve inpatient capacity and timely discharges; (b) computerized bed management systems; and (c) electronic dashboards. For example, Virginia and Maryland have created state-

⁴ Source: <http://www.aha.org/research/reports/tw/12jan-tw-behavhealth.pdf>.

wide electronic dashboards to allow ED staff to see all available psychiatric beds simultaneously, so they do not need to contact each facility separately to find a bed.⁵

Suggestions for short-term improvements of care of boarded patients include: (a) separate psychiatric EDs, holding areas, or separate waiting areas; (b) diversion center in the ED for triage; (c) adoption of the guidelines for Psychiatric Emergency Care & Use of Restraints provided by the American Psychiatric Association (APA) Task Force, Substance Abuse and Mental Health Service Administration (SAMHSA), and Joint Commission on Accreditation, Health Care, Certification (JCAHO)⁶; (d) use of inpatient or acute care hallway instead of an ED; (e) boarding psychiatric patients in a bed outside of an ED; and (f) advanced discharge planning for more timely hospital discharges (Bender, Pande, & Ludwig, 2008; Stover et al., 2015).

Work with Law Enforcement

Providing mental health training to law enforcement such as management of mental health crisis and information on local mental health resources can lead to a reduction in ED boarding (Alakeson et al., 2010). Webster and Harris (2004) propose that to facilitate collaboration between law enforcement and EDs to appropriately manage mental health patients presenting to EDs mental health liaison teams should be established between EDs and police services, and Lamb et al. (2002) suggest the need for outreach teams consisting of both police officers and mental health service professionals to assist in the adequate care of individuals presenting to EDs for mental illness.

Other Suggestions

Increased access to insurance and an increase in inpatient psychiatric care capacity (more hospital psychiatric beds) have also been suggested as strategies to reduce ED boarding (Arizona Hospital and Healthcare Association, 2015; Mental Health America, 2015).

⁵ Source:

http://www.acep.org/uploadedFiles/ACEP/Clinical_and_Practice_Management/Resources/Mental_Health_and_Substance_Abuse/Psychiatric%20Patient%20Care%20in%20the%20ED%202014.pdf.

⁶ Source: http://www.jointcommission.org/assets/1/23/Quick_Safety_Issue_One_April_20142.PDF.

Chapter 3. Extent and Trends in Psychiatric ED Boarding in Oregon

3.1. Introduction

To examine the extent and trends in psychiatric ED boarding in Oregon, we analyzed data from three independently-maintained data sources, including the Emergency Department Information Exchange (EDIE), hospital discharge data, and Medicaid claims and enrollment files. The EDIE is a web-based, real-time intra- and inter-ED communication and information technology that allows ED clinicians to exchange patient information, develop notification systems, and coordinate care for patients with complex care needs. The Hospital ED discharge data were obtained from the Oregon Association of Hospital and Health Systems (OAHHS) and capture information on Oregon hospital ED visits, including patient demographic characteristics, admission and discharge date and time, length of stay in EDs, diagnoses, ED charges, and payment sources. Medicaid claims data were supplied by OHA's Office of Health Analytics.

Each data source has its own strengths and limitations, summarized below in <Exhibit 3-1>. The hospital discharge data contain ED utilization records for both Medicaid and non-Medicaid patients admitted to hospital EDs in Oregon. However, the discharge hour field is missing in approximately 81% of visits in the raw data set, which limits the investigation of the ED boarding problem based on information on hours of an ED episode. Furthermore, only billed amount is included, making it difficult to examine ED expenditures associated with psychiatric ED boarding.

The EDIE data contain hospital ED admission and discharge date and time, discharge destination, patient demographics, and diagnosis and procedure codes. The raw EDIE data set has almost complete information on ED admission and discharge date and time and also captured both Medicaid and non-Medicaid ED visits. However, it does not include charge or payment information. Also, data accuracy may be challenged by inconsistent EDIE adoption practices.

ED utilization and payment data for Medicaid patients were also retrieved from Medicaid claims and enrollment files. The Medicaid data include more reliable records of ED utilization for Medicaid patients, compared to the other data sources. It also represents the sole source of actual payment for ED services. Nonetheless, there are several significant limitations, including: (a) Medicaid claims include data only on Medicaid population; (b) discharge dates are often missing in the raw data files; and (c) there is no recorded admission and discharge time, which is critical to measure the extent of ED boarding based on hours of ED stay.

In addition to the source-specific caveats, all the data sources may also suffer from potential recording inaccuracy inherent in any administrative data source. Nonetheless, the databases analyzed here, individually and collectively, offer a unique opportunity to quantify the psychiatric ED boarding in Oregon. The databases in fact can serve as complementary sources to one another. For example, missing ED admission and discharge time in hospital discharge and Medicaid claims data can be filled with information from the EDIE data.

The OAHHS performed data linkage to uniquely identify the same patients across the three databases and assigned person identification numbers to unique individuals across the data sources. OAHHS removed personal identifiers such as name or address from the datasets before

providing them to OSU. These raw data sets were then de-duplicated and linked at the person-episode level by OSU researchers.

Exhibit 3-1. Strengths and weaknesses of data sources

	Hospital Discharge	EDIE	Medicaid
Strengths	<ul style="list-style-type: none"> • ED utilization records for all ED patients regardless of insurance status • Information on ED admission/discharge date and time 	<ul style="list-style-type: none"> • ED utilization records not only for Medicaid patients but also for non-Medicaid patients • Complete information on ED admission and discharge date and time 	<ul style="list-style-type: none"> • Reliable record of the care received by Medicaid patients • Information on actual ED facility payment.
Limitations	<ul style="list-style-type: none"> • 81% of discharge hour missing in the raw data • Only billed amount included • Potential reporting inaccuracy of administrative records 	<ul style="list-style-type: none"> • May miss a non-trivial number of ED episodes • No charge or payment information • Potential reporting inaccuracy of administrative records, especially due to inconsistent EDIE adoption practices 	<ul style="list-style-type: none"> • Missing discharge dates • Data only on Medicaid population • Admission and discharge hours not recorded

To address the limitations of each raw data set, OSU researchers augmented them with complementary information from one another. We filled in missing or absent information in each data set with information available in the alternative data sources. For example, missing ED discharge times in the raw hospital discharge data are filled with discharge time for the same ED episode available in the EDIE data. Complete episode-level data on admission and discharge time were also attached to the Medicaid claims data at the person-episode level. Our imputation algorithm is described in detail in <Appendix B1>.

Our analysis is restricted to the one-year sample period from October 1, 2014 through September 30, 2015 during which complete data were available from all three data sources. The raw data sets contain only records for ED patients who were linked across the three data sources based on full name and birth date, and therefore undercount actual ED visits in Oregon. For the study period, there were 564,151 unique ED visits in the hospital discharge data, 539,923 unique ED visits in the EDIE data, and 391,479 unique ED visits in the Medicaid claims data. In comparison, OAHHS reports approximately 1.4 million total hospital ED visits in 2015. Therefore, hospital ED visits captured in the hospital discharge and EDIE data represent roughly

40% of the annual total hospital ED visits in Oregon. Nonetheless, data on psychiatric ED boarding presented below are likely to be representative of all psychiatric ED visits and boarding data on the entire ED visits during the study period in Oregon.⁷

The rest of Chapter 3 is organized as following. Below in Sub-chapter 3.2 we first discuss briefly the definitions of psychiatric ED boarding applied in our analysis. In Sub-chapters 3.3 and 3.4, we present results on the extent of psychiatric ED boarding in Oregon as well as recent trends, using full-linked data that contain all unique ED episodes from all three raw data sets. The full-linked data set included 690,245 unique ED episodes on 290,181 unique persons between October 1, 2014 and September 30, 2015. A comprehensive discussion of the full-linked analytic data is found in <Appendix B1>.

We also analyzed the augmented data sets individually for reliability of each data source. Results of our comparative analysis are reported in Sub-chapter 3.5. Finally, we report our estimates of ED expenditures associated with psychiatric ED boarding in Oregon.

3.2. Definitions

ED boarding

No standard definition for ED boarding exists in the US (Lewin Group, 2009) although ED boarding may be conceptually characterized by patients for whom evaluation is complete and the decision has been made to admit or transfer but no bed is available to receive the patient (Nolan et al., 2015). Various practical definitions have been adopted in the U.S. and also in other countries. Australia has adopted national targets for public hospital ED stays of no more than 4 hours (Australian Government Department of Health and Ageing, 2009). Canada has set similar targets; total time spent in the ED should last no longer than 4 hours for low-acuity patients and 8 hours for high-acuity patients (Ontario Ministry of Health and Long-term Care, 2014). The Accreditation Council for Graduate Medical Education (2013), indicates that the maximum ED length of stay should be no more than 4 hours for discharged patients and 8 hours for admitted patients. Most recently, the council also suggested the 6-hour threshold for ED boarding in the U.S. Nolan et al. (2015) applied the practical definition to a national data source and suggested the ED boarding rate of 12.8% among psychiatric patients in EDs in 2008 nationwide, defined as the ratio of boarded ED episodes to the entire psychiatric ED visits.

In light of the current literature and information available in our data sources, we have adopted two most widely applied definitions of ED boarding based on the number of hours of ED stay: (a) a stay in the ED lasting greater than 24 hours (henceforth, 24-hour definition) and (b) a stay in the ED longer than 6 hours (henceforth, 6-hour definition). These distinct definitions of ED boarding allow us to compare our results to the most recent findings on the extent of ED boarding from other states such as Arizona (Arizona Hospital and Healthcare

**Main definitions of ED boarding adopted:
(a) a stay in an ED longer than 24 hours, and
(b) a stay in the ED longer than 6 hours.**

⁷ To gauge whether the raw data containing ED visits only for linked patients are representative of all ED visits, we compared linked data to the entire data for Medicaid patients for which all ED utilization data became available. See <Appendix B1> for details.

Association, 2015) based on the 24-hour definition as well as to national estimates reported in the current literature such as Nolan et al. (2015) based on the 6-hour definition. It is worth noting that in this section, although both 24- and 6-hour definitions have been adopted to describe psychiatric ED boarding in Oregon, we consider the 6-hour definition as a more rigorous definition of boarding.

Psychiatric ED visit

Psychiatric ED visits describe ED episodes for both pediatric and adult patients who received ICD-9 codes of mental health conditions and related injury during their ED visits, including: 290-319 (all mental illness); 648.4, V40.2, V40.3, V40.9, V67.3 (other miscellaneous mental disorders and problems); 331.0, 331.1, 331.2, 331.8, 797 (delirium, dementia and other cognitive limitations); V40.0, V40.1 (other developmental problems); E950-E959, V628 (suicide related); V62.8, V66.3, V67.3, V70.1, V70.2, V71.0, V79.0, V79.8, V79.9 (mental health exam and screening). See <Appendix B2> for details.

Psychiatric ED visits were categorized into severe and non-severe psychiatric visits. Severe psychiatric ED visits include ED episodes that received diagnoses of severe mental illness. We adopted severe mental illness visit profiling developed by Yoon et al. (2014). The following ICD-9 codes were considered to indicate severe mental illness: 295—Schizophrenic Disorders, 296—Episodic Mood Disorders (except for 2962—Major Depressive Disorder, Single Episode), 297—Delusional Disorders, and 298—Non-organic Psychoses. All other psychiatric ED visits were classified as non-severe psychiatric ED visits.

Psychiatric visits were grouped into severe and non-severe episodes.

Psychiatric ED boarding

Psychiatric ED boarding is also defined in two ways according to the 24-hour and 6-hour definitions: (a) ED visit with psychiatric diagnoses and a stay of longer than 24 hours and (b) ED visit with psychiatric diagnoses and a stay of longer than 6 hours. We split psychiatric ED boarding into severe psychiatric ED boarding (defined as psychiatric ED boarding episodes that received diagnoses of severe mental illness) and non-severe psychiatric ED boarding (defined as other psychiatric ED boarding episodes that did not receive diagnoses of severe mental illness).

3.3. The Extent of Psychiatric ED Boarding in Oregon

As aforementioned, our main findings on the extent of psychiatric ED boarding in Oregon came from the full-linked data set which contains all unique ED visits in all three data sources. It included 690,245 unique ED visits on 290,181 unique patients between October 2014 to September 2015.

3.3.1. Boarding incidence

Unique ED visits

<Exhibit 3-2> presents results on ED visits and psychiatric ED boarding incidents in Oregon between October 2014 and September 2015 for the full-linked data set. We applied to our data two different definitions of ED boarding: One based on the ‘24-hour’ definition (i.e., ED stay longer than 24 hours) and the other based on the ‘6-hour’ definition (i.e., ED stay longer than 6 hours).⁸

During the one-year period, there were total 690,245 unique hospital ED episodes. Approximately 14% of the entire ED visits were psychiatric episodes. This rate is similar to national averages reported in Owens et al. (2010) and Nolan et al. (2015).⁹ Based on the 6-hour definition, 37,760 visits in our data (5.5% of the total annual ED visits including both psychiatric and non-psychiatric visits) were identified as boarding episodes.

About two percent of the total ED visits, or 14,676 ED visits in our analytic data, satisfied the criteria for psychiatric ED boarding. Given that our analytic sample did not include all ED

2.1% of all hospital ED visits in Oregon or 29,763 ED visits from Oct. 2014 to Sep 2015, were psychiatric ED boarding episodes, based on the definition of an ED boarding as a stay in the ED longer than 6 hours.

visits in Oregon (see <Appendix B3>, we extrapolate from our sample and estimate total 29,763 boarded psychiatric ED visits per year in Oregon.¹⁰ In comparison, based on the 24-hour definition, 8,442 visits or 1.2% of the total ED visits were

boarded visits, and 3,504 visits (0.5% of the total ED visits) were classified as psychiatric ED boarding.

The rate of boarding was substantially higher for psychiatric ED visits than for non-psychiatric visits. <Exhibit 3-3> shows the proportion of boarded visits separately for psychiatric and non-psychiatric visits. As shown in Panel A, based on the 6-hour definition, 14.6% of total psychiatric visits were boarding episodes, which is smaller than the national average of 21.5% from the 2008 National Hospital Ambulatory Medical Care Survey [NHAMCS] (Nolan et al., 2015). However, the national rate included both psychiatric and substance abuse conditions. Nolan et al. (2015) also reported that the rate of psychiatric ED boarding was significantly lower in the West than the nationwide average. Therefore, we view our estimate is roughly comparable to the most recent national estimate.

14.6% of all psychiatric ED visits were boarding episodes.

⁸ The 24-hour definition helps us compare our results to findings from other states based on the same 24-hour definition such as Arizona (Arizona Hospital and Healthcare Association, 2015). The 6-hour definition allows for a comparison to national ED boarding rates reported in the literature in which experts suggested ED boarding to be defined as staying in ED longer than 6 hours in the U.S.

⁹ Owens et al. (2010) estimated 12.5% in 2007 and Nolan et al. (2015) estimated 11% in 2008. However, both studies defined psychiatric visits more broadly including both mental health and substance abuse (MHSA) conditions.

¹⁰ = 14,676 (from Exhibit 3-2) × 2.028 (expansion weight calculated as the ratio of 690,245 ED visits in our analytic data to total 1.4 million annual ED visits in Oregon)

The rate of boarding for psychiatric ED visits is more than three times greater than the rate for non-psychiatric ED visits. In comparison, based on the 24-hour boarding definition, approximately 3.5% of psychiatric ED visits were classified as boarding episodes (Panel B). This ED boarding rate is lower than 7% in hospital EDs in Arizona based on the same 24-hour definition (Arizona Hospital and Healthcare Association, 2015). However, it is worthwhile to note that diagnoses of substance abuse disorders were also included in the definition of psychiatric episodes for the Arizona estimate.

Exhibit 3-2. Unique ED visits (proportions¹) in Oregon, Oct. 2014 – Sep. 2015

	<i>Boarding definition:</i>	
	24-hour definition	6-hour definition
Total ED visits	690,245	690,245
Psychiatric visits ²	100,809 (14.6%)	100,809 (14.6%)
Boarded visits ³	8,442 (1.2%)	37,760 (5.5%)
Psychiatric ED boarding ⁴	3,504 (0.5%)	14,676 (2.1%)

¹The denominator is total ED visits ($N = 690,245$).

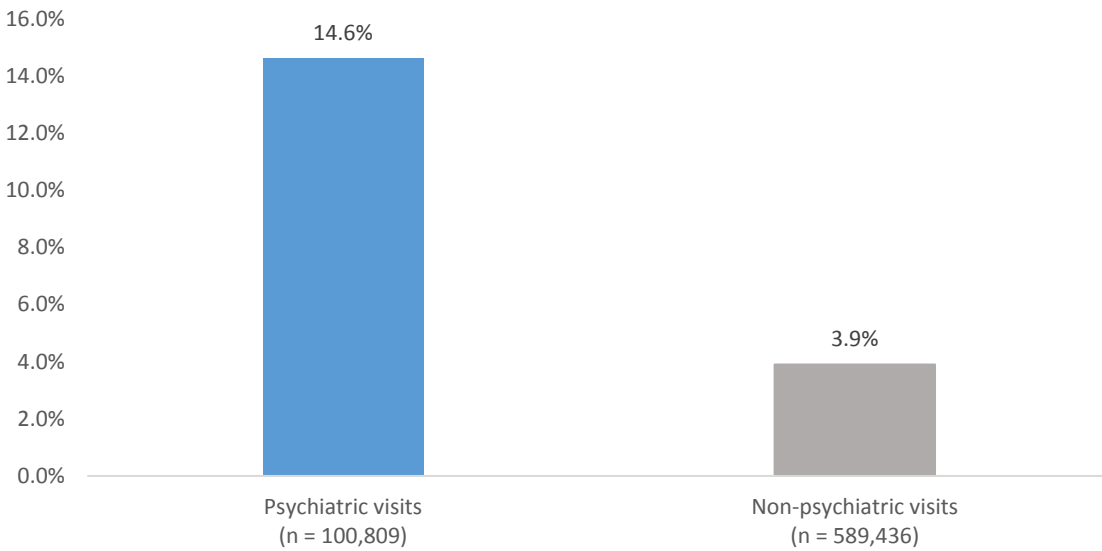
²Psychiatric visit defined as having ICD-9 diagnoses for mental illness and related injury, including: 290-319 (all mental illness); 648.4, V40.2, V40.3, V40.9, V67.3 (other miscellaneous mental disorders and problems); 331.0, 331.1, 331.2, 331.8, 797 (delirium, dementia and other cognitive limitations); V40.0, V40.1 (other developmental problems); E950-E959, V628 (suicide related); V62.8, V66.3, V67.3, V70.1, V70.2, V71.0, V79.0, V79.8, V79.9 (mental health exam and screening).

³The 24-hour definition defines ED boarding as staying in ED longer than 24 hours (AZHHA, 2015). The 6-hour definition defines ED boarding as staying in ED longer than 6 hours (Nolan et al., 2015).

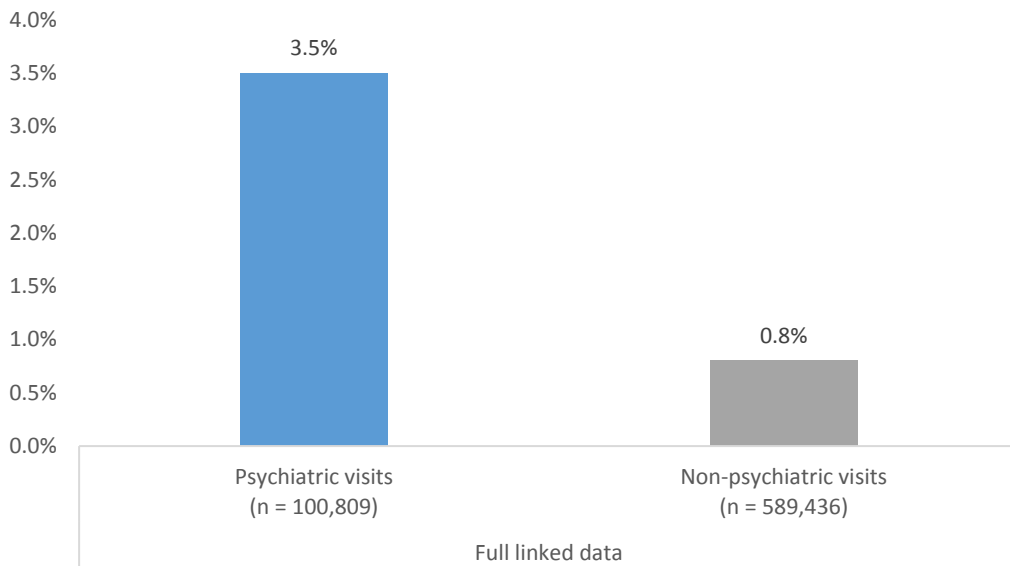
⁴Meet both definitions of psychiatric and ED boarding episodes.

Exhibit 3-3. Proportions of boarded episodes for psychiatric and non-psychiatric ED visits in Oregon EDs, Oct. 2014 – Sep. 2015

Panel A: 6-hour definition



Panel B: 24-hour definition



The severity of psychiatric conditions appears to increase the chance of boarding during an ED visit. In <Exhibit 3-4> we focus on psychiatric ED visits and report ED boarding incidents by the severity of psychiatric diagnoses during ED visits. About 15% of all psychiatric visits were classified as severe psychiatric episodes and the remaining 85% identified as non-severe psychiatric episodes. Our data also show that based on the 6-hour definition 3,753 visits (3.7%

of all psychiatric ED visits, severe and non-severe) were boarded, severe psychiatric visits and 10,923 visits (about 11% of all psychiatric visits) were boarded, non-severe psychiatric visits.

Exhibit 3-4. Psychiatric ED visits (proportions¹) in Oregon, Oct. 2014 – Sep. 2015: By severity of psychiatric conditions

	<i>Boarding definition:</i>	
	24-hour definition	6-hour definition
Total psychiatric ED visits ²	100,809	100,809
Severe episodes ³	15,394 (15.3%)	15,394 (15.3%)
Boarded	1,399 (1.4%)	3,753 (3.7%)
Non-severe episodes	85,415 (84.7%)	85,415 (84.7%)
Boarded	2,105 (2.1%)	10,923 (10.8%)

¹The denominator is total psychiatric ED visits.

²Psychiatric visit defined as having ICD-9 diagnoses for mental illness and related injury, including: 290-319 (all mental illness); 648.4, V40.2, V40.3, V40.9, V67.3 (other miscellaneous mental disorders and problems); 331.0, 331.1, 331.2, 331.8, 797 (delirium, dementia and other cognitive limitations); V40.0, V40.1 (other developmental problems); E950-E959, V628 (suicide related); V62.8, V66.3, V67.3, V70.1, V70.2 V71.0, V79.0, V79.8, V79.9 (mental health exam and screening).

³Severe mental illness visit defined as having ICD-9 diagnoses for severe mental illness, including: 295 (Schizophrenic Disorders), 296 (Episodic Mood Disorders), 297 (Delusional Disorders), 298 (Non-organic Psychoses)

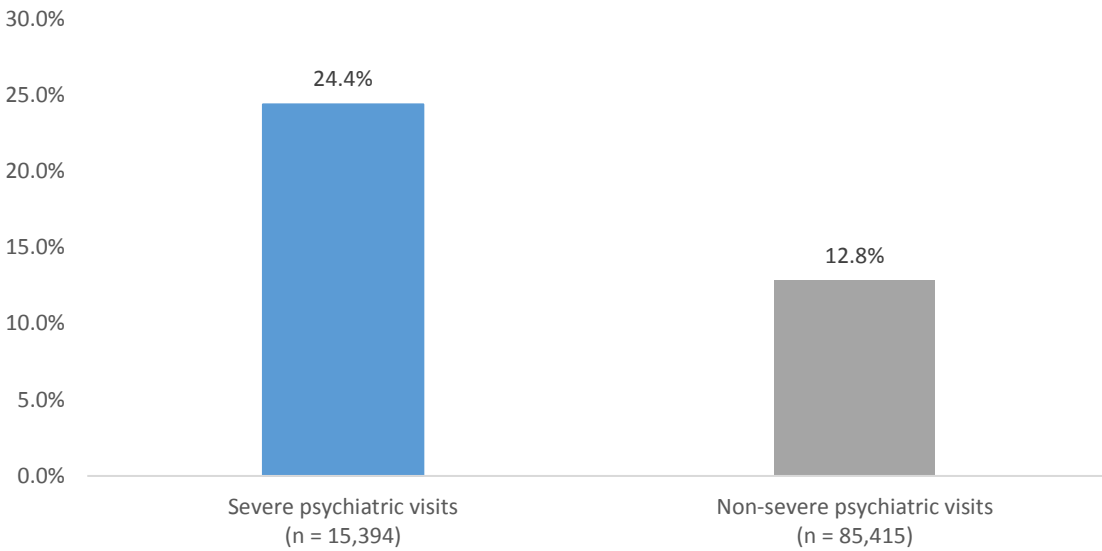
⁴The 24-hour definition defines ED boarding defined as staying in ED longer than 24 hours (AZHHA, 2015). The 6-hour definition defines ED boarding as staying in ED longer than 6 hours (Nolan et al., 2015).

<Exhibit 3-5> shows the proportion of boarded visits separately for severe and non-severe psychiatric visits. As shown in Panel A, based on the 6-hour definition, one-fifth of all severe psychiatric visits (24.4%) were classified as boarding episodes, which is nearly twice larger than the boarding rate of 12.8% for non-severe psychiatric visits. Once again, the 6-hour definition led to much higher boarding rates than the 24-hour definition (Panel B).

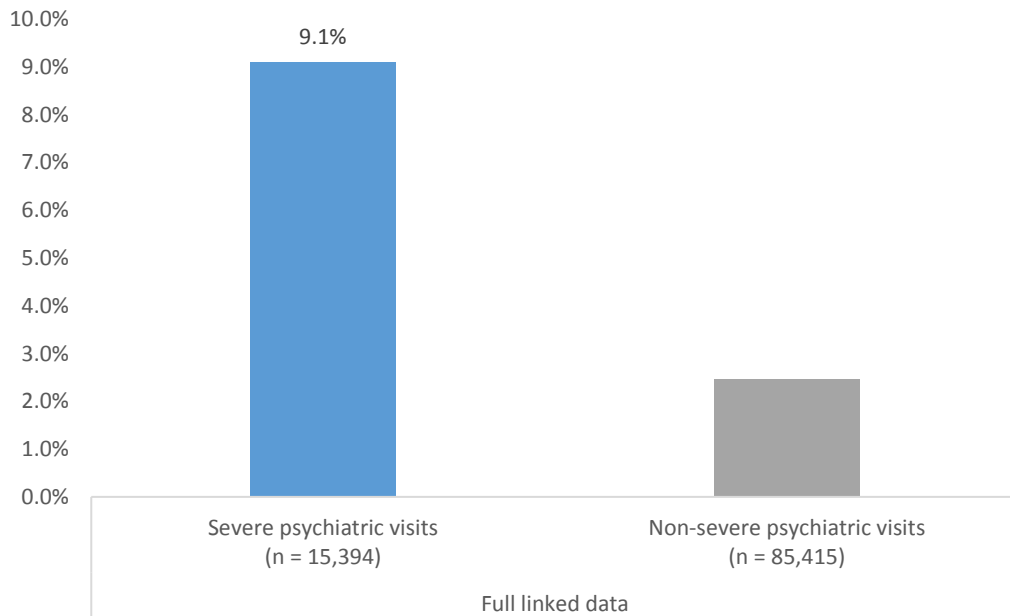
Over 24% of all severe psychiatric ED visits were boarding episodes, compared to 13% of all non-severe visits.

Exhibit 3-5. Proportions of boarded ED visits for severe and non-severe psychiatric episodes in Oregon, Oct. 2014 – Sep. 2015

Panel A: 6-hour definition



Panel B: 24-hour definition



Unique ED patients

<Exhibit 3-6> reports the count of total unique patients who used Oregon hospital EDs between October 2014 and September 2015. We again present ED boarding data separately for the 24-hour and 6-hour definitions.

Our analytic data set included total 290,181 unique ED patients. During the one-year study period, 11% of the entire ED patients received psychiatric diagnoses. Based on the 6-hour definition, 12,404 patients (4.3% of total ED patients including both psychiatric and non-psychiatric patients) were boarded. 3,893 patients (1.4% of all ED patients) were classified as psychiatric ED boarding patients. Based on the 24-hour definition, 2,459 patients (0.9% of all ED patients) were boarded, and 811 patients (0.3% of all ED patients) were classified as psychiatric ED boarding patients. The findings are consistent with the findings from the episode-level analysis given that overall the proportions for patient-level data were only slightly smaller than those for the episode-level data.

Exhibit 3-6. Unique ED patients (proportions¹) in Oregon, Oct. 2014 – Sep. 2015

	<i>Boarding definition</i>	
	24-hour definition	6-hour definition
Total ED patients	290,181	290,181
Psychiatric patients ²	31,824 (11.0%)	31,824 (11.0%)
Boarded patients ³	2,459 (0.9%)	12,404 (4.3%)
Psychiatric ED boarding ⁴	811 (0.3%)	3,983 (1.4%)

¹The denominator is total ED patients.

²Psychiatric patient defined as having ICD-9 diagnoses for mental illness and related injury, including: 290-319 (all mental illness); 648.4, V40.2, V40.3, V40.9, V67.3 (other miscellaneous mental disorders and problems); 331.0, 331.1, 331.2, 331.8, 797 (delirium, dementia and other cognitive limitations); V40.0, V40.1 (other developmental problems); E950-E959, V628 (suicide related); V62.8, V66.3, V67.3, V70.1, V70.2 V71.0, V79.0, V79.8, V79.9 (mental health exam and screening).

³The 24-hour definition defines ED boarding as staying in ED longer than 24 hours (AZHHA, 2015). The 6-hour definition defines ED boarding as staying in ED longer than 6 hours (Nolan et al., 2015).

⁴Meet both definitions of psychiatric and ED boarding patients.

<Appendix B4> discusses additional results from the unique ED patient data in details. They are similar to the results from the unique ED visit data presented above.

3.3.2. Boarding Time

<Exhibit 3-7> reports average boarding time in our data set, defined as (a) ED stay time in hours *less* six hours for the 6-hour definition and (b) total ED hours *less* 24 hours for the 24-hour definition. Panel A reports average ED boarding time for all ED visits including both boarded and not-boarded ED visits while Panel B presents boarding time for the subset of boarded ED visits. As shown in Panel A, ED visits on average had a boarding time of 1.2 hours (i.e., a total of 7.2 hours in ED) based on the 6-hour definition and about a

Average boarding time for psychiatric ED visits was 3.2 hours.

half hour based on the 24-hour definition. Psychiatric episodes extended the average boarding time to 3.2 hours, compared to less than an hour for non-psychiatric visits. Among psychiatric visits, severe psychiatric visits had on average 9.2 hours of boarding time, four times longer than 2.3 hours of boarding time for non-severe psychiatric visits. Comparable patterns were discovered for the 24-hour definition.

Exhibit 3-7. Average boarding time (BT) in hours [standard deviation] in Oregon, Oct. 2014 – Sep. 2015

	24-hour definition ¹		6-hour definition ²	
	ED visits (n)	BT [St. Dev.]	ED visits (n)	BT [St. Dev.]
<i>Panel A: All ED visits</i>				
Average boarding time for ED visit	690,245	0.525 [12.3]	690,245	1.220 [15.1]
Psychiatric ³	100,809	1.391 [16.6]	100,809	3.168 [20.3]
Severe ⁴	15,394	3.831 [27.1]	15,394	9.187 [35.0]
Non-severe	85,415	0.952 [13.8]	85,415	2.266 [16.9]
Non-psychiatric	589,426	0.377 [11.4]	589,426	0.862 [13.9]
<i>Panel B: Boarded ED visits only</i>				
Average boarding time for boarded ED visit	8,442	42.9 [103.0]	37,760	17.6 [54.8]
Psychiatric	3,504	40.0 [79.8]	14,676	18.2 [45.8]
Severe	1,399	42.2 [80.4]	3,753	27.0 [55.8]
Non-severe	2,105	38.6 [79.3]	10,923	15.2 [41.4]
Non-psychiatric	4,938	44.9 [116.7]	23,084	17.1 [59.8]

Notes. Boarding time is defined as total hours of a ED stay less six hours.

¹ED boarding defined as staying in ED longer than 24 hours (AZHHA, 2015).

²ED boarding defined as staying in the ED longer than 6 hours (Nolan et al., 2015)

³Psychiatric visit defined as having ICD-9 diagnoses for mental illness and related injury, including: 290-319 (all mental illness); 648.4, V40.2, V40.3, V40.9, V67.3 (other miscellaneous mental disorders and problems); 331.0, 331.1, 331.2, 331.8, 797 (delirium, dementia and other cognitive limitations); V40.0, V40.1 (other developmental problems); E950-E959, V628 (suicide related); V62.8, V66.3, V67.3, V70.1, V70.2 V71.0, V79.0, V79.8, V79.9 (mental health exam and screening).

⁴Severe mental illness visit defined as having ICD-9 diagnoses for severe mental illness, including: 295 (Schizophrenic Disorders), 296 (Episodic Mood Disorders), 297 (Delusional Disorders), 298 (Non-organic Psychoses)

As reported in Panel B, in the subset of boarded ED visits, the average boarding time for boarded ED visits was over 17 hours (total 23.6 hours of ED stay), based on the 6-hour definition.

Boarded psychiatric ED visits on average had the boarding time of 18.2 hours (total 24.2 hours in ED), a one hour longer boarding time than boarded non-psychiatric ED visits. To put this into perspective, the total 24.2 hours of

Once boarded, average boarding time for psychiatric and non-psychiatric ED visits were 18 and 17 hours, respectively. It was 27 hours for boarded, severe psychiatric ED visits.

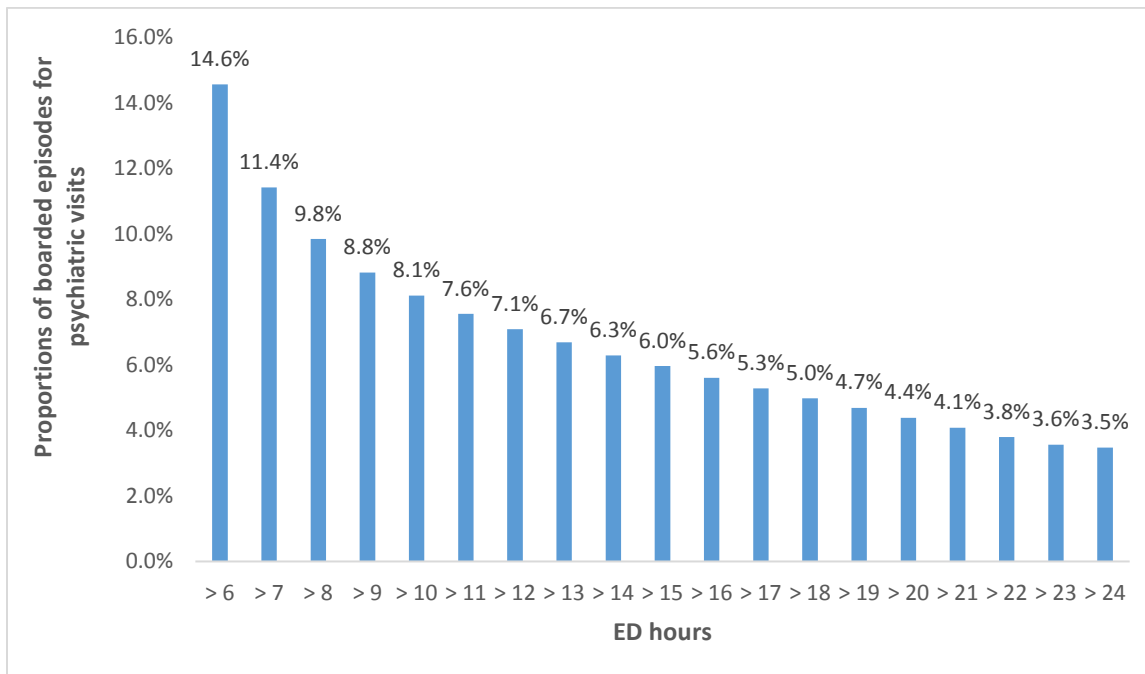
ED stay with psychiatric conditions were comparable to about 24 hours in Arizona (Arizona Hospital and Healthcare Association, 2015), longer than 10 hours in California (Stone et al., 2012), and shorter than 34 hours in Georgia (Bender et al., 2008). The average boarding time for boarded severe psychiatric visits was 27 hours (total 31 hours in ED), almost twice as large as 15.2 hours for boarded non-severe psychiatric visits.

The average boarding times reported in Panel B increased significantly when the 24-hour definition of ED boarding was used. This finding suggests that the overall magnitude of psychiatric ED boarding incidence in Oregon is driven largely by a subgroup of length ED visits.

3.3.3. Boarding incidences for different cutoffs for boarding definition

We have adopted two different definitions of ED boarding: The 6 and 24 hour definitions. The former uses longer than 6 hours of ED stay as the cutoff of boarding. Thus, it may define ED boarding somewhat generously although the definition has been adopted in prior national research (Nolan et al., 2015). In comparison, the 24-hour definition uses longer than one full day of ED stay to identify boarding episodes and therefore may define ED boarding narrowly. To gauge the sensitivity of the rate of psychiatric ED boarding over a range of cutoff points for boarding definition, we obtained the rate of psychiatric ED boarding for different cutoff hours, ranging from six to 24 hours.

Exhibit 3-8. The rate of psychiatric ED boarding¹ by different cutoffs for boarding definition in Oregon, Oct. 2014 – Sep. 2015



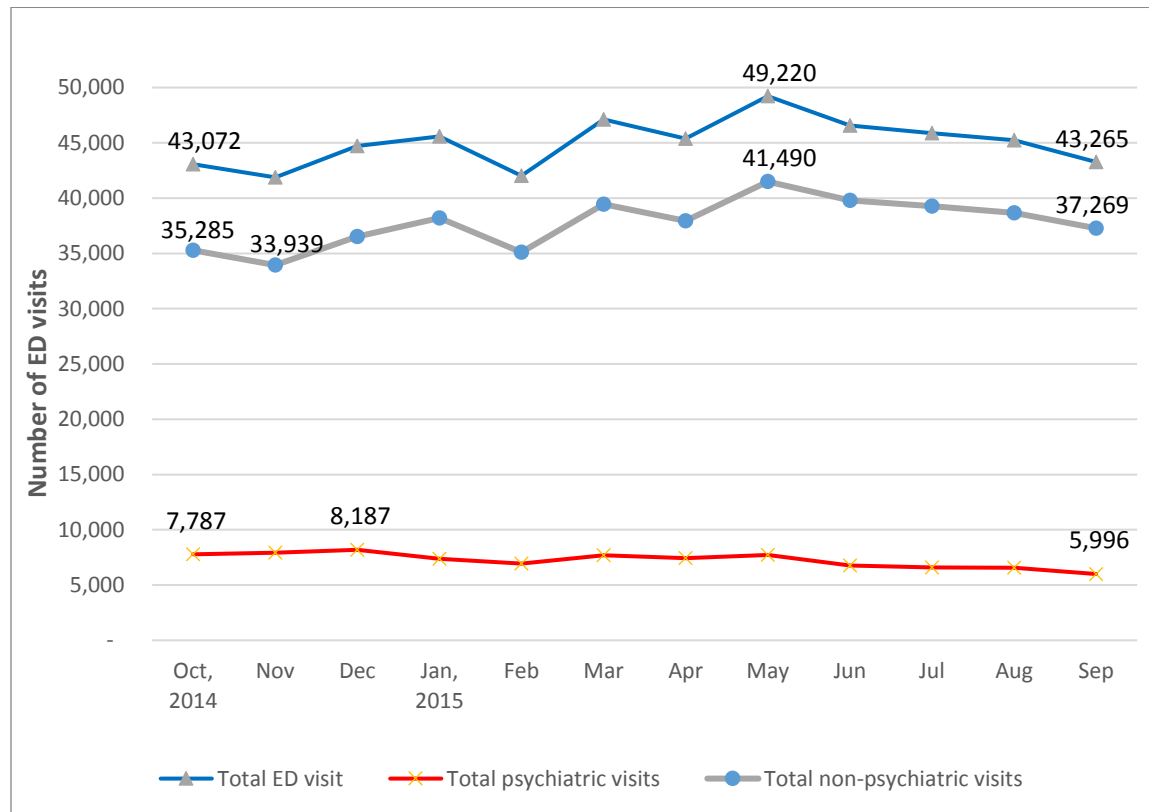
¹The proportion of boarded ED visits in all psychiatric ED visits.

As shown above in < Exhibit 3-8>, the rate of psychiatric ED boarding decreases as the cutoff threshold for the boarding definition is raised . However, the boarding rate did not decreased monotonically. Relatively greater drops in the rate were found in the left-side of the cutoff hour range, implying that a significant portion of the psychiatric ED boarding problem could be addressed by reducing the length of ED time for patients who stay in EDs just above the 6-hour threshold.

3.4. Recent Trends in Psychiatric ED Boarding

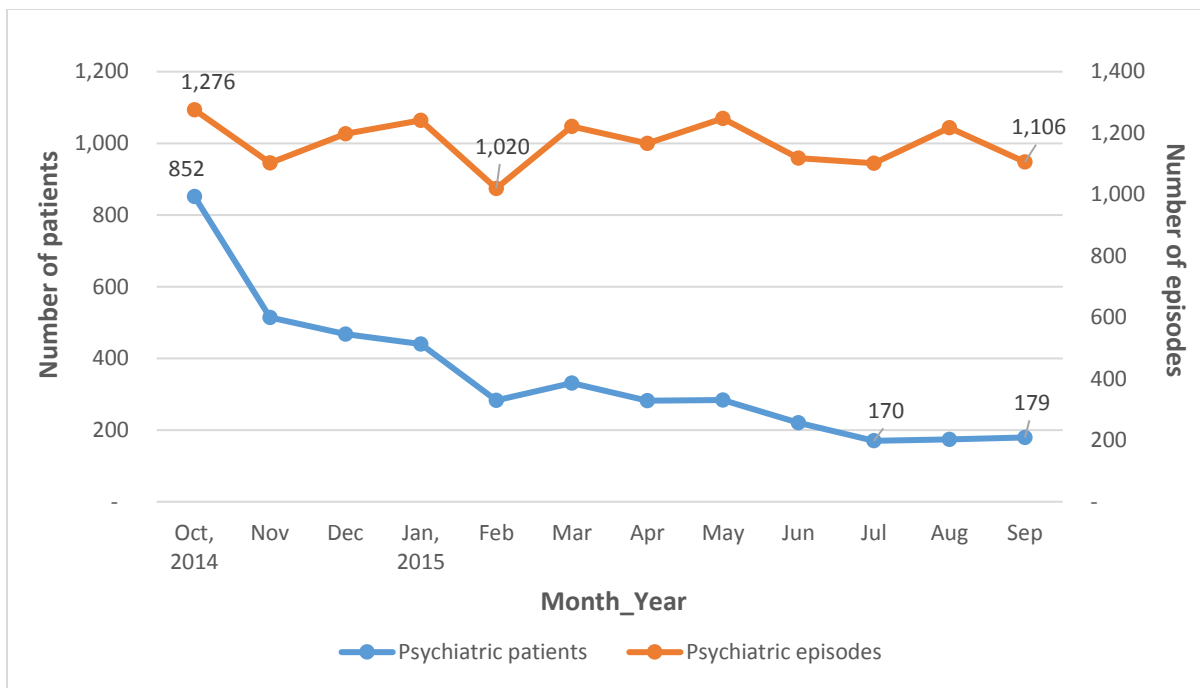
<Exhibit 3-9> shows the monthly trends in ED visits in Oregon, for total and also by the psychiatric visit status, from October 2014 to September 2015. The number of total ED visits in Oregon ranged from 41,874 to 43,072 per month. Total ED visits had an overall increase from October 2014 until it peaked in May 2015 with 49,220 visits. Then it decreased gradually. This trend was largely driven by the parallel trend in non-psychiatric ED visits. In comparison, the number of psychiatric ED visit had an overall decrease from 7,787 in October 2014 to 5,996 in September 2015.

Exhibit 3-9. Monthly trends in ED visits in Oregon, Oct. 2014 – Sep. 2015



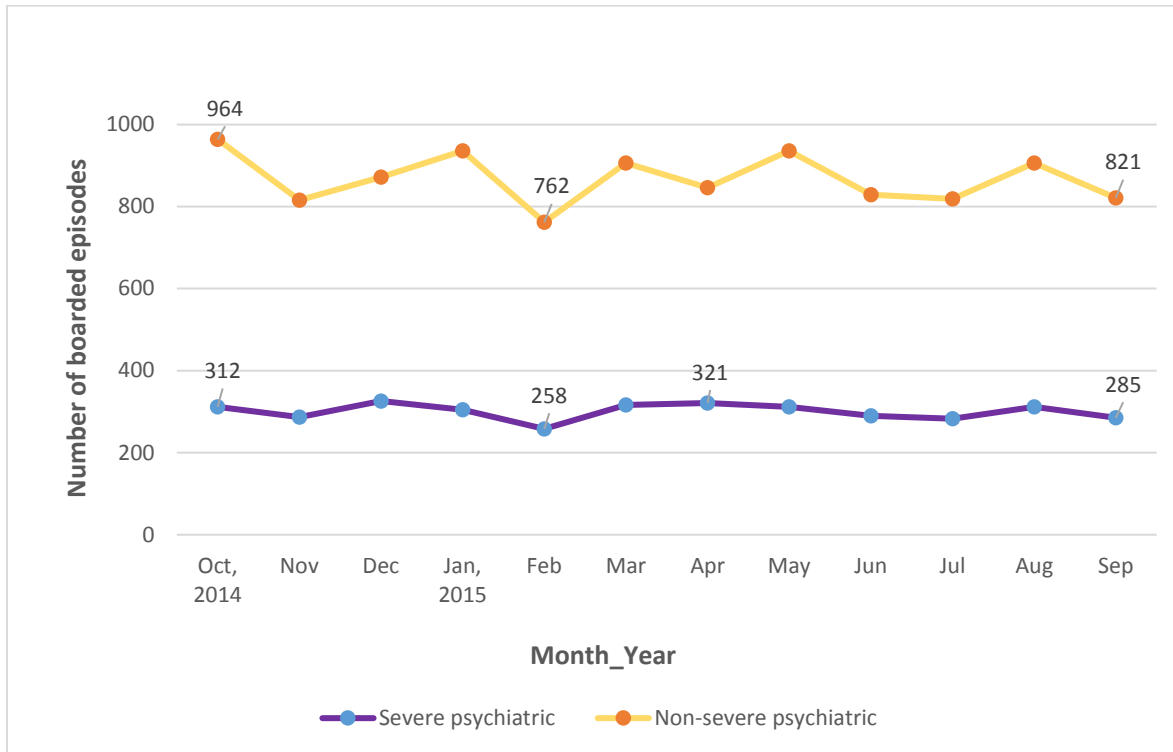
<Exhibit 3-10> presents monthly trends in unique psychiatric ED patients who were classified as boarded patients as well as unique psychiatric ED visits identified as boarding, based on the 6-hour definition of ED boarding. The number of unique psychiatric patients boarded in EDs steeply decreased from 852 patients in October, 2014 to 179 patients in September, 2015 with the lowest 170 patients in July, 2015. During the same period, boarded psychiatric ED episodes decreased relatively slightly from 1,276 to 1,106 ED visits. The trends together indicate that although the total number of boarded psychiatric patients decreased over the study period, the frequency of psychiatric ED boarding per patient in fact increased substantially, from 1.5 boarded psychiatric ED visits in October, 2014 to 6.3 boarded psychiatric ED visits in September, 2015.

Exhibit 3-10 Monthly trends in boarded psychiatric ED patients and boarded psychiatric ED visits in Oregon, Oct. 2014 – Sep. 2015 (6-hour definition)



As shown in <Exhibit 3-11>, the number of boarded non-severe psychiatric ED visits was usually three times greater than that for boarded severe psychiatric visits, based on the 6-hour boarding definition. The monthly number of boarded severe psychiatric ED episodes ranged from 258 to 312. The number of boarded non-severe psychiatric ED episodes were more fluctuating from month to month, ranging from 762 in February, 2015 to 964 boarded episodes in October, 2014. Nonetheless, the monthly trends in the numbers of psychiatric ED boarding episodes by the severity of mental illness did not show either increasing or decreasing pattern over time.

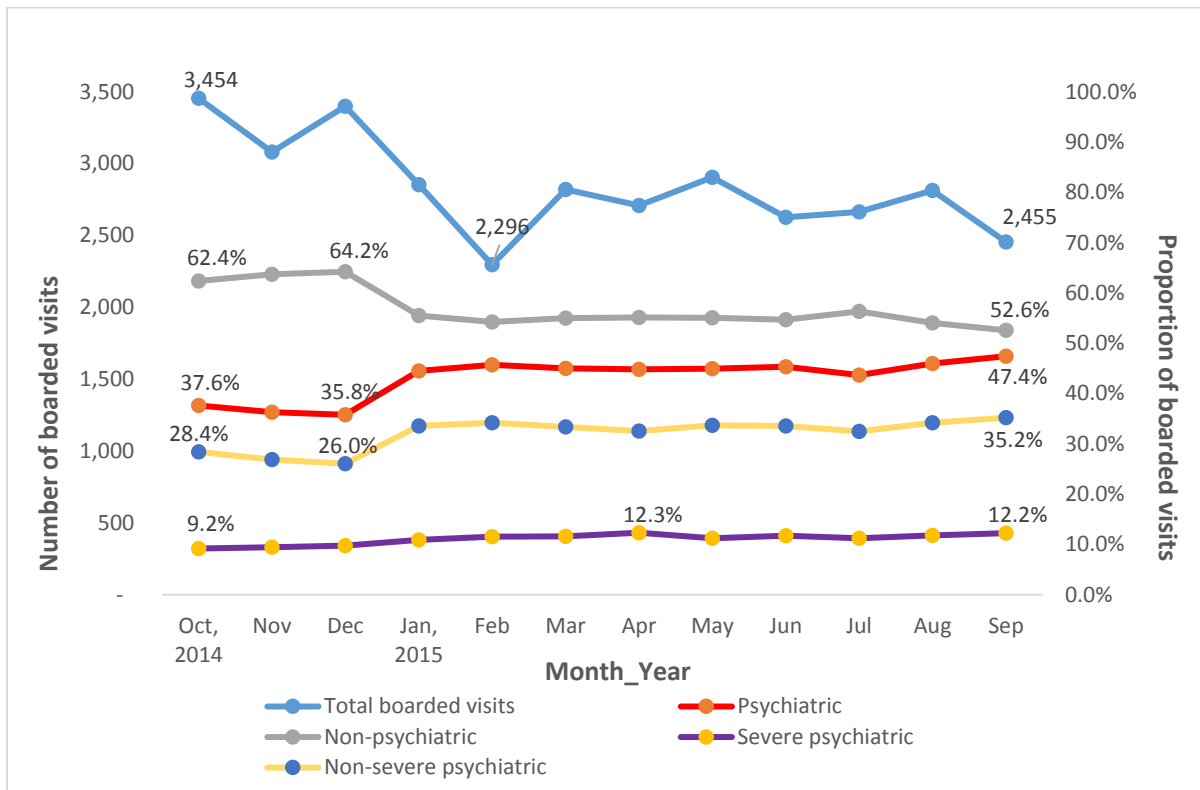
Exhibit 3-11. Monthly trends in boarded psychiatric ED visits in Oregon, Oct. 2014 – Sep. 2015: By severity of psychiatric conditions (6-hour definition)



<Exhibit 3-12> exhibits monthly trends in all boarded ED visits and the proportion of boarded ED visits by psychiatric visit status and severity of psychiatric conditions. Over the one-year period, the number of boarded ED visits decreased sharply from 3,454 to 2,455. The proportion of non-psychiatric ED boarding episodes in all boarded ED visits decreased overall from 62.4% to 52.6%—16% annual decrease. In contrast, the proportion of psychiatric visits in all boarded ED visits had an overall increase from 37.6% to 47.4%—26% increase over a year. The same trend was found for boarded non-severe-psychiatric visits which comprised 35.2% of all boarded episodes in September, 2015. The proportion of severe-psychiatric visits also shows an upward trend, increasing from 9.2% in October, 2014 to 12.2% in September, 2015. This increase represents 33% increase during the one-year period.

Despite the overall downward trend in the overall ED boarding rate, the portion of boarded psychiatric visits in all entire boarded ED visits increased.

Exhibit 3-12. Monthly trends in the proportions of boarded ED visits (6-hour definition) by psychiatric visit status and severity of psychiatric conditions in Oregon, Oct. 2014 – Sep. 2015



Taken together, results reported in <Exhibits 3-9, 3-10, 3-11, and 3-12> indicate that despite the overall downward trends in all psychiatric ED visits, boarded ED visits, and boarded psychiatric ED visits, the portion of boarded psychiatric episodes in the entire boarded ED visits in fact increased over time. This finding implies that while the overall boarding rate, both psychiatric and non-psychiatric, decreased over the sample period, the ED boarding problem had become more concentrated on psychiatric patients during the study period.

3.5. Comparison of Data from Independent Data Sources

This sections reports results from our analysis of data from each of the independent data sources, augmented with additional information available in the alternative data sources.

Unique ED visits

<Appendix B5> presents results on unique ED visits and boarding incidents in Oregon between October 2014 and September 2015, separately for the hospital discharge and EDIE data. ED utilization episodes were identified using ED admission date and hour information from the source data files. Results are reported for both 6-hour and 24-hour definitions of ED boarding. Data from the hospital ED discharge database revealed that during the one-year period, there

were total 564,151 unique ED utilization episodes. In comparison, the EDIE data captured 539,923 unique ED visits for the same study period, which is slightly less than the unique ED episodes captured in the hospital ED discharge database. Results from our analysis of each independent data sources were consistent with those from the combined dataset presented in the Chapter 3.3. See <Appendix B5> for details.

Unique ED Boarding Episodes Among Medicaid Patients

<Exhibit 3-13> presents ED visits and boarding rates only for Medicaid patients. Data from all three databases are reported so that we may gauge whether the hospital discharge and EDIE databases reliably capture psychiatric ED boarding episodes as compared to Medicaid claims data. As aforementioned, the Medicaid claims did not contain information on ED admission and discharge time. Therefore, to identify boarded ED visits, the raw Medicaid data were augmented with admission and discharge time data available in the EDIE and hospital discharge databases. Likewise, missing records of ED admission and discharge time in the hospital discharge database were filled with the data from the EDIE database, and vice versa.

Exhibit 3-13. Unique ED visits (proportions¹) for Medicaid patients in Oregon, Oct. 2014 – Sep. 2015

	Medicaid Claims		EDIE		Hospital Discharge	
	24-hour definition	6-hour definition	24-hour definition	6-hour definition	24-hour definition	6-hour definition
Total ED visits	391,479	391,479	300,324	300,324	329,290	329,290
Psychiatric visits ²	70,062 (17.9%)	70,062 (17.9%)	47,067 (15.7%)	47,067 (15.7%)	24,272 (7.4%)	24,272 (7.4%)
Boarded visits ³	3,179 (0.8%)	18,328 (4.7%)	3,479 (1.2%)	18,295 (6.1%)	2,783 (0.9%)	17,083 (5.2%)
Psychiatric ED boarding ⁴	1,900 (0.5%)	8,014 (2.1%)	1,828 (0.6%)	7,974 (2.7%)	1,434 (0.4%)	5,548 (1.7%)

¹The denominator is total ED visits.

²Psychiatric visit defined as having ICD-9 diagnoses for mental illness and related injury, including: 290-319 (all mental illness); 648.4, V40.2, V40.3, V40.9, V67.3 (other miscellaneous mental disorders and problems); 331.0, 331.1, 331.2, 331.8, 797 (delirium, dementia and other cognitive limitations); V40.0, V40.1 (other developmental problems); E950-E959, V628 (suicide related); V62.8, V66.3, V67.3, V70.1, V70.2 V71.0, V79.0, V79.8, V79.9 (mental health exam and screening).

³The 24-hour definition defines ED boarding as staying in ED longer than 24 hours (AZHHA, 2015). The 6-hour definition defines ED boarding as staying in ED longer than 6 hours (Nolan et al., 2015).

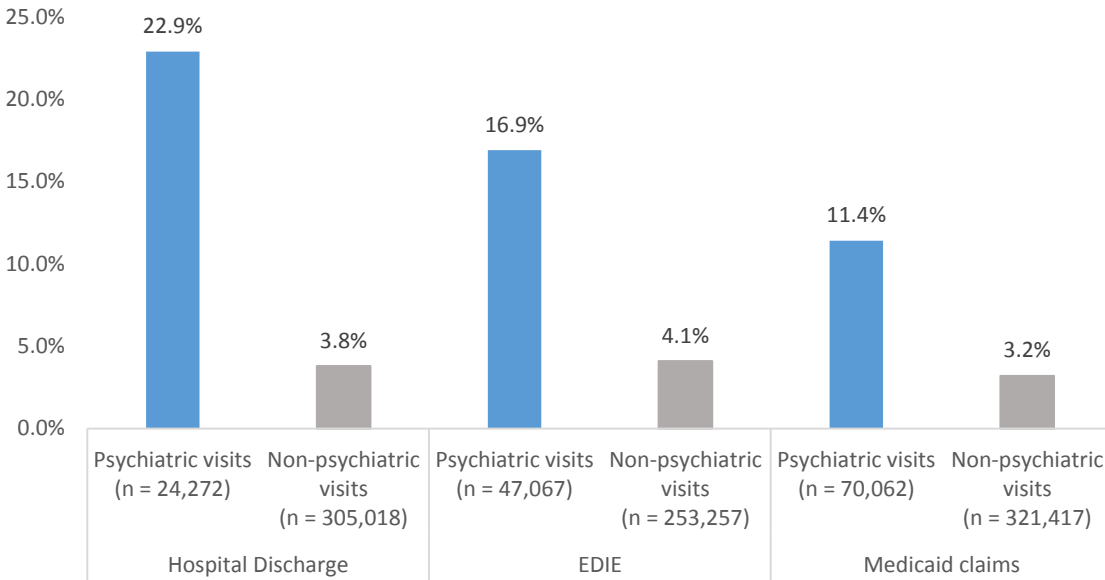
⁴Meet both definitions of psychiatric and ED boarding episodes.

The Medicaid claims data show that during the one-year period, there were a total of 391,479 unique ED episodes for Medicaid patients, as shown in <Exhibit 3-13>. 70,062 ED visits or approximately 18% of all ED visits by Medicaid patients were psychiatric visits. Based on the 6-hour definition, 18,328 visits were found to be boarded, either psychiatric or non-

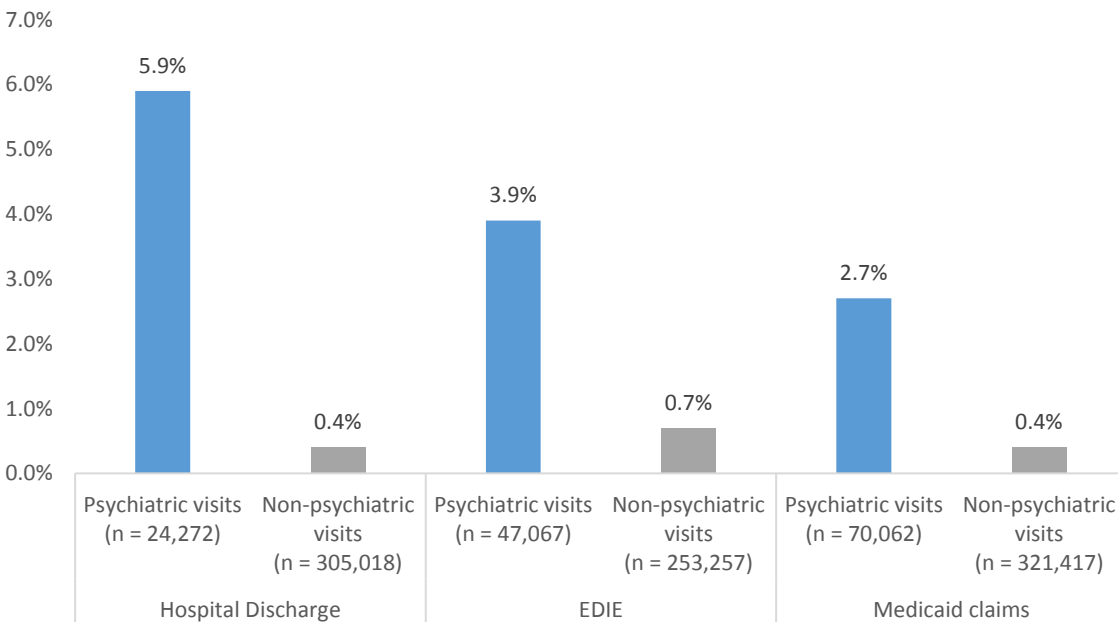
psychiatric, and 8,014 visits (2.1% of all ED visits for Medicaid patients) were classified as psychiatric ED boarding episodes. As shown in <Exhibit 3-14>, 11% of all psychiatric visits were identified as boarding episodes, nearly 4 times higher than that of non-psychiatric episodes.

Exhibit 3-14. Proportions of boarded episodes for psychiatric and non-psychiatric ED visits in Oregon, Oct. 2014 – Sep. 2015

Panel A: 6-hour definition



Panel B: 24-hour definition



The comparison of data from the three databases suggests that the EDIE database closely captures ED boarding episodes for Medicaid patients. Compared to the EDIE data which

included 300,324 unique ED episodes, the hospital discharge data captured total 329,290 unique hospital ED episodes for Medicaid patients, providing a count closer to the actual unique ED episodes in the Medicaid claims data, shown in <Exhibit 3-13>. However, the EDIE database better captured psychiatric and/or boarded episodes, based on either 24-hour or 6-hour definition. Based on the 6-hour definition, the EDIE data identified 7,974 unique ED visits which were boarded, psychiatric ED visits. The count of 7,974 is much closer to 8,014 boarded, psychiatric ED visits identified by the Medicaid claims, compared to 5,548 boarded, psychiatric ED visits captured by the hospital discharge data. <Exhibit 3-14> consistently shows that the EDIE data are closer to the Medicaid claims data than the hospital discharge data regarding the proportion of boarded episodes in psychiatric ED visits.

It is important to note that the rate of psychiatric ED boarding is considerably close between all ED visits and a subset of ED visits by Medicaid patients. For example, results reported in <Exhibits 3-2 and 3-13> indicate that 2.1% of all ED visits in Oregon captured in this report were psychiatric ED boarding cases and the same 2.1% of ED visits among Medicaid patients in Oregon were psychiatric ED boarding cases. Taken together, our results suggest that currently the EDIE data capture psychiatric ED boarding episodes somewhat more reliably than the hospital discharge data. This finding does not necessarily speak to the quality of the hospital discharge data but is rather likely to be an artifact that compared to the EDIE data, the hospital discharge data included less diagnoses codes available to OSU researchers and had more missing information on ED utilization time.

The Medicaid claims data show that based on the 6-hour definition of ED boarding, there were 2,190 severe-psychiatric ED boarding cases and 5,824 non-severe psychiatric ED boarding cases captured in our data, shown in <Exhibit 3-15>. Importantly, the severity of psychiatric conditions appears to increase the rate of ED boarding among Medicaid patients. For example, according to the Medicaid claims data, about 23% of all severe psychiatric visits were boarded, compared to less than 10% for non-severe psychiatric visits <Exhibit 3-16>. Again, the EDIE data better reflect the Medicaid claims data in terms of the rate of psychiatric ED boarding.

Exhibit 3-15. Unique ED visits (proportions¹) for Medicaid patients in Oregon, Oct. 2014 – Sep. 2015: By severity of psychiatric conditions

	Medicaid Claims		EDIE		Hospital Discharge	
	24-hour definition	6-hour definition	24-hour definition	6-hour definition	24-hour definition	6-hour definition
Total psychiatric ED visits ²	70,062	70,062	47,067	47,067	24,272	24,272
Severe episodes ³	9,620 (13.7%)	9,620 (13.7%)	6,531 (13.9%)	6,531 (13.9%)	4,295 (17.7%)	4,295 (17.7%)
Boarded	838 (1.2%)	2,190 (3.1%)	815 (1.7%)	2,095 (4.5%)	676 (2.8%)	1,603 (6.65)
Non-severe episodes	60,442 (86.3%)	60,442 (86.3%)	40,536 (86.1%)	40,536 (86.1%)	19,977 (82.3%)	19,977 (82.3%)
Boarded	1,062 (1.5%)	5,824 (8.3%)	1,013 (2.2%)	5,879 (12.5%)	758 (3.1%)	3,945 (16.3%)

¹The denominator is total psychiatric ED visits.

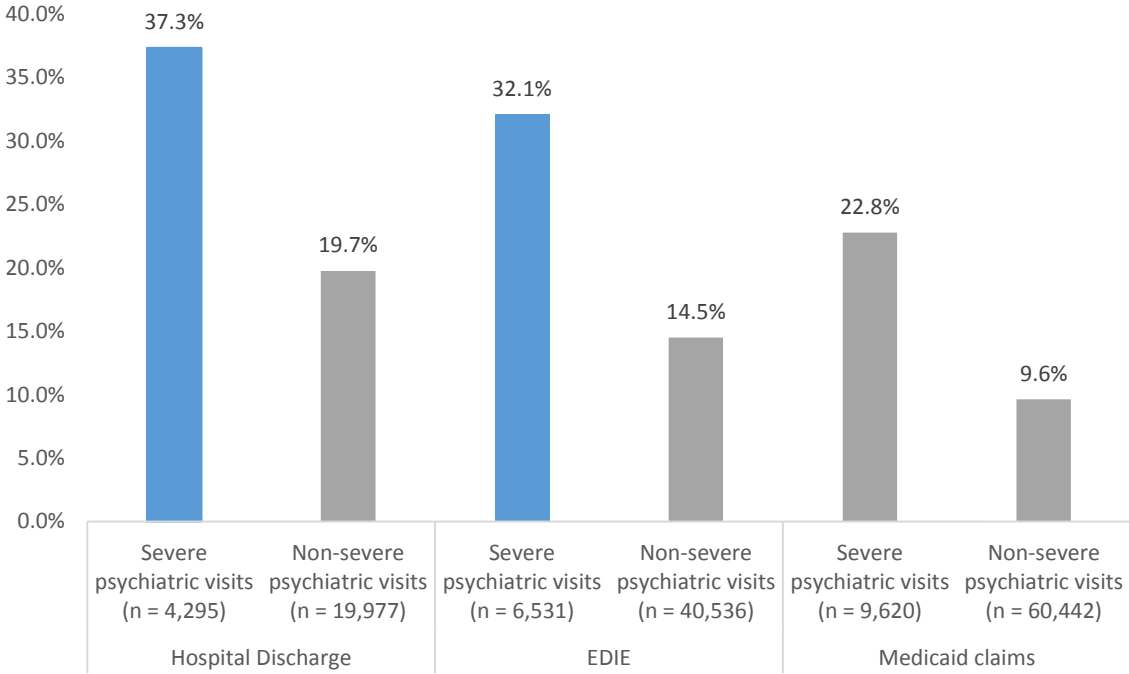
²Psychiatric visit defined as having ICD-9 diagnoses for mental illness and related injury, including: 290-319 (all mental illness); 648.4, V40.2, V40.3, V40.9, V67.3 (other miscellaneous mental disorders and problems); 331.0, 331.1, 331.2, 331.8, 797 (delirium, dementia and other cognitive limitations); V40.0, V40.1 (other developmental problems); E950-E959, V628 (suicide related); V62.8, V66.3, V67.3, V70.1, V70.2 V71.0, V79.0, V79.8, V79.9 (mental health exam and screening).

³Severe mental illness visit defined as having ICD-9 diagnoses for severe mental illness, including: 295 (Schizophrenic Disorders), 296 (Episodic Mood Disorders), 297 (Delusional Disorders), 298 (Non-organic Psychoses)

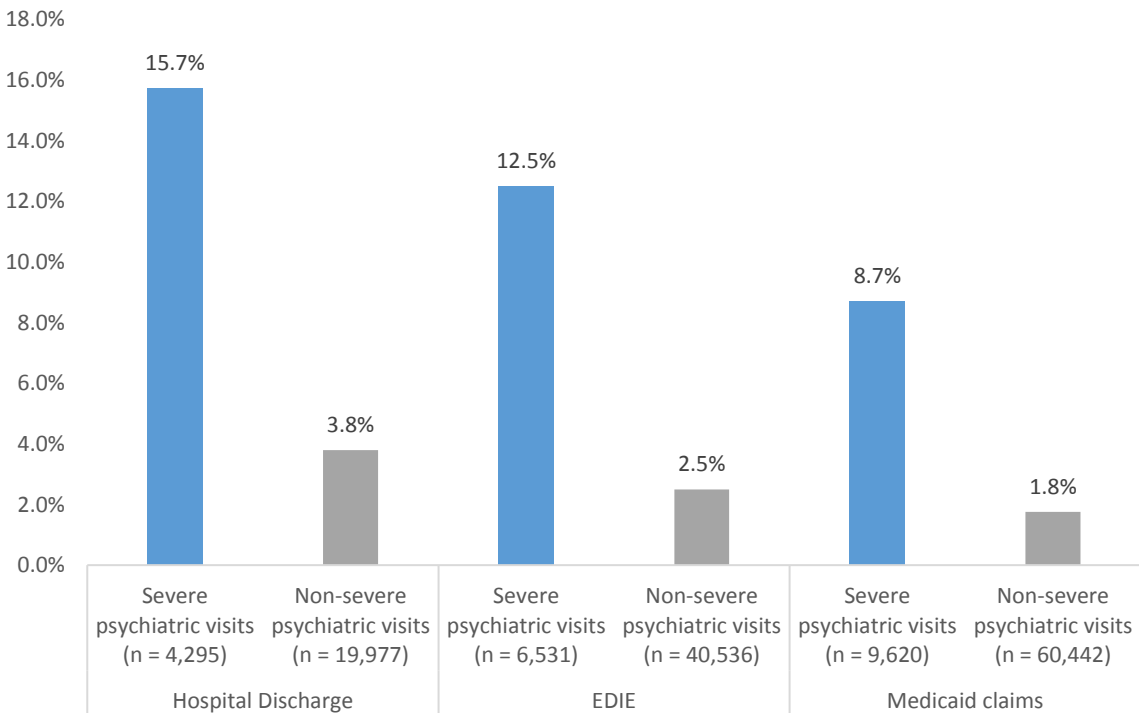
⁴The 24-hour definition defines ED boarding defined as staying in ED longer than 24 hours (AZHHA, 2015). The 6-hour definition defines ED boarding as staying in ED longer than 6 hours (Nolan et al., 2015).

Exhibit 3-16. Proportions of boarded episodes for severe and non-severe psychiatric ED visits for Medicaid patients in Oregon, Oct. 2014 – Sep. 2015

Panel A: 6-hour definition



Panel B: 24-hour definition



Unique ED Patients

We also report results from the unique patient-level data, rather than the unique episode-level data. <Appendix B6> support the results from the episode-level analysis presented above and in <Appendix B5>. Results are only slightly different between the patient-level and episode-level analysis. For example, based on the 6-hour boarding definition, the episode-level EDIE data show that approximately 16% of psychiatric ED episodes were boarding episodes during the one-year study period, compared to the corresponding 14.5% for the person-level EDIE data.

3.6. Costs of Psychiatric ED Boarding

We estimated the cost of ED visits based on payments to EDs and physicians by the Oregon Health Plan (Medicaid); this estimate is conservative to the extent that Medicare or commercial insurers reimburse EDs and physicians at higher rates than Medicaid. <Exhibit 3-17> presents mean and median ED cost per visit. The average cost of boarded ED episodes was \$997 per visit, which is \$605 greater than the average of \$392 for all non-boarded ED episodes. For non-boarded patients, psychiatric visits cost about \$30 more than non-psychiatric visits.

Boarded psychiatric ED visits cost \$277 more, on average, than non-boarded psychiatric visits.

Interestingly, severe-psychiatric ED visits, either boarded or not boarded, were slightly less costly than non-severe psychiatric ED visits. For all cost estimates the median average cost per ED episode is significantly

less than the mean, suggesting that a small proportion of very cost visits skews our data to the right.

Our estimates are somewhat smaller than the national average of ED boarding expenditures reported in the literature. For example, nationally the average cost of boarded ED episodes ranged from \$2000 to \$4000 (Nicks and Manthey, 2012; Claudius et al., 2014). Nonetheless, our estimates of the overall mean and median cost of an ED visit are similar to recent national estimates. In 2013, the national mean of annual ED costs per person was \$547.¹¹

¹¹ \$311 (\$176) for physician services and \$236 (\$108) for facility use. National ED cost data were retrieved from the 2013 Medical Expenditure Panel Survey (MEPS) maintained by the Agency for Healthcare Research and Quality.

Exhibit 3-17. Per-visit costs of ED utilization, Oct. 2014 – Sep. 2015

	All visits	Boarded ¹					Not boarded				
		All	Psychiatric ²			Non-psychiatric	All	All	Psychiatric		
			All	Severe ³	Non-severe				Severe	Non-severe	Non-psychiatric
Mean	\$424	\$997	\$695	\$639	\$713	\$1,196	\$392	\$418	\$395	\$420	\$388
(Median)	(\$125)	(\$174)	(\$171)	(\$171)	(\$171)	(\$180)	(\$124)	(\$125)	(\$122)	(\$124)	(\$122)
[St. Dev.]	[\$849]	[\$1,624]	[\$1,115]	[\$939]	[\$1,167]	[\$1,857]	[\$771]	[\$797]	[\$836]	[\$791]	[\$797]

Notes: For Medicaid claims data, ED costs came from Medicaid payment to providers. For hospital ED discharge data, total charges were converted to estimated provider payment using payment to charge ratio from Medicaid claims data. ED boarding is based on the 6-hour definition.

¹ED boarding defined as staying in ED longer than 6 hours (Nolan et al., 2015).

²Psychiatric visit defined as having ICD-9 diagnoses for mental illness and related injury, including: 290-319 (all mental illness); 648.4, V40.2, V40.3, V40.9, V67.3 (other miscellaneous mental disorders and problems); 331.0, 331.1, 331.2, 331.8, 797 (delirium, dementia and other cognitive limitations); V40.0, V40.1 (other developmental problems); E950-E959, V628 (suicide related); V62.8, V66.3, V67.3, V70.1, V70.2 V71.0, V79.0, V79.8, V79.9 (mental health exam and screening).

³Severe mental illness visit defined as having ICD-9 diagnoses for severe mental illness, including: 295 (Schizophrenic Disorders), 296 (Episodic Mood Disorders), 297 (Delusional Disorders), 298 (Non-organic Psychoses)

Chapter 4. Qualitative Analysis of Stakeholder Interviews

This section describes results from interviews of various stakeholders regarding the causes and impacts of psychiatric ED boarding in Oregon as well as solutions to the boarding problem. Interview methods and characteristics of the sample of stakeholders are described in <Appendix C1>.

4.1. Causes of Psychiatric ED Boarding

Overview

Stakeholder interviews identified several broad causes of psychiatric boarding in hospital EDs in Oregon as following. Below we summarize the interview findings that describe how these conditions lead to psychiatric ED visits, and why some of these patients are then boarded in hospital EDs.

Underlying Behavioral Health Conditions. Respondents reported that psychiatric emergencies arise from a variety of underlying behavioral health conditions. Among individuals with severe and persistent mental illness (SPMI), schizophrenia and bipolar disorder were viewed as top causes of boarding. Respondents also noted that patients with acute anxiety or depression boarded, especially if they were potentially suicidal. Among children and adolescents, adverse childhood experiences were viewed as intimately linked with young people experiencing mental health crises and ultimately boarding in the ED.

Most respondents also identified substance abuse as a reason patients boarded. Intoxicated patients have to be held until sober in order to identify whether the substance is causing the mental health symptoms or if the mental health symptoms persist after the patient is no longer intoxicated. Respondents noted that this sobering period often increased the length of boarding.

Outpatient Treatment Capacity. Respondents argued that many psychiatric emergencies could be prevented, if a person has access to ongoing outpatient treatment. However, respondents reported a lack of outpatient treatment capacity or inadequate access in most communities, which can lead to an escalation of symptoms and a psychiatric emergency.

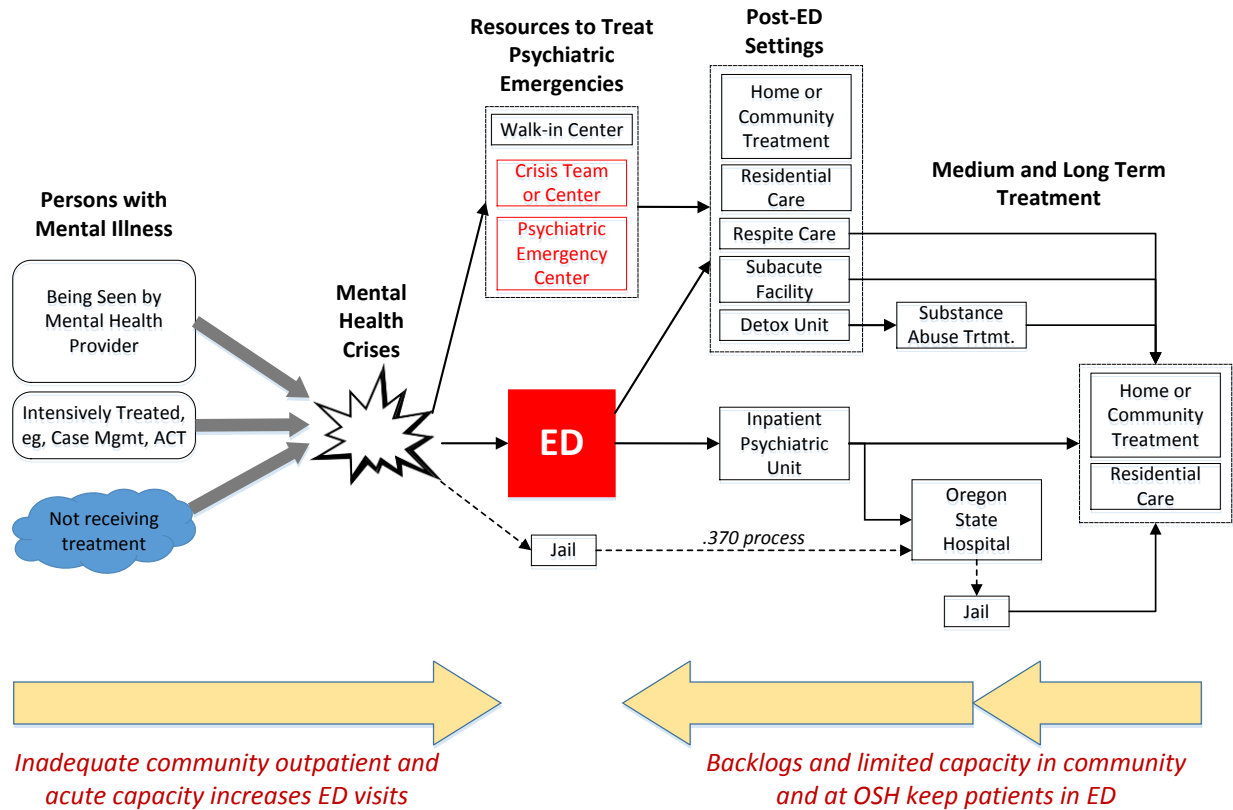
Urgent and Emergency Treatment Availability. Respondents felt that not all psychiatric emergencies required treatment in the ED, but few alternative response or treatment options are available. Without an ED alternative, patients with psychiatric emergencies board in the ED waiting for evaluation, and treatment is often suboptimal given a lack of trained mental health professionals in the ED.

Challenges to Community Discharge. Most ED patients with psychiatric emergencies can be discharged to home or other community settings, but ED discharge may be delayed—for example, due to unavailability of skilled personnel to determine which post-discharge setting is required, limited community program capacity, or reimbursement restrictions—and cause a patient to be boarded in the ED.

Inpatient and Sub-Acute Capacity. ED patients with the most severe psychiatric emergencies need inpatient or sub-acute care. However, respondents reported that inpatient, sub-acute, and OSH beds are often unavailable. Thus, patients waiting for a bed often board in the ED.

Exhibit 4-1 depicts these major causes by showing different potential paths of individuals whose mental illness requires urgent or emergency treatment. Each of the four broad causes of psychiatric boarding identified by interviewees is described in more detail below.

Exhibit 4-1. Causes of psychiatric boarding in Oregon



Outpatient Treatment Capacity and Preventable Psychiatric Emergencies

Wait Times. Many persons with mental illness reach a psychiatric crisis point—an emergency—that could have been avoided with adequate and timely access to outpatient treatment. However, respondents noted that wait times to see a behavioral health provider are so long that some people reach a crisis before they can be seen. Wait times for psychiatrists, often several months long, are particularly problematic. This happens even if a person has health insurance. Although the 2014 expansion of the Oregon Health Plan (OHP) has reduced the number of uninsured people, the capacity of behavioral health providers has not been able to expand fast enough to meet the rising demand. When asked about the ability of telemedicine to address this wait, respondents generally felt this was not a cost-efficient way to address the shortage of psychiatrists, due to issues like high no-show rates and the need to preschedule blocks of a remote psychiatrist’s time.

Program Capacity. For the SPMI population, respondents noted that community outpatient treatment programs, such as ACT teams or intensive case management, can reduce psychiatric emergencies. However, in many communities these programs do not have adequate capacity or fidelity. Although the ideal treatment capacity can be estimated based on available estimates of a local community's population with SPMI, building that capacity requires both sustained funding and an available workforce of skilled behavioral health clinicians and staff.

Housing. Respondents also described how the limited availability of stable housing exacerbates the challenges of providing effective outpatient treatment. In the Portland area specifically, respondents noted that low housing vacancy rates have increased homelessness among persons with mental illness. More broadly, in almost all Oregon counties, residential care facilities for adults were perceived to have inadequate capacity. Similar capacity issues were identified for the child and adolescent population, especially for those suffering from severe adverse childhood events. A large number of residential child and adolescent beds were closed in 2015 further reducing the supply of housing options for this population.

Limited or Underutilized Alternatives to Hospital EDs

Although many psychiatric emergencies can be managed more appropriately in settings other than the hospital ED, these alternative options may not be accessible in some counties, or may not be utilized as often as they should be. Respondents discussed three ED alternatives and the current barriers to use: walk-in behavioral health centers, crisis response programs, and a dedicated psychiatric emergency center.

Walk-in Behavioral Health Centers. When asked about behavioral health services available in their community, many respondents identified walk-in behavioral health centers. Respondents described how patients could receive immediate assessment and response by trained staff. However, not all counties have them and most are not open evenings or weekends, limiting the number of mental health patients who can be served.

Crisis Response Programs. Respondents also spoke of the usefulness of crisis response programs. Crisis response programs can allow persons experiencing psychiatric emergencies to be treated at home or diverted to a community setting other than the ED. Respondents felt that telephone, physical, or mobile crisis response programs should be available 24 hours a day, 7 days a week for maximum benefit, but reported that keeping these programs funded and fully staffed is a challenge.

Crisis centers, or even crisis call-in lines, are specifically designed and staffed to address psychiatric emergencies. All counties have crisis call-in lines, but not all counties have crisis centers. Similarly, mobile crisis teams can go to a patient's home or other locations where a psychiatric emergency is occurring allowing the patient to be treated on-site or diverted to a treatment setting other than the ED. These units are now available statewide, although with limited geographic coverage in some counties. A major challenge for communities with these programs is the need for strong collaboration between behavioral health, law enforcement, and EMS professionals. However, each of these professions has a unique culture and approach to addressing psychiatric emergencies. Effective collaboration therefore requires training, experience working together, and support from local mental health program, police/sheriff, and EMS leaders.

Dedicated Psychiatric Emergency Centers. Many respondents also explained how dedicated psychiatric emergency centers are the ideal setting for managing most psychiatric emergencies, but that there are currently none in Oregon. The Unity Center will open soon in Portland, but will be the only one until other hospitals also open such centers. And the need for psychiatric emergency centers is not limited to the Portland metro area.

Awareness. Unfortunately, even when alternatives to ED care for psychiatric emergencies are available in a community, respondents reported that persons with mental illness, their families, behavioral health and addiction providers, or law enforcement officers may not be aware of them. During our interviews, we asked respondents about the mental health services available in their communities. A number of respondents were unfamiliar with the variety of services available, which supports the respondents' claims.

Challenges in Discharging Psychiatric ED Patients to Community Settings

Respondents felt that approximately 3 out of 4 people who present to an ED with a psychiatric emergency can be safely discharged to home or community destinations. Even though many persons with relatively severe psychiatric emergencies need not receive inpatient care, they are often not discharged to those more appropriate settings for several reasons.

Capacity. Depending on their individual needs, patients can be discharged to a wide range of settings, including: residential care; transitional housing or a shelter with “wraparound” behavioral health treatments; respite care (eg. hotel room with professional or peer attendant); or supported home care. Despite the recognition of the utility of such settings, respondents stated that these ED alternatives are not available in all counties. Additionally, respondents commented that many existing programs have inadequate capacity to accept suitable patients from the ED, for a number of reasons. First, these programs are organizationally complex to set up. For example, a residential facility may be operated by one organization, but have behavioral health treatment provided by another organization. Another challenge is finding an adequate number of trained staff to allow for the continued operation of existing programs; this challenge is especially great in rural areas, where skilled personnel may not be available and the number of patients in a given community may be relatively small. Limited state and county funding is a further barrier to the availability of these programs.

Health Insurance. Respondents discussed a variety of health insurance reimbursement issues as barriers to the utilization of alternative psychiatric treatment settings. For instance, CCOs may reimburse respite care, but not residential care. Some respondents felt that residential care may now be less well connected to other services than when counties managed the entire continuum, but perspectives on this issue vary. Additionally, Medicare and commercial payers have very restrictive reimbursement for such services. For example, private insurance often does not cover community mental health services such as home care. Medicare covers mental health care provided by a physician, LCSW, or PhD, but not by an ACT team. And not all psychiatrists accept Medicare. Thus, the types of ED alternatives available vary based on a person's insurance status.

Weekend Admissions. Another barrier to the utilization of ED alternatives noted by respondents were admission hour restrictions. Many community programs are not staffed to assess or accept new patients on weekends. Combined with the fact that patients on a “hold” may wait up

to 72 hours to be evaluated by county mental health staff, patients may end up boarding in the ED, even when an appropriate, alternative mental health treatment center is accessible to them.

Coordination with EDs. A further concern voiced by respondents regarding the underuse of ED alternatives, is that EDs may not be well coordinated with these community destinations. Respondents identified several reasons for poor coordination. First, ED physicians and staff may lack knowledge about the available settings or the expertise to assess how a particular patient matches to potential settings (in clinical and reimbursement terms). Even with appropriate knowledge, a number of ED staff interviewed noted that they lacked adequate time to call multiple settings to find an available opening. Because few EDs have psychiatric social workers or other non-psychiatrist mental health staff, there are limited personnel to perform these tasks either on site or on call.

Several respondents felt that ED staff generally had inadequate training in the diagnosis and treatment of psychiatric emergencies. The ED staff we interviewed largely agreed with this sentiment, and also noted concerns about lawsuits as a driving force for inpatient versus outpatient discharge destinations.

Additionally, ED staff may be more comfortable discharging patients to an inpatient unit rather than a community setting. Some ED staff noted discomfort with discharging a patient to their home or a community setting, even when they did not need inpatient treatment, because the patient would be unable to access needed services in the community, could experience an exacerbation of symptoms, and would likely return to the ED in a worse condition. And unlike discharging to a community setting, discharging a mental health patient to inpatient care matches standard approaches to treating physical illness, for which EDs are optimized. Nevertheless, paper documentation to request inpatient psychiatric admission is less efficient than for admission to other inpatient units.

Furthermore, respondents felt that for many ED staff, placing a patient on a mental health hold may appear to be a conservative choice. In particular, ED staff noted they are conservative with respect to discharging patients who are homeless or may be suicidal. Oregon's commitment law requires two persons to sign a hold; one of them may be a qualified mental health practitioner rather than a physician, but the law does not require community mental health staff to be part of discharge planning.

Comorbidities. Even when respondents knew of alternative treatment settings and desired to connect their patients with such facilities, respondents noted that certain patients were particularly difficult to place. In particular, respondents stated that there were insufficient facilities and a lack of willingness of the part of existing facilities to accommodate patients with disruptive or violent behavior, severe substance abuse, dementia, and developmental disabilities.

Legal Constraints. For some respondents, the lack of a version of "Kendra's Law" in Oregon was seen as an impediment to the use of alternative treatment programs. Such laws, which are stronger than Oregon's current outpatient commitment law, can compel psychiatric patients who are a risk to themselves or others to enter and remain in Assisted Outpatient Treatment. Without this type of law, some respondents felt that discharging patients to alternative treatment settings would provide little benefit and that the patient would return to the ED for further treatment.

Taken together, respondents overwhelmingly believed that the lack of alternative community treatment options and underutilization of existing services contribute to ED boarding.

Inadequate Capacity in Inpatient, Detoxification, and Sub-Acute Facilities

ED patients with the most severe psychiatric emergencies must be discharged to a facility with 24/7 supervision and intensive treatment capabilities.

Inpatient Psychiatric Units. An inpatient psychiatric bed is the most common choice, but they are usually full, for a variety of reasons. In the worst case, this may mean that a psychiatric patient could board for days in the ED. Notably, respondents reported that patients are more likely to board in EDs whose hospitals do not have their own psychiatric inpatient units.

The main reason respondents identified for the lack of inpatient psychiatric beds related to OSH capacity. Many patients in psychiatric inpatient units are awaiting transfer to the OSH, which has a waiting list for admission. Although the OSH had reduced that waiting list by streamlining the assessment process for patients seeking admission, the waiting list has again grown. Respondents noted that a major reason for the increasingly long wait for OSH admission is that civil commitment beds at the OSH are being occupied by the “370” population, who have been arrested, but are unable to “aid and assist” in their own defense. One interviewee estimated that among the “370” population, approximately 40% were arrested for misdemeanors and could safely be treated in the community. Another reason respondents identified for the backlog of patients waiting for OSH admission in inpatient units is that community programs (described above) lack capacity to accept patients who are ready for discharge from OSH. They noted that without adequate community programs, OSH patients cannot be discharged.

Respondents also noted that the process for transferring patients from inpatient units to the OSH is slow. According to respondents, a patient must be a psychiatric inpatient for at least 14 days before the referral process to the OSH can start. That period of inpatient care is intended to assess whether patients can improve enough, so that they can be discharged elsewhere. For those who don’t improve sufficiently, OSH staff must then assess whether the patient meets OSH admission criteria. If the patient meets admission criteria, then the patient can be placed on the OSH wait list. Until this time, the patient is “waiting for the wait list”.

Detoxification treatment. The lack of alternative treatment facilities was another cause of boarding identified by respondents. Many psychiatric patients have co-occurring substance abuse conditions that would benefit from treatment in a detox facility. However, a lack of detox beds, especially in rural communities, means that patients often detox in the ED.

Sub-acute facilities. Respondents also discussed the limited availability of sub-acute facilities, that is, non-hospital units that provide 24/7 mental health treatment. Many respondents felt that such facilities are the best discharge destination for many psychiatric ED patients. However, there are very few such facilities in Oregon, especially in the urban areas where most psychiatric emergencies occur. For example, Portland has 3 subacute facilities with combined capacity of fewer than 40 beds. Additionally, even when sub-acute facilities exist, Medicare and commercial insurers have limited or no reimbursement for sub-acute care. This further limits access for many patients.

4.2. Impacts

There were no perceived benefits to psychiatric boarding for patients, ED staff, or ED operations. For all parties involved, boarding was viewed as stressful and frustrating.

Patients

For patients, boarding is stressful. ED staff communicate infrequently with the patient. Patients rarely receive any psychiatric care while boarding, and are left waiting without an understanding of what is being done for them.

Further, boarding is stressful for patients because the environment is chaotic and stimulating, which is not helpful to a person experiencing a psychiatric emergency. For patients boarded in safe hold rooms, the experience is similar to solitary confinement. The patient experiences very limited human interaction. Again, this is not perceived as helpful to a person experience a psychiatric emergency.

Respondents viewed boarding as a form of re-traumatization, which can exacerbate mental health problems, and may lead to the need for hospitalization.

Caregivers

Although respondents felt that boarding might be a form of respite for caregivers, they also expressed how defeating boarding can be. A caregiver might bring someone to the ED for care, but after a period of boarding the ED determines there is no way to fix the problem and sends the patient home.

ED Staff

Respondents described boarding as stressful for ED staff. ED staff lack training in the treatment of psychiatric patients and are often unable to find a proper placement for a person. This can cause ED staff to feel bad because they cannot help the person and simultaneously frustrated that the person remains in the ED.

Respondents expressed that disruptive behaviors, including yelling, can also be stressful for ED staff. If boarded patients exhibit disruptive behavior over long periods of time it can make it difficult for ED staff to do their jobs and reduce their job satisfaction.

ED Operations

For the hospital, boarding is a money loser and reduces the number of patients that may be seen by the ED staff. Mental health patients who board are occupying ED beds for a lengthier time period than other ED patients. A slower rate of bed turnover reduces the number of available beds to treat other ED patients.

Boarding further reduces the ED's ability to serve other patients because mental health patients often require intensive nursing. If nurses are caring for psychiatric patients, then they are not able to take care of the other patients with medical problems who are presenting to the ED.

Boarding thus may increase staffing needs for the ED without added reimbursement. In the worst case, the combination of slower bed turnover and increased nursing demands lead to backed up waiting rooms and may lead to ambulance diversion.

4.3. Solutions to ED Boarding in Oregon

Nearly all respondents stated that they did not believe an increase in inpatient beds alone would solve the boarding problem. Instead, respondents felt the focus needed to be on preventing mental health crises and better managing patient needs in alternative settings. The main themes that arose from the interviews for solutions to ED boarding are presented below.

Expand Community Services

Respondents overwhelmingly agreed that Oregon needs to expand community mental health services. Investing in community services was seen as a means both to prevent mental health emergencies and to allow people to transition out of inpatient or OSH care. Respondents recommended expanding the mental health workforce and increasing their presence in primary care offices. For areas of the state lacking a psychiatrist, respondents suggested the use of telemedicine to provide access to prescription drug care. With a greater availability of a variety of mental health providers in more accessible settings, respondents felt fewer people would reach the level of a mental health crisis, thereby reducing ED use. Additionally, the greater availability of providers would allow more robust support for patients leaving inpatient and OSH care. In turn, the higher level of support could prevent these individuals from seeking care at the ED.

For patients in crisis, respondents discussed the importance of increasing investment in mobile crisis units; the Legislature has recently authorized funding to expand these services. Respondents noted the ability of crisis teams to de-escalate mental health crises and connect patients with appropriate levels of mental health services. Additionally, respondents spoke of the need for lower acuity alternatives to the ED, including crisis resolution centers and crisis respite beds. Together respondents perceived that this collection of services would reduce the need for seeking emergency psychiatric services in the ED.

Modify the Handling of the .370 Population

Respondents perceived that the growing .370 population is occupying a substantial number of civil hold beds at the Oregon State Hospital. When OSH beds are full, patients remain in inpatient units, reducing the availability of inpatient beds for emergency patients and ultimately causing ED boarding. To address this backlog of patients, respondents suggested using alternatives to the State Hospital for the .370 population. Respondents advised that Oregon should increase the availability of aid-and-assist programs in the community to reduce the need for the State Hospital. In the case of misdemeanors, they felt communities should discourage arrests and provide alternative mental health service options.

Some efforts to address this problem are underway. HB 2420 requires courts to check whether community mental health services are available before sending a suspect to the State Hospital. In addition, several counties (including the handful of counties that account for the majority of .370 admissions) have received a total of \$4 million to promote community restoration

programs as alternatives to the State Hospital. For example, in Marion County a .370 case manager works with clients in the jail offering brief case management and weekly classes on legal skills to restore people to mental fitness without having to be hospitalized. From 2011 to 2015, Marion County saw a decline in the number of people in the .370 population entering the OSH. Multnomah County has also initiated programs to address the .370 population. These programs include in-reach into jails for those with mental health problems and the creation of a 16-bed stabilization facility to connect people to resources and to smooth their transition from the jail or hospital to the community.

Change the Service Delivery Environment in the ED

Boarding will not cease to be a problem overnight. In the short term, respondents advise adopting practice improvements in the ED to improve patient care. Many of the suggested practice improvements are used in psychiatric emergency service centers around the country and have been recommended by national emergency medicine and psychiatric associations (e.g. ACEP, 2014). Respondents advised that psychiatric evaluations need to be more readily available in the ED to capture patients' needs in a timely fashion and to more appropriately provide care. Similarly, respondents suggested that ED staff utilize patient medical record tools, including Pre-Manage and EDIE to provide more personalized care to mental health patients.

Two other interventions were cited as mechanisms to reduce the trauma mental health patients experience in the ED. A primary recommendation was to create a dedicated area in the ED for psychiatric care. Many ED staff reported that psychiatric patients are usually boarded in isolated rooms with little contact with staff and few sources of distraction. Although ED staff generally felt that patients and staff were safe given these arrangements, they generally did not perceive these rooms were conducive to positive mental health outcomes. An alternative space away from the chaos of incoming trauma patients where psychiatric patients could readily interact with ED staff and watch television was perceived by many respondents as a better alternative to the current ED environment.

A number of respondents also spoke of the role of peer support services to improve the quality of care for psychiatric patients in the ED. Most respondents felt that persons experiencing psychiatric emergencies needed contact with others. Peer support is used in psychiatric emergency centers (e.g. Crisis Response Center- Connections Arizona). The main goals of peer support is to connect patients with social support and allow for rapport building with others who have previously experienced mental health crises and understand the challenges of navigating the health care system for mental health conditions.

Provide Alternatives to Inpatient Beds

Not all mental health patients require inpatient hospital treatment, but many cannot simply be released back home. Respondents overwhelmingly spoke of the need to increase the availability of alternative higher acuity placement options, so that patients can safely be discharged from the ED without unnecessary utilization of inpatient beds. The most commonly referenced need was for an increase in sub-acute beds, especially in the Portland area. Similarly, respondents spoke of the need for more residential services for children and adults across the state.

Although respondents reported the need for these alternative services, many felt that without a simultaneous increase in ED staff awareness of and comfort with alternatives to inpatient hospital beds that patients would continue to be discharged to inpatient units. Findings from this study support this argument. During interviews with ED staff members who have community services available to them, a number were unaware of these services.

Improve the Availability of Services to Assist People Transitioning out of an Inpatient Hospital Bed or the Oregon State Hospital

Patients transitioning out of inpatient psychiatric hospital placements need temporary, and sometimes permanent, assistance connecting with community resources to prevent the need for further ED utilization and hospitalization. Respondents discussed the need to expand several types of programs to meet these needs, including intensive case management and Intensive Transition Teams. In line with the Department of Justice recommendations for the state of Oregon, respondents also recommended greater utilization of ACT teams operating at full fidelity for persons with SPMI.

Notable accomplishments have been made with ACT teams in Oregon in the past few years. The Oregon Center of Excellence for Assertive Community Treatment began work in 2014 with the mission of promoting and implementing high fidelity ACT programs around Oregon. As of early 2016, there were 18 high fidelity ACT teams in Oregon with another 8 programs anticipated to achieve fidelity within the year. However, work is still needed in this area to better reach the SPMI population.

For young adult populations, several respondents spoke of the need for the continued use and expansion of EASA programs. Currently, Oregon's EASA program serves young adults ages 12 to 25 in 32 counties. Oregon also has an EASA Center for Excellence that provides resources to young adults and their families as well as mental health professionals.

Although controversial, some respondents spoke of enacting Kendra's Law in Oregon. Originally implemented in New York, the intention of Kendra's Law is to ensure continued utilization of outpatient community mental health services for individuals "who are unlikely to survive safely in the community without supervision" (New York Office of Mental Health). Respondents perceived Oregon's current outpatient commitment law as ineffective because there is no mechanism to enforce service utilization.

Provide Supportive Services

Mental health patients frequently have basic needs that are not being met. Providing for these basic needs may reduce the incidence of mental health emergencies. Respondents overwhelmingly advocated for increasing services in three main areas 1) housing resources, especially in the Portland area; 2) supportive employment services; and 3) substance abuse treatment programs, especially outside of the Portland area. Work is on-going in these areas. As of 2015, Oregon had nearly 800 supported/supportive housing units and provided rental assistance to 576 for persons experiencing mental health challenges. The legislature has also invested approximately \$20 million in rental assistance for persons with SPMI and another \$25 million in the development of housing for persons with SPMI. Additionally, supportive employment opportunity programs serve residents in 31 Oregon counties.

Insurance and Reimbursement Changes

People experience difficulty accessing specific levels of services dependent on their health insurance. Additionally, reimbursement for specific mental health services varies widely across payers. Because of the low level of reimbursement, some respondents felt that community mental health providers had little incentive to provide mental health services themselves. These respondents felt the lack of reimbursement perversely incentivized communities to send patients to the ED and to fail to provide adequate services to patients leaving the OSH.

A number of respondents suggested that alternative payment methods for mental health services, rather than just fee-for-service, would be a way to improve service access. Some efforts are being made in this arena both in Oregon and at the national level. For example, the Oregon Health Authority recently funded PacificSource Health Plans to explore alternative payment models for behavioral health services (PacificSource, 2016). At the national level, programs like the Centers for Medicare and Medicaid Comprehensive Primary Care Initiative (CMS CPCI, 2016) and forthcoming Comprehensive Primary Care Plus (CMS CPC+, 2016) may further advance alternative payment models to improve access to mental health services.

Increase the Transparency of Waitlists for Inpatient and Oregon State Hospital Beds

Respondents, especially ED staff, noted frustration with the lack of transparency about who qualified for an inpatient or OSH bed and how long they would be waiting. Numerous respondents desired to see the creation of a bed registry to provide greater clarity on their patient's admission status. Although such a registry may not reduce boarding, the registry would allow ED staff to identify open inpatient beds more quickly. Additionally, the registry could help hospital administrators plan for the use of their inpatient facilities if they knew what sort of wait to expect for patients needing OSH services.

The Unity Center: Solution and Fears

When asked specifically about the Unity Center, respondents were generally supportive of the creation of the Center. They felt its model of care would be superior to ED care, and it was noted that Unity should be able to develop more efficient inpatient admission processes. A new Medicaid reimbursement rate for emergency psychiatric care, plus clarifications to staffing requirements for such care, may also encourage other hospitals to open psychiatric emergency centers or provide more appropriate psychiatric care in their EDs.

However, respondents had mixed feelings about the ability of the Unity Center to solve boarding problems. Respondents perceived that the Unity Center's psychiatric emergency service has the potential to address concerns about inadequate evaluation and inappropriate treatment of mental health patients in the ED for the Portland metro area. However, they noted that that the Center would do little to address boarding problems in other parts of the state.

Other concerns were raised about the ability of the Unity Center to reduce the boarding problem even in the Portland area. Overwhelmingly respondents were concerned that there will not be adequate community services to which to discharge Unity patients. Without community service support, respondents feared that patients would board in the psychiatric emergency service center much as they currently do in the ED. Respondents also voiced a concern that the lack of

community services could lead to a ‘revolving door’ problem at the Unity Center. Respondents envisioned that patients might be stabilized, returned to the community without adequate support, and return to the Unity Center because no alternative exists.

A smaller number of respondents also noted concerns about the overall reduction in adult inpatient beds due to the creation of the Unity Center. These respondents feared the bed reduction would exacerbate the boarding problem.

Child and Adolescent Specific Changes

Respondents felt there were certain services needed specifically for children and adolescents experiencing mental health problems. Unlike with the adult population, most respondents felt there was a need to increase the number of inpatient beds for children and adolescents. The current limited availability of beds for this population and the fact that all of these beds are located in the Portland metro area were perceived as problematic.

Numerous respondents also spoke of the need to address child and adolescent mental health problems outside of a hospital setting. These respondents advocated for increasing the availability of therapeutic foster care. Additionally, they spoke of the need to utilize new models of care, including in-home services that allow children to stay with their families.

Chapter 5. Quantitative Analysis of Oregon Hospital ED Utilization Data

This section presents results of statistical analyses that empirically tested potential determinants of psychiatric ED boarding in Oregon as well as potential solutions. Three independent empirical analyses were conducted on the full linked ED utilization data set:

- 1) We examined person-level characteristics associated with the chance of boarding among psychiatric patients in Oregon hospital EDs. This analysis quantifies some of the important causes of ED boarding.
- 2) We then analyzed the extent to which the county-level inpatient and community-based capacity of the mental health system might influence psychiatric ED boarding in Oregon. These findings may have implications for potential solutions to current boarding problems.
- 3) We quantified the increased probability and length of ED boarding for patients with psychiatric conditions compared to non-psychiatric patients.

5.1. Determinants of Psychiatric ED Boarding in Oregon

In this sub-chapter, we report results from an empirical analysis of potential determinants of boarding of psychiatric patients in hospital EDs in Oregon. We estimated the two-part model (2PM) of psychiatric ED boarding (a psychiatric ED episode lasting longer than 6 hours from the time of admission) on the sample of psychiatric ED visits. In this approach, the first part of the two-part model estimates the probability of ED boarding using the entire sample of psychiatric ED episodes. The second part then predicts boarding time conditional on ED boarding status, using only the subsample of boarded psychiatric ED visits. Therefore, the first part examines factors associated with the probability of ED boarding while the second part tests the influence of potential determinants of boarding on boarding time after an ED visit becomes a boarding episode. Technical details are discussed in <Appendix D1>.

Below in <Exhibit 5-1> we first describe variables included in our statistical models as potential determinants of psychiatric ED boarding. As discussed in Chapter 3, severe psychiatric episodes comprised about 15% of the analytic sample (i.e., all psychiatric ED visits). About one-third of the psychiatric episodes involves diagnoses of substance abuse (see <Appendix D2> for the definition of substance abuse). 54% were Medicaid episodes. The sample was characterized by the mean age of 40, 52% female, 88% whites, and 5% Hispanic. Roughly 28% of all psychiatric ED visits started on weekends. About 78% of the visits were made by patients living in urban areas. The rurality variables were constructed based on the Rural-Urban Commuting Area Codes (RUCA) classification scheme. See Appendix 5A-2 for detail. In terms of the location of a hospital ED, the Portland metropolitan area was the most frequent location, comprising one-third of all psychiatric ED visits in Oregon, followed by 26% in the Willamette Valley area and 19% in the Southern Oregon area.

Exhibit 5-1. Descriptive characteristics of psychiatric ED visits, Oct. 2014 – Sep. 2015.

Variable	Mean	Std. Dev.
<i>Severity of psychiatric conditions</i>		
Severe psychiatric visit	15.3%	-
Non-severe psychiatric visit	84.7%	-
Substance abuse	27.0%	-
Medicaid status	54.1%	-
Age	39.9	16.5
Female	51.9%	-
<i>Race</i>		
White (reference)	87.5%	-
AIAN	2.5%	-
Asian	0.6%	-
Black	4.1%	-
NHPI	0.3%	-
Other	5.0%	-
Hispanic	5.3%	-
Weekend admission	27.8%	-
<i>Rurality of patient residence</i>		
Urban	77.5%	-
Large rural	20.2%	-
Small rural	3.6%	-
<i>Hospital location</i>		
Central Oregon (reference)	3.7%	-
Eastern Oregon	8.2%	-
Northern Oregon	8.2%	-
Portland metropolitan area	34.7%	-
Southern Oregon	19.1%	-
Valley area	26.1%	-

<Exhibit 5-2> reports results from the 2PM of psychiatric ED boarding. Results for the first and second parts are presented in Columns (1) and (2), respectively. Reported are marginal effects. Therefore, the findings have an interpretation of a percentage-point change in the probability of ED boarding associated with each of the potential determinants of psychiatric ED boarding, holding other things fixed. The models also controlled for countywide heterogeneity that might affect psychiatric ED boarding such as average distance to psychiatric facilities.

Our results indicate that the severity of psychiatric conditions was positively associated with both the probability and length of boarding among psychiatric patients in EDs. Severe

The severity of psychiatric conditions, substance abuse, rural residence, male gender, and hospital locations in the Portland metropolitan and Willamette Valley regions significantly increased the likelihood of ED boarding.

psychiatric visits were significantly more likely than non-severe psychiatric visits to be boarded by 16 percentage-points. Given that 14.6% of all psychiatric ED visits were boarded in our data (see <Exhibit 3-2>), the probability of ED boarding for severe psychiatric visits was more than twice as large as that for non-severe psychiatric

visits. Once being boarded, the length of boarding time became about 10 hours longer for severe psychiatric visits.

Diagnoses of substance abuse was significantly associated with an increase in the probability of psychiatric ED boarding, as reported in Column (1): Substance abuse on average was associated with about 5 percentage-point increase in the probability of psychiatric ED boarding. However, once boarded, a psychiatric ED visits involving substance abuse conditions is significantly associated with reduced boarding time, shown in Column (2): average boarding time in fact decreased by 6 hours for visits with diagnoses of substance abuse once patients become boarded.

Medicaid enrollment status did not affect the probability of ED boarding, but significantly reduced boarding time after psychiatric patients become boarded in EDs by an average of 2.7 hours. Patient age was negatively associated with the probability of psychiatric ED boarding but was positively associated with boarding time although the magnitude was small. Female sex was negatively associated with the probability of psychiatric boarding. Race and ethnicity overall were not significantly associated with psychiatric ED boarding.

Compared to admission during the weekdays, weekend admissions (defined as admission on Saturday and Sunday) were found to decrease the probability of boarding of psychiatric ED patients but was positively associated with boarding time conditional on boarding. Compared to living in an urban area, living in a large rural area was significantly associated with an increase in the probability of boarding among psychiatric patients in EDs, but was not associated with the conditional boarding time.

Hospital location also appears to matter. The probability of boarding of psychiatric ED patients was higher in hospital EDs located in the Portland metropolitan and Valley regions than in other regions of the state. The conditional boarding time was significantly longer in hospital EDs located in the Southern Oregon region followed by EDs in the Portland metropolitan region. Although not reported in the exhibit, county indicator variables were jointly significant, implying significant cross-county variations in psychiatric ED boarding.

Exhibit 5-2. Factors affecting the probability of psychiatric ED boarding and boarding time: Two-part model

	Part 1: Pr(psychiatric ED boarding)	Part 2: Psychiatric ED boarding time, conditional on boarding
	(1)	(2)
Severe psychiatric ED visit	0.1569*** (0.0053)	9.8113*** (1.1530)
Substance abuse	0.0644*** (0.0037)	-4.0724*** (0.9480)
Medicaid status	0.0014 (0.0031)	-2.8591** (0.8688)
Age	-0.0002* (0.0001)	0.1007*** (0.0276)
Female	-0.0082** (0.0031)	-0.4050 (0.8427)
<i>Race (reference: White)</i>		
AIAN	0.0026 (0.0096)	0.5627 (2.1049)
Asian	-0.0429* (0.0169)	11.7012 (14.8144)
Black	0.0066 (0.0096)	-1.8760 (1.7202)
NHPI	0.0371 (0.0302)	-9.5666*** (2.7944)
Other	0.0114 (0.0082)	-1.9076 (1.6609)
Hispanic	-0.0064 (0.0077)	1.9359 (2.1942)
Admission on weekend	-0.0059* (0.0028)	2.4522* (1.0717)
<i>Rurality of patient residence (reference: Urban)</i>		
Large rural	0.0150* (0.0063)	0.4664 (2.3696)
Small rural	0.0053 (0.0094)	-1.0958 (2.8759)
<i>Hospital location (reference: Central Oregon)</i>		
Eastern Oregon	-0.0361* (0.0151)	2.8165 (4.3591)
Northern Oregon	0.0255* (0.0122)	11.8466** (4.5056)
Portland metropolitan	0.1437*** (0.0109)	17.7957*** (3.9207)
Southern Oregon	0.0208 (0.0123)	32.4046*** (8.0907)

Valley area	0.0582*** (0.0110)	10.3351* (4.2581)
<i>N</i>	81,370	13,002

Notes: Cluster-robust standard errors are in parentheses. All models control for county fixed-effects.

* Statistically significant at the 95% level.

** Statistically significant at the 99% level.

*** Statistically significant at the 99.9% level.

5.2. Relationship between Mental Health System Capacity and Psychiatric ED Boarding in Oregon

This sub-chapter presents results of the analysis of the extent to which the capacity of the mental health system, separately for inpatient and community-based, is associated with the rate of psychiatric ED boarding in Oregon. We postulated that a greater capacity of the mental health system reduces the probability of psychiatric ED visit and thereby shrinks the volume of psychiatric boarding episodes in EDs. This is conceptually plausible because the availability of mental health resources should affect the incident of psychiatric ED boarding through a change in the chance of psychiatric ED visit.

Empirically, we constructed the so-called recursive simultaneous-equations model, a system of two simultaneous equations. In this approach, the first equation tests whether the capacity of the mental health system affects probability that an ED visit was a psychiatric episode. Therefore, a dichotomous indicator for a psychiatric ED visit was the dependent variable, and measures of mental health system capacity separately for inpatient and community-based systems served as key independent variables. In the second equation, a binary psychiatric ED boarding indicator was our dependent variable, and the binary psychiatric ED visit indicator from the first equation was the key independent variable. Therefore, the second equation examines a chance that a psychiatric ED visit becomes a boarding episode. Together, results from the two equations can answer the extent to which the capacity of mental health system influences the rate of psychiatric ED boarding in Oregon. Our empirical approach speaks to a strong causal inference in our results. See <Appendix D4> for details.

Descriptive characteristics of variables in our econometric models are presented below in <Exhibit 5-3>. There are several points that are noteworthy. First, the analysis presented above in <Exhibits 5-1 and 5-2> analyzed only the sample of psychiatric ED visits to examine potential determinants of psychiatric ED boarding. In comparison, the analytic sample here included all hospital ED visits in Oregon from October 2014 to September 2015. Descriptive characteristics are similar between the psychiatric ED visit sample (see <Exhibit 5-1>) and the entire ED visit sample (see <Exhibit 5-3>) for most of the variables. However, the probability of an ED visit with substance abuse is seven times as large as in the psychiatric ED visit sample than in the all ED visit sample, which confirms frequent dual diagnoses of mental illness and substance abuse.

<Exhibit 5-3> also describes inpatient and community-based mental health resources constructed to capture county-level mental health system capacity, separately for psychiatric inpatient and community resources. The ‘ratio of the quarterly average of psychiatric inpatients in private and state facilities to the quarterly average number of persons with severe mental illness’ from October 2013 to September 2014 (%Psychiatric inpatients) was constructed as a county-level proxy for the capacity of inpatient mental health system for persons with severe mental illness.

This variable captures inpatient mental health system capacity during the one year prior to our sample period (Oct. 2014 – Sep. 2015) to minimize concern that psychiatric ED visits might influence the number of persons with severe mental illness in psychiatric inpatient settings.

The ‘ratio of the quarterly average of patients served by assertive community treatment (ACT) teams to the quarterly average number of persons with severe mental illness’ for the October 2013 – September 2014 period (%ACT population) was used as a county-level proxy for the capacity of community mental health system especially for persons with severe mental illness. This variable is also lagged by one year to minimize concern that psychiatric ED visits might influence the number of ACT clients.

Exhibit 5-3. Descriptive Characteristics of Hospital ED Visits, Oct. 2014 – Sep. 2015.

Variable	Mean	Std. Dev.
Psychiatric visit	14.6%	-
Substance abuse	3.9%	-
Medicaid status	55.6%	-
Age	34.6	20.8
Female	56.6%	-
<i>Race</i>		
White (reference)	83.1%	-
AIAN	2.0%	-
Asian	1.2%	-
Black	5.5%	-
NHPI	0.5%	-
Other	7.7%	-
Hispanic	10.0%	-
Weekend admission	27.8%	-
<i>Rurality</i>		
Urban	84.0%	-
Large rural	12.9%	-
Small rural	2.8%	-
<i>Hospital location</i>		
Central Oregon (reference)	2.1%	-
Eastern Oregon	4.9%	-
Northern Oregon	8.2%	-
Portland metropolitan area	36.4%	-
Southern Oregon	19.0%	-
Valley area	29.5%	-
<i>County-level system characteristics</i>		
%Psychiatric inpatients	6.4%	3.1
%ACT population	1.1%	1.4
SMI population	3,458	2,954

We acknowledge that our county-level system capacity measures are not the absolute size of system capacity. Nonetheless, the proxy measures are useful for cross-county comparison of system capacity and associated relationship with psychiatric ED visit and boarding. We also included the quarterly average number of persons with severe mental illness per 1,000 persons by county, for the October 2013 – September 2014 period in our model to control for the underlying prevalence of severe mental illness by county.

<Appendix D5> reports descriptive characteristics of patient and system factors, stratified by ED boarding status. It shows that compared to non-boarded ED episodes, boarded ED episodes are significantly more likely to have diagnoses for both mental illness and substance abuse. All the other characteristics appear similar. This finding suggests a significant contribution of psychiatric visits to the problem of ED boarding in Oregon.

Effects of mental health system capacity on psychiatric ED visits

<Exhibit 5-4> presents main results from the analysis of the effect of county-level mental health system capacity (i.e., first equation), separately for inpatient and community-based mental health resources, on the probability of psychiatric ED visits. Full results are available in <Appendix D6>.

A greater supply of psychiatric inpatient and intensive community mental health resources was significantly associated with a reduction in the probability of psychiatric ED visit. Our estimate suggests that holding other things constant, a 1% higher capacity of the inpatient mental

1% increase in psychiatric inpatient capacity, ceteris paribus, may lead to 7% decrease in the probability of psychiatric ED visit.

health system (which was proxied by the proportion of psychiatric inpatients to persons with severe mental illness) is associated with a 1.3 percentage-point lower probability of psychiatric ED visit. This result means that a 1% increase in the capacity of the inpatient

mental health system, ceteris paribus, may lead to approximately 7% decrease in the probability of psychiatric ED visit because the rate of psychiatric visits was 14.6% (see <Exhibit 3-2>).

A response in psychiatric ED visit to a change in the inpatient mental health system capacity was even more elastic. A 1% increase in the capacity of community-based mental health resources (measured by the volume of ACT clients served), ceteris paribus, was significantly associated with a 1.8 percentage-point decrease

(alternatively, 12% decrease) in the probability of psychiatric ED visit. Also to be consistent with our expectation, a greater prevalence of severe mental illness in a county was significantly associated with a higher probability of psychiatric ED visit in that county.

An increase in psychiatric inpatient or community-based mental health capacity, ceteris paribus, led to a decrease in the magnitude of psychiatric ED boarding in Oregon.

Exhibit 5-4. Effect of county mental health capacity on the likelihood of psychiatric ED visit

	Pr(psychiatric ED visit)
<i>County-level system characteristics</i>	
%Psychiatric inpatients	-0.0128***
%ACT population	-0.0180***
SMI population	0.0110***

Notes: Cluster-robust standard errors are in parentheses. All models control for the full covariates as well as county fixed-effects.

* Statistically significant at the 95% level.

** Statistically significant at the 99% level.

*** Statistically significant at the 99.9% level.

Effects of psychiatric episode on ED boarding

<Exhibit 5-5> reports our estimates on the effect of psychiatric ED visit on ED boarding (i.e., equation 2). We estimated the two-part model (2PM) and results for the first and second parts are presented in Columns (1) and (2), respectively. The first part of the 2PM estimates the effect of psychiatric ED visit on the probability of ED boarding and the second part measures the effect of psychiatric ED visit on boarding time conditional on ED boarding. Reported are marginal effects and therefore they have a percentage-point change interpretation. We report only main results and full results are available in <Appendix D7>.

As shown in Column (1), a psychiatric episode on average was significantly associated with 9.5 percentage-point increase in the probability of ED boarding. This effect is almost twice as large as the average boarding rate of 5.5% reported in <Exhibit 3-2> (based on the 6-hour boarding definition). Our

Psychiatric episodes on average may lead to (a) a two-fold increase in the probability of boarding in hospital EDs, and (b) 5-hour increase in boarding time once being ED-boarded.

finding is in line with a national estimate reported in Nolan et al. (2015), in that they discovered that psychiatric ED episodes status on average were

associated with nearly five times greater odds of ED boarding when compared to non-psychiatric ED episodes.

Results from the second part of the 2PM are presented in Column (2). Again, the second part estimates factors associated with boarding time only using the subsample of boarded ED visits. Therefore, it measures the influence of psychiatric ED episode on ED boarding time only for boarded ED episodes. Psychiatric visit status was significantly associated with additional five hour of ED stay. Our estimate is comparable to a national estimate. Nolan et al. (2015) found that at the national level, in 2008, ED boarding time was higher by 3.5 hours for psychiatric ED patients, compared to non-psychiatric ED patients. To summarize, psychiatric conditions increased both the

probability and length of ED boarding.

Exhibit 5-5. Factors affecting the probability of ED boarding and boarding time: Two-part model

	Part 1: Pr(psychiatric ED boarding) (1)	Part 2: Psychiatric ED boarding time, conditional on boarding (2)
Psychiatric ED visit	0.0954*** (0.0019)	5.0520*** (0.7534)
<i>N</i>	510,773	31,854

Notes: Cluster-robust standard errors are in parentheses. All models controlled for the full covariates as well as county fixed-effects.

* Statistically significant at the 95% level.

** Statistically significant at the 99% level.

*** Statistically significant at the 99.9% level.

To summarize, we empirically examined the extent to which the capacity of the mental health system, separately for inpatient and community-based, may affect the rate of psychiatric ED boarding in Oregon. We tested using a system of recursive simultaneous equations (a) whether a greater capacity of the mental health system reduces the probability of psychiatric ED visit and (b) whether the lowered probability of psychiatric ED visit in turn may reduce boarded-ED episodes.

Taken together, our findings reported in <Exhibits 5-4 and 5-5> suggest that an increase in the capacity of either inpatient or community-based mental health system, *ceteris paribus*, may lead to a decrease in the rate of psychiatric ED boarding through a reduced probability of psychiatric ED visit.

Chapter 6. Synthesis of the Literature, Stakeholder Interviews, and Statistical Analyses of Quantitative Data

<Exhibit 6-1> compares findings from the national literature, the stakeholder interview, and statistical analyses of quantitative data in terms of causes of psychiatric ED boarding as well as potential solutions. Findings from the stakeholder interviews mirrored those from the national literature, often emphasizing the Oregon context. Results from our statistical analyses confirm key determinants of psychiatric ED boarding in Oregon discovered by the stakeholder interviews, suggesting increasing the capacity of the mental health system as a potential solution to the psychiatric ED boarding problem.

Exhibit 6-1. Synthesis of the Literature, Stakeholder Interviews, and Statistical Analyses of Quantitative Data

Literature (Nationwide)	Stakeholder Interviews (Oregon)	Quantitative analyses (Oregon)
Causes		
<ul style="list-style-type: none"> ▪ Person-level determinants: Homelessness, urban residence, sex, race/ethnicity, diagnosis of mental illness, substance abuse, suicidal/homicidal ideation, a history of self-harm, types of health insurance ▪ System-level determinants: Limited capacity of inpatient care, lack of available community (outpatient) mental health programs, lack of community alternatives to EDs, lack of care coordination for psychiatric patients, mental health workforce shortage, insufficient training of ED staff, less 	<ul style="list-style-type: none"> ▪ Person-level determinants: Homelessness, urban residence, diagnosis of mental illness, substance abuse, suicidal/homicidal ideation, a history of self-harm, types of health insurance ▪ System-level determinants: Limited capacity of inpatient care, lack of available community (outpatient) mental health programs, lack of community alternatives to EDs, lack of care coordination for psychiatric patients, mental health workforce shortage, insufficient training of ED staff, less 	<ul style="list-style-type: none"> ▪ Person-level determinants: Severity of psychiatric conditions, substance abuse, Medicaid eligibility, rurality of patient residence ▪ System-level determinants: Weekend admissions, location of hospital ED

<p>generous mental and behavioral health benefits</p> <ul style="list-style-type: none"> ▪ Legal determinants: Interpretation of Emergency Medical Treatment and Activity Labor Act, involuntary commitment statutes, institute for mental diseases (IMD) exclusion, mental and behavioral health parity 	<p>generous mental and behavioral health benefits</p> <ul style="list-style-type: none"> ▪ Legal determinants: Civil commitment population at OSH 	
<p>Solutions</p>		
<ul style="list-style-type: none"> ▪ Monitor psychiatric ED boarding ▪ Increase community mental health services; invest in comprehensive community-based psychiatric emergency services (such as 24 hour help line, mobile crisis outreach team, emergency walk-in clinic, and crisis stabilization unit) ▪ Enhance continuity of care in community ▪ Work with law enforcement 	<ul style="list-style-type: none"> • Expand community mental health services to reduce the number of psychiatric ED visits • Expand the availability of ED alternatives such as crisis centers or psychiatric emergency centers like the new Unity Center in Portland • Increase alternatives to inpatient beds such as sub-acute beds and residential services • Use alternatives to the State Hospital for the .370 population • Improve the availability of services to assist patients discharging from inpatient psychiatric hospitals or the state hospital • Provide supportive services, such as housing, in the community • Address specific challenges for pediatric populations. 	<ul style="list-style-type: none"> ▪ Expand comprehensive community-based mental health resources for persons with severe mental illness

<ul style="list-style-type: none"> ▪ Increase inpatient psychiatric care capacity ▪ Promote collaboration between EDs and community programs ▪ Improve care of psychiatric ED patients ▪ Increase access to insurance 	<ul style="list-style-type: none"> ▪ Increase inpatient psychiatric care capacity ▪ Promote collaboration between EDs and community programs; increase in ED staff awareness of and comfort with alternatives to inpatient placement. ▪ Change the service delivery environment in the ED such as improved information tools such as Pre-Manage and Emergency Department Information Exchange (EDIE), a dedicated area in the ED for psychiatric care, and peer support services ▪ Expand alternative payment models for behavioral health care services 	<ul style="list-style-type: none"> ▪ Increase inpatient psychiatric care capacity
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Chapter 7. Conclusion

This chapter summarizes the results of our analysis of the breadth of the ED boarding practice, the current system and process, causes and impacts of the ED boarding practice, and potential solutions. This report integrates from a comparative perspective results from (a) interviews with mental health experts and key stakeholders in Oregon and (b) analyses of three quantitative databases currently available to study psychiatric ED boarding in Oregon. Discussed below are highlights of results presented in this report.

Stakeholders were interviewed from all regions of Oregon and a wide range of mental health expertise. Databases used to analyze ED boarding practice in Oregon included the EDIE, hospital discharge, and Medicaid data. Despite several limitations, these databases currently represented the only sources that provide the basis to quantify psychiatric ED boarding in Oregon. Quantitative results presented here are based on the 6-hour definition of ED boarding recommended by the Accreditation Council for Graduate Medical Education (2013) and adopted in the most recent national analysis of psychiatric ED boarding practice in Nolan et al. (2015).

Extent and cost of psychiatric ED boarding

The quantitative analytic data—which contained all 690,245 unique ED episodes on 290,181 unique persons between October 1, 2014 and September 30, 2015 from the three data sources—revealed several key results on the breath of ED boarding practice in Oregon as well as the current trend. Although the analytic sample data included only about half of recent annual ED episodes in Oregon, further investigation suggested that this sample was likely representative of the entire universe of Oregon ED visits; however, the analyses presented in this report may somewhat overestimate extent of the psychiatric ED boarding problem in Oregon due to data limitations.

We estimated that during the one-year sample period, up to about 30,000 hospital ED visits in Oregon (or 2.1% of all annual hospital ED visits) were psychiatric boarding episodes, based on the definition of an ED boarding as a stay in the ED longer than 6 hours. Among all psychiatric ED visits in Oregon, 14.6% were boarding episodes. This rate is smaller than the national estimate of 21.5% from the 2008 National Hospital Ambulatory Medical Care Survey (Nolan et al., 2015). However, the national rate included both psychiatric and substance abuse conditions. Nolan et al. (2015) also reported that the rate of psychiatric ED boarding was significantly lower in the West than the nationwide average. Therefore, we view our estimate is roughly comparable to the most recent national estimate.

The rate of psychiatric ED boarding decreases as the cutoff threshold for the boarding definition is raised beyond 6 hours, implying that a significant portion of the psychiatric ED boarding problem could be prevented by reducing the length of ED time for patients who stay in EDs just above the 6-hour threshold. For example, the corresponding rates for 8-, 12-, and 24-hour cutoffs were 9.8%, 7.1%, and 3.5%, respectively.

The rate of psychiatric ED boarding was greater for severe psychiatric conditions: One-fourth of all severe psychiatric visits (24.4%) were boarded episodes, compared to 13% of non-severe psychiatric visits.

Boarding time, defined as the length of ED stay over 6 hours, was greater for psychiatric visits than for non-psychiatric visits. While all ED visits on average had a boarding time of 1.2 hours (i.e., a total of 7.2 hours in ED), psychiatric visits had the boarding time of 3.2 hours. Among all psychiatric visits, severe psychiatric visits had on average 9.2 hours of boarding time, four times longer than 2.3 hours of boarding time for non-severe psychiatric visits. The average boarding time for the subset of boarded ED visits was over 17 hours (total 23.6 hours of ED stay). Boarded psychiatric ED visits on average had the boarding time of 18.2 hours (total 24.2 hours in ED), a one hour longer boarding time than boarded non-psychiatric ED visits.

The rate of psychiatric ED boarding increased gradually over the year while the rate of non-psychiatric ED boarding episodes continued to decrease. Between the last quarter of 2014 and the third quarter 2015, the proportion of psychiatric visits in all boarded ED visits grew constantly from 38% to 47%.

Comparative analysis of the independent data sets revealed that the EDIE data contained slightly fewer unique psychiatric ED boarding episodes than the hospital discharge data. The EDIE data suggest that based on the 6-hour definition of ED boarding, approximately 16% of psychiatric ED visits were boarded visits, compared to the corresponding rate of 22.3% in the hospital discharge data.

Other comparative analyses gauged the degree to which the hospital discharge and EDIE databases reliably capture psychiatric ED boarding episodes for Medicaid patients. This analysis shows that the rate of psychiatric ED boarding in Medicaid claims is similar to the rate in the EDIE data. It also revealed that the rate of psychiatric ED boarding is similar between the entire sample of ED visits and a subset of ED visits for Medicaid patients. Taken together, our results suggest that currently the EDIE data capture psychiatric ED boarding episodes somewhat more reliably than the hospital discharge data.

ED boarding appears to increase the cost of an ED episode. ED visits on average cost approximately \$424 per visit. In comparison, the average cost of boarded psychiatric ED visits was \$695 per visit. Psychiatric visits had a higher average per-visit ED cost than non-psychiatric visits for non-boarded patients. However, for boarded visits, non-psychiatric visits had a greater average ED cost than psychiatric visits (\$1,196 vs. \$695).

Stakeholder perspectives on causes of and solutions to ED boarding

Stakeholder interviews identified several broad causes of psychiatric boarding in hospital EDs in Oregon, including: lack of outpatient treatment capacity, which increases the probability of psychiatric ED visits; lack of crisis response or other alternative treatment options to ED utilization; barriers to discharge from the ED directly to community destinations; and limited availability of inpatient or sub-acute care resources for patients with the most severe psychiatric emergencies.

Several potential solutions were identified. First, nearly all respondents stated that although there is need for improved access to inpatient care settings, an increase in inpatient capacity alone would solve the boarding problem. Instead, they suggested a greater focus on preventing mental health crises and better managing patient needs in alternative settings. Respondents overwhelmingly agreed that Oregon needs to expand community mental health services, thereby reducing the need for seeking emergency psychiatric services in the ED.

Second, respondents recommended alternative settings for the civil commitment population at Oregon State Hospital (OSH). Some efforts to address this problem are already underway including HB 2420 and community restoration programs as alternatives to Oregon State Hospital.

Third, respondents endorsed the further expansion of alternative settings to respond to mental health emergencies, including crisis centers, crisis teams, and psychiatric emergency centers like the new Unity Center in Portland.

Fourth, respondents advised practice improvements in the ED to capture patients' needs in a timely fashion and to more appropriately provide care, such as making psychiatric evaluations more readily available in the ED, a dedicated area in the ED for psychiatric care, and peer support services.

Fifth, respondents overwhelmingly recommended to increase the availability of alternative higher acuity placement options such as sub-acute psychiatric beds, accompanied by a simultaneous increase in ED staff awareness and comfort with alternatives to inpatient placement.

Sixth, respondents suggested assistance connecting patients transitioning out of inpatient settings or the state hospital to community resources to prevent the need for further ED utilization and hospitalization. It was recommended that although notable accomplishments have been made with ACT teams in Oregon in the past few years, work is still needed in this area to better reach the SMI population.

Finally, reimbursement for specific mental health services varies widely across payers. N Some respondents therefore felt that community mental health providers had inadequate incentive to provide some mental health services.

Statistical analyses of causes of and solutions to ED boarding

Statistical analyses of potential determinants of boarding of psychiatric patients affirm findings from the national literature and the stakeholder interviews regarding causes of psychiatric ED boarding in Oregon:

- Substance abuse was significantly associated with an increase in the probability of the boarding of psychiatric ED patients but with shorter boarding time once being boarded;
- Medicaid enrollment status was not significantly associated with the probability of ED boarding, but significantly reduced boarding time after psychiatric patients become boarded in EDs;
- Race and ethnicity overall were not significantly associated with psychiatric ED boarding;
- Weekend admissions were negatively associated with the probability of boarding but positively associated with boarding time conditional on boarding;
- Compared to living in an urban area, living in a large rural area was significantly associated with an increase in the probability of boarding among psychiatric patients in EDs, but was not associated with the conditional boarding time; and
- The probability of boarding of psychiatric ED patients was higher in hospital EDs located in the Portland metropolitan and Willamette Valley areas than the other regions of the state.

Other statistical analyses showed that an increase in the capacity of either inpatient or community-based mental health system, *ceteris paribus*, was associated with a decrease in the rate of psychiatric ED boarding through a reduced probability of psychiatric ED visits. This result supports stakeholders' view, suggesting that increasing the capacity of the mental health system could mitigate to the psychiatric ED boarding problem in Oregon.

Conclusion

Nearly 1 in 7 psychiatric ED visits in Oregon (14.6%) were boarding episodes, and almost 1 in 4 (24%) of severe-psychiatric ED visits were boarded. Taken together, our findings from stakeholder interviews and statistical analyses of quantitative data from Oregon affirm the national literature about the causes of psychiatric ED boarding as well as potential solutions, providing additional insights into the Oregon context.

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Appendix A. Summary of the literature

Appendix A Exhibit 1. Extent of Psychiatric ED Boarding

Study	Objectives	Setting	Findings
Nolan et al. (2015)	Determine the incidence, duration and factors associated with ED boarding in the U.S.	<ul style="list-style-type: none"> ▪ Analyzed 2008 National Hospital Ambulatory Medical Care Survey. ▪ Sample of 34,134 children and adults who visited ED in non-institutional general and short-stay hospitals in the U.S. 	<ul style="list-style-type: none"> ▪ 21.5% of all psychiatric ED patients boarded. ▪ The odds of boarding for psychiatric patients 5 times higher than for non-psychiatric patients. ▪ Psychiatric patients boarded 2.8 hours longer, compared to non-psychiatric patients.
Dolan et al. (2011)	Address the roles that the ED and ED health care professionals play in emergency MH care of children and adolescents in the U.S.	<ul style="list-style-type: none"> ▪ N/A 	<ul style="list-style-type: none"> ▪ Barriers to MH services for children include lack of information relating to pediatric illness, limitations of ED setting, need for education and training, and lack of access to inpatient and outpatient services ▪ Potential solutions include increase ED capacity to provide medical stabilization, proper suicide risk assessment tools (Suicidal Ideation Questionnaire (SIQ)), increased screening for MH conditions in pediatric patients (particularly depression)
Weiss et al. (2012)	Identify patient and clinical management factors related to ED length of stay for psychiatric patients.	<ul style="list-style-type: none"> ▪ Sample of 1,000 adults with psychiatric illness treated in 5 hospital-based EDs in Boston between June 2008 and May 2009. 	<ul style="list-style-type: none"> ▪ Patients discharged to home had an average ED length of stay of 8.6 hours (95% CI: 7.7 to 9.5), whereas those admitted to a psychiatric unit within the hospital stayed 11 hours (95% CI: 8.7 to 13.9). ▪ Patients transferred within system stayed 12.9 hours (95% CI: 11.7 to 14.3), and patients transferred to a unit outside the system stayed 15 hours (95% CI: 12.7 to 17.6). ▪ Compared to those discharged home, ED boarding times of patients admitted, transferred within system and transferred outside system were 2.4, 3.5

Study	Objectives	Setting	Findings
Stephens et al. (2014)	Identify patient factors associated with extremely long length of stay (>24h) (EL-LOS) of mental health patients in ED	<ul style="list-style-type: none"> ▪ Retrospective case-control study ▪ Sample of 242 patients in an ED of an urban academic hospital between October 2009 and May 2010 	<p>and 4.7 times higher, respectively.</p> <ul style="list-style-type: none"> ▪ Mental health patients were more likely to experience EL-LOS (OR = 105, 95%CI: 67-164) compared to non-mental health patients ▪ Median LOS for those experienced EL-LOS = 35 hours (SD =11.3)
Slade et al. (2010)	Estimate trends in duration of ED visits of mental health and non-mental health visits	<ul style="list-style-type: none"> ▪ Analyzed National Hospital Ambulatory Medical Care Survey 2001-2006 ▪ Sample of 193,077 of ED visits 	<ul style="list-style-type: none"> ▪ Average duration of ED visits increased 2.3% per year for both mental health and non-mental health visits ▪ Mental health visit duration was 42.1% longer (1.25 hours) than non-mental health visits ▪ Duration was extremely long for mental health visits ended in transfer to different facility or patients with serious mental illness and substance abuse disorders
Wolf et al. (2015)	Describe US emergency nurses' estimates of lengths of stay (LOS) and factors affecting LOS for behavioral health patients in the US	<ul style="list-style-type: none"> ▪ Mix-method study ▪ Purposive sample of 1229 emergency nurses recruited through online survey (September 10 to October 13, 2013). 	<ul style="list-style-type: none"> ▪ Average ED LOS = 18.5 hours for behavioral health patients ▪ Median ED LOS = 10 hours for behavioral health patients
Wharff et al. (2011)	Determine the extent and predictors of pediatric psychiatric boarding	<ul style="list-style-type: none"> ▪ Retrospective cohort study ▪ Sample of 461 patients at an ED of a large urban pediatric teaching hospital (July 2007 – June 2008) 	<ul style="list-style-type: none"> ▪ 34.1% of patients boarded ▪ Mean boarding duration were 22.7 hours (SD = 8.1) ▪ Median boarding duration = 21.18 hours.

Study	Objectives	Setting	Findings
		<ul style="list-style-type: none"> ▪ Comparing predictors of boarding for 2007-2008 and 1999-2000 patient cohorts 	
Brennaman (2014)	Determine the extent and factors associated with psychiatric boarding for people meeting criteria for involuntary psychiatric examination	Sample of 170 ED patients requiring involuntary mental health examinations in 2 hospitals Florida	<ul style="list-style-type: none"> ▪ 90% of patients waited longer than 4 hours for transfer to inpatient facility. ▪ 48.8% of patients waited longer than the 12 hour maximum allowed by Florida law. ▪ Mean boarding time was 14.9 hours (SD= 14.5) ▪ Median boarding time was 11 hours
Mansbach et al. (2003)	<ul style="list-style-type: none"> ▪ Describe the extent of pediatric psychiatric ED boarding ▪ Compare patients who were placed successfully into psychiatric facilities with boarder 	<ul style="list-style-type: none"> ▪ Retrospective cohort study ▪ Sample of 315 psychiatric patients at a pediatric ED (July 1999 – June 2000) 	<ul style="list-style-type: none"> ▪ 33% of patients boarded on medical services
Chang et al. (2011)	Describe lengths of stay (LOS) of ED patients receiving psychiatric evaluation by hospital types	<ul style="list-style-type: none"> ▪ Prospective study ▪ Sample of 1,000 adult patients treated between June 2008 and May 2009 at 5 hospitals in Boston (2 academic medical centers and 3 community hospitals) 	<ul style="list-style-type: none"> ▪ Median LOS ranged from 6.7 to 10.8 hours ▪ Time from disposition decision to ED discharge ranged from 3.2 to 5.9 hours.

Study	Objectives	Setting	Findings
Chakravarthy et al (2015)	Examine patient and hospital factors associated with lengths of stay (LOS) and prolonged lengths of stay (PLOS) of pediatric psychiatric ED patients	<ul style="list-style-type: none"> ▪ Sample of 939 psychiatric patients (aged 3-17) in 2 urban EDs in Southern California (May 2010-May 2012) ▪ 2 EDs are the University of California, Irvine Medical Center in Orange County and Long Beach Memorial Medical Center in Los Angeles County 	<ul style="list-style-type: none"> ▪ Mean LOS = 4.9 hours
Warren et al. (2015)	Identify factors associated with prolonged lengths of stay (PLOS) of psychiatric ED patients	<ul style="list-style-type: none"> ▪ Sample of 6335 ED patients receiving a psychiatric consultation at an academic hospital (September 2010 - September 2013) 	<ul style="list-style-type: none"> ▪ Median LOS = 4.1 hours ▪ 15% of visits (1424 out of 9247 visits) with prolonged LOS (8 hours or more)
Rhodes et al. (2015)	<ul style="list-style-type: none"> ▪ Characterize behavioral health (BH) ED visits of older adults ▪ Determine risk factors of prolonged length of stay (PLOS) and adverse events (AEs) of BH ED visits in older adults 	<ul style="list-style-type: none"> ▪ Sample of 213 patients aged 65 or older with BH related ED visits in a community hospital trauma level 3 ED 	<ul style="list-style-type: none"> ▪ Median LOS = 16.2 hours. ▪ 6.6% of patients had LOS ▪ = 6 hours or less
Case et al. (2011)	Compare lengths of stay (LOS) of pediatric psychiatric ED visits with LOS of other pediatric ED	<ul style="list-style-type: none"> ▪ Analyzed National Hospital Ambulatory Medical Care Survey 2001-2008 ▪ Sample of 73,015 visits of patients aged 18 or below 	<ul style="list-style-type: none"> ▪ Mental health visits were more likely to be admitted or transferred ▪ Median LOS of mental health visits = 2.8 hours compared to 1.8 hours of LOS of other visits ▪ Odds of LOS >4 hours for mental health visits were

Study	Objectives	Setting	Findings
	visits	(1,476 mental health visits and 71,539 other visits)	1.9 times higher than that for other visits
Miller (2014)	Describe psychiatric boarding and suggested solutions in Washington	<ul style="list-style-type: none"> ▪ Literature review 	<ul style="list-style-type: none"> ▪ Steady reduction in psychiatric beds but not enough investment in community services in the state. ▪ 70% of involuntary patients in ER have never had any interaction with community system. ▪ 4,566 cases of psychiatric boarding per year. ▪ 70% of counties did not have involuntary psychiatric beds
Arizona Hospital and Healthcare Association (2015)	Describe the extents, causes, impacts and solutions to psychiatric boarding in Arizona	<ul style="list-style-type: none"> ▪ Literature review 	<ul style="list-style-type: none"> ▪ Number of boarded patients (lengths of stay (LOS) > 24 hours) increased by 33% from 2012 to 2013 ▪ Boarded patients for attempted suicide rose 41% from 2012 to 2013
Nesper et al. (2015)	Evaluate the effect of decreasing county mental health services on the ED	<ul style="list-style-type: none"> ▪ Retrospective before-after study at an academic university hospital adjacent to county mental health treatment center. ▪ EHRs collected for ED visits for 8 months before decrease (100 to 50 beds) in county services (October 2008 to May 2009) and 8 months after decrease (October 2009 to May 2010). ▪ Outcome measures included number of pts evaluated and ED LOS. 	<ul style="list-style-type: none"> ▪ Mean daily psychiatry consultations increased from 1.3 before closure to 4.4 after, with a difference in means of 3.0 visits. ▪ Average ED LOS for psychiatry consultation patients was 14.1 hours before closure and 21.9 hours after, with a difference in means of 7.9 hours. ▪ Ultimately, more than 5-fold increase in daily ED bed hours occupied by a patient receiving psychiatry consultation after decrease in county mental health services.

Study	Objectives	Setting	Findings
Chang et al. (2012)	Obtain perspectives on the rate-limiting steps (RLS) in patient care in the ED and compare them to patient's actual LOS	<ul style="list-style-type: none"> ▪ Prospective cohort of clinicians' perspectives on the RLS among 1092 adult ED patients ▪ Medical records collected for ED LOS and other data (integrated HC network in NE US, 2008-2009) ▪ Main outcome measures included LOS and time from disposition decision to discharge 	<ul style="list-style-type: none"> ▪ 12.5% of 95 million visits to the ED in 2007 for psychiatric care ▪ 90 patients (8%) stayed 24 or more hours (median=31 hours) ▪ Two academic medical centers had higher proportions of extended stay patients than the three community hospitals (12% and 15% versus 1%, 7%, and 7%, respectively; ▪ Number inpatient psychiatric beds 524,878 in 1970, down to 211,199 in 2002
Claudius et al. (2014)	Evaluate rate of admission of psychiatric patients, care provided, and estimated costs of care	<ul style="list-style-type: none"> ▪ Single-center retrospective chart review in LA County of all patients on involuntary psychiatric holds July 2009 to December 2010 ▪ Convenience sample of patients admitted to affiliated psychiatric hospital ▪ Main outcome measures were rates of medication administration, documented counseling in first 3 days of inpatient psychiatric hospitalization on pediatric medical inpatient unit 	<ul style="list-style-type: none"> ▪ 50.1% of patients on involuntary psychiatric holds were admitted to pediatric medical unit ▪ 94.2% were admitted for boarding because no psychiatric bed was available ▪ Psychiatric patients were boarded in medical beds for 1169 days at an estimated cost of \$2,232,790 or \$4269 per patient over the 18-month period ▪ In US, affective disorders are the fourth most common reason for non-newborn pediatric hospitalizations; ▪ Only 25% of EDs providing pediatric care are located in hospitals with in-house mental health resources

Study	Objectives	Setting	Findings
Fieldston et al. (2014)	Describe how psychiatric patients boarding on a medical floor receive little of the care they need while incurring high costs	<ul style="list-style-type: none"> ▪ Retrospective chart review of all patients on involuntary psychiatric holds presenting to 1 pediatric ED from July 2009 to December 2010. ▪ Primary outcome measures were rate of admission to a medical unit, rate of counseling or psychiatric medication administration, and estimated cost of nonmedical admissions (boarding) 	<ul style="list-style-type: none"> ▪ Almost 50% of Pediatric Psychiatry Consultation/Liaison services in the United States report inadequate staffing to meet clinical needs ▪ More than 50% report insufficient funding to support the service in its current form
Nicks & Manthey (2012)	Examine the impact of resource utilization, throughput, and financial impact for psychiatric patients waiting for inpatient placement	<ul style="list-style-type: none"> ▪ All psychiatric and non-psychiatric adult admissions in an Academic Medical Center ED (>68,000 adult visits) from January 2007-2008; ▪ De-identified financial facility-based data were obtained 	<ul style="list-style-type: none"> ▪ ED LOS was significantly longer for psychiatric admissions when compared to non-psychiatric admissions (1089 min vs. 340 min) ▪ In some states, available inpatient capacity for primary psychiatric care has decreased by nearly 100%; ▪ Nationally, patients with mental health complaints account for 7% to 10% of ED visits ▪ Survey of 328 ED Medical Directors in the United States, 79.2% report routine psychiatric pt boarding with 35.1% boarding greater than 1 patient per day and 38.9% boarding for between 8 and 24 hours
Wood et al. (2014)	Provide information on disposition and cost related to ED visits by juvenile hall patients transported for urgent psychiatric evaluation	<ul style="list-style-type: none"> ▪ Retrospective cross-sectional descriptive study of patients presenting to 1 ED from juvenile detention centers for consideration of psychiatric holds 	<ul style="list-style-type: none"> ▪ 108 patients had 196 visits and were transported from juvenile hall for urgent psychiatric evaluation, ▪ 131 (67%) resulted in involuntary psychiatric hold, ▪ More than 50% on hold (75 patients) were admitted to a medical ward for boarding because of lack of psychiatric inpatient beds

Study	Objectives	Setting	Findings
		<ul style="list-style-type: none"> ▪ Patients identified by search of ICD-9 discharge diagnosis codes and chart review 	<ul style="list-style-type: none"> ▪ Charges for 196 visits during 18-month period totaled US \$1,357,884, with most of the costs due to boarding on the medical ward
Bakhsh et al. (2014)	Characterize medication errors in psychiatric patients boarded in ED, and identify risk factors associated with these errors	<ul style="list-style-type: none"> ▪ Prospective observational study conducted between December 2012 and May 2013 in a 50-bed community medical center ED with an estimated annual census of 76,000 patients ▪ Study includes all patients seen in the ED for primary psychiatric complaints and remained in the ED pending transfer to a psychiatric facility 	<ul style="list-style-type: none"> ▪ Total of 288 medication errors in 100 patients ▪ 65 patients had one or more medication errors; majority of errors (n = 256, 89%) were due to errors of omission ▪ American Medical Association cited an average boarding time of 34 hours and noted many patients waited several days for placement ▪ Up to 40% of boarded pts experience missed or incorrectly timed medications
Mapelli et al. (2015)	Describe trends in utilization of pediatric Emergency Department (PED) resources by patients with mental health concerns over the past 10 years at a tertiary care hospital	<ul style="list-style-type: none"> ▪ Retrospective cohort study (British Columbia Children's Hospital (BCCH)) of tertiary PED visits from 2003 to 2012. ▪ All visits with chief complaint or discharge diagnosis related to mental health were included ▪ Main outcome measures included number and acuity of mental health-related visits, length of stay, waiting time, admission rate, and return visits, relative to all PED visits 	<ul style="list-style-type: none"> ▪ Proportion of mental health visits triaged to high acuity level decreased whereas the proportion of visits triaged to mid-acuity level has increased ▪ LOS for psychiatric patients was significantly longer than for visits to the PED in general ▪ 23% increase in number of mental health-related visits resulting in admission ▪ Mental health disorders affect 1 in 4 to 1 in 5 children every year ▪ Rate of extended LOS for mental health visits is increasing over time ▪ 8183 mental health-related visits to the BCCH PED during study period ▪ Annual number of mental health visits increased over study period (529 visits in 2002; 983 in 2012);

Study	Objectives	Setting	Findings
			<p>represents an 85.8% increase in number of mental health visits</p> <ul style="list-style-type: none"> ▪ Repeat visits represented on average 32.3% of yearly mental health visits ▪ Proportion of mental health visits triaged to a high acuity level decreased by 42.3% (from 42.3% in 2002 to 24.42% in 2012), proportion of visits triaged to the mid-acuity level increased by 30.7%;
Simpson et al. (2014)	Describe the frequency and characteristics of adult PES boarders	<ul style="list-style-type: none"> ▪ Extracted electronic medical records for adult patients presenting to the PES in an urban county safety-net hospital over 12 months in the state of Washington 	<ul style="list-style-type: none"> ▪ 521 of 5363 patient encounters (9.7%) resulted in boarding ▪ Compared to non-boarding encounters, boarding patient encounters were associated with diagnoses of a primary psychotic, anxiety, or personality disorder, or a bipolar manic/mixed episode ▪ Boarders were more likely to be referred by family, friends or providers than self-referred ▪ Boarders were more likely to arrive in restraints; experience restraint/seclusion in the PES; or be referred for involuntary hospitalization ▪ Boarders were more likely to present to the PES on the weekend

Study	Objectives	Setting	Findings
Zeller et al. (2014)	Assess the effects of a regional dedicated emergency psychiatric facility design known at the "Alameda Model" on boarding times and hospitalization rates for psychiatric patients in area EDs	<ul style="list-style-type: none"> ▪ Studied 30-day period beginning in January 2013 ▪ 5 community hospitals in Alameda County, CA ▪ Tracked all ED patients on involuntary mental health holds ▪ Main outcome measures were boarding time, patients were also followed to determine percentage admitted to inpatient psychiatric units after evaluation and treatment in psychiatric emergency service 	<ul style="list-style-type: none"> ▪ Of 144 patients, the average boarding time was approximately 1 hour and 48 minutes ▪ 24.8% were admitted for inpatient psychiatric hospitalization from the psychiatric emergency service ▪ Past studies have shown average boarding times ranging from 6.8 hours to 34 hours
Alakeson et al. (2010)	Develop and/or find solutions to ED boarding crisis via interviews with key stakeholders and evaluation of current literature	<ul style="list-style-type: none"> ▪ Literature review, consultations with experts in the field, and interviews at nine hospitals ▪ All hospitals were non-profit; 8 are urban or suburban, and 7 have a psychiatric ward; 3 have psychiatric emergency services in addition to a traditional ER 	<ul style="list-style-type: none"> ▪ 2008 survey of 328 emergency room (ER) medical directors, the American College of Emergency Physicians found that roughly 80 percent believed that their hospitals “boarded” psychiatric patients

Study	Objectives	Setting	Findings
Marciano et al. (2012)	Determine if targeted education of emergency physicians (EPs) regarding treatment of mental illness will improve their comfort level in treating psychiatric patients boarding in the ED awaiting admission	<ul style="list-style-type: none"> ▪ Pilot study ▪ Surveys used before and after an educational intervention ▪ Each survey consisted of 10 scenarios of typical psychiatric patients ▪ EPs were asked to rate their comfort levels in treating described patients on visual analogue scale ▪ Main outcome measures were calculated summary scores for the non-intervention survey group (NINT) and intervention survey group (INT) 	<ul style="list-style-type: none"> ▪ 340 participating EDs, two thirds of the respondents reported increasing numbers of PBPs (American College of Emergency Physicians, American Psychiatric Assoc., Nat'l Alliance for Mental Ill) ▪ Psychiatric patients were more likely to be readmitted than medical patients within 30 days (21% vs 13.4%) ▪ 21.1% increase in state mental health admissions between 2002 and 2005 in 8 key states in the United States
Blumstein et al. (2012)	Assess the outcomes of rounds conducted in ED each weekday at North Carolina Baptist Hospital for psychiatric patients by faculty members of the Department of Psychiatry	<ul style="list-style-type: none"> ▪ Retrospective data review was performed to assess the effect of these rounds on the LOS and disposition of these patients ▪ The LOS and dispositions of subjects before and after the initiation of psychiatry rounds were compared ▪ Subjects had a primary psychiatric diagnosis with a LOS of 12 hours or greater ▪ 355 subjects in pre-implementation period and 512 in post-implementation period 	<ul style="list-style-type: none"> ▪ Psychiatric patients in ED are disproportionately affected by crowding and wait times ▪ Psychiatric conditions requiring admission are growing in number and in time waiting for appropriate inpatient beds ▪ Proportion of patients discharged remained unchanged (pre-implementation 49.6%; post-implementation 49.0%) ▪ More patients were admitted to the hospital (24.2%, vs. 32.8%) and fewer were transferred to other psychiatric facilities (25.6% vs. 18.0%) ▪ Among subjects with the longest LOS, those in the post-implementation group experienced a reduction in their waiting times

Study	Objectives	Setting	Findings
Polevoi et al. (2013)	Compare traditional resident consultation with a new model (co-management) to reduce LOS for patients with psychiatric emergencies, and compare the costs of this model we to those of standard care	<ul style="list-style-type: none"> ▪ Before-and-after study conducted in the ED of an urban academic medical center without an inpatient psychiatry unit from January 1, 2007 through December 31, 2009 ▪ Co-management model was fully implemented in September 2008 ▪ Interrupted time series analysis used to study the effects of intervention on LOS for all psychiatric patients transferred for inpatient psychiatric care ▪ Secondary outcomes included average number of hours on ambulance diversion per month, and average number of patients who left without being seen from the ED 	<ul style="list-style-type: none"> ▪ 1884 patient visits were considered; compared to the pre-intervention phase, median LOS for patients transferred for inpatient psychiatric care decreased by about 22% in the post-intervention phase ▪ Ambulance diversion hours increased by about 40 hours per month and average number of patients who left without being seen decreased by about 26 per month (although not stat. sign.) in the post-intervention phase ▪ prolonged boarding of psychiatric patients seen nationwide

Study	Objectives	Setting	Findings
Berstein, (2014)	N/A; Oregon Live article	<ul style="list-style-type: none"> ▪ Legacy plans to consolidate psychiatric beds for both adults and adolescents that are at different hospitals in Portland at a remodeled building ▪ Would allow for 101 acute psychiatric beds available for estimated 25 percent of the patient population who arrive and are in need of in-patient care for up to seven or eight days 	<ul style="list-style-type: none"> ▪ About 75% of patients who arrive at Alameda County, CA, psychiatric emergency hospital are released within 23 hours, and referred to lower-level community-based care; other 25% are admitted into an inpatient facility on site ▪ A federal investigation in 2012 found Portland police engaged in pattern and practice of using excessive force against people in mental health crisis ▪ Police Bureau pledged to pair more officers with mental health experts ▪ Bring back a specialized team of experienced officers to respond to mental health calls and help re-route certain 911 calls to mental health providers
Zeller & Rieger (2015)	Discuss the most prominent models of psychiatric crisis care and compare the pros and cons of each, with additional focus on the newest and most innovative approaches	<ul style="list-style-type: none"> ▪ Literature Review 	<ul style="list-style-type: none"> ▪ Health care systems across the country have adopted idiosyncratic designs to fit their particular situations best ▪ Most models tend to be variations of several distinct models ▪ In 2007 1/8 (approximately 12 million) of all ED contacts was due to either a psychiatric crisis, substance use disorder, or both, with psychiatric crises comprising 64 % of that total ▪ Design 1: MH consultants in hospitals ▪ Design 2: Telepsychiatry ▪ Design 3: Dedicated MH wing of ED ▪ Design 4: Psychiatric urgent care or voluntary crisis centers ▪ Design 5: Mobile crisis teams ▪ Design 6: Acute diversion units/crisis residential

Study	Objectives	Setting	Findings
McCullumsmith et al. (2015)	Describe predictors of ED return visits, and increased LOS in psychiatric patients	<ul style="list-style-type: none"> Retrospective chart review data of 390 patients 	<ul style="list-style-type: none"> Patients with mental health complaints comprised 12.5 % of 95 million emergency department visits in 2007 Average ED length of stay is 42 % longer for patients with mental problems, averaging more than 11 hours.
Wier et al. (2013)	Overview of children in the ED in 2010; HCUP statistical brief	<ul style="list-style-type: none"> Nationally representative data from the Healthcare Cost and Utilization Project (HCUP) on ED visits for children younger than 18 years (excluding births) in 2010 	<ul style="list-style-type: none"> Children with MHSA conditions accounted for 1,091,000 ED visits in 2010 MHSA conditions were in the top 10 leading causes of ED visits for children in 2010
American College of Emergency Physicians (2008)	Overview of Psychiatric and Substance Abuse Survey of 2008 findings	<ul style="list-style-type: none"> Survey conducted from February to April 2008; distributed to +1,400 ED directors. 328 physicians responded. 	<ul style="list-style-type: none"> 79% MHSA patients boarded in their EDs More than 90% boarded patients each week; 55% daily or multiple times per week Over 60% boarded for more than 4 hours; 33% more than 8 hours
Bender et al., 2008	Provide literature review on psychiatric ED boarding in U.S. and suggestions for system level changes	<ul style="list-style-type: none"> N/A; literature review 	<ul style="list-style-type: none"> 2007 AHA survey of hospital leaders, 42% of hospitals reported increase in boarding MHSA patients in the ED NV declared state of emergency in 2004 because individuals with MHSA disorders were flooding EDs. Boarding times for MHSA patients in Georgia's EDs average 34 hours In Maryland, many EDs see and treat over a dozen psychiatric patients daily and may board up to a dozen for days at a time.

Study	Objectives	Setting	Findings
Beech et al (2000)	Examine police referrals to general hospital EDs and characteristics of boarder and hospital visits	<ul style="list-style-type: none"> Assessment of an after hour on call psychiatric nurse service to a general hospital ED 	<ul style="list-style-type: none"> 9% of all psychiatric ED boarders were brought in to the ED by police services
Brunero et al (2007)	Examine police presentations to general hospital EDs and characteristics of boarder and hospital visits	<ul style="list-style-type: none"> Sample of mental health consumers (n = 868) in a general hospital ED in Australia brought in by police services 	<ul style="list-style-type: none"> Psychiatric patient police referrals were most often for schizophrenia, psychotic episode, and suicide risk, and that those referred by police services were more likely to attend the ED for psychiatric emergencies more often - between two and three times during the 12-month study period as compared to only once.
Kneebone et al. (1995)	Study purpose-built psychiatric assessment centres in North America	<ul style="list-style-type: none"> Retrospective study of police referrals (n = 634) to a 400-bed psychiatric hospital 	<ul style="list-style-type: none"> The majority of psychiatric police referrals presenting with psychotic disorder had longer admission times than those who presented for non-psychotic issues.

Appendix A Exhibit 2. Causes of Psychiatric ED Boarding

Study	Objectives	Setting	Findings
Nolan et al. (2015)	Determine the incidence, duration and factors associated with ED boarding in the U.S.	<ul style="list-style-type: none"> ▪ Analyzed 2008 National Hospital Ambulatory Medical Care Survey. ▪ Sample of 34,134 children and adults who visited ED in non-institutional general and short-stay hospitals in the U.S. 	<ul style="list-style-type: none"> ▪ The odd of boarding was greater for the uninsured (vs. insured) and metropolitan hospitals (vs. nonmetropolitan); also increased with age. ▪ Psychiatric patients from non-private residences boarded 2 hours longer (vs. private residences). ▪ Psychiatric patients in the Northeast boarded 2.5 hours longer (vs. the South and the West).
Weiss et al. (2012)	Identify patient and clinical management factors related to ED length of stay for psychiatric patients.	<ul style="list-style-type: none"> ▪ Sample of 1,000 adults with psychiatric illness treated in 5 hospital-based EDs in Boston between June 2008 and May 2009. 	<ul style="list-style-type: none"> ▪ Patients with commercial insurance boarded 3.7 hours [95%CI: 2.7 to 5.2] while the uninsured boarded 5.1 hours [95%CI: 2.6 to 10.0] ▪ Restraint usage increased disposition decision to discharge time by 50% for patients admitted or transferred ▪ ED boarding duration for patients aged 60 and older was 28% higher than that of those less than 40
Stephens et al. (2014)	Identify patient factors associated with extremely long length of stay (>24h) (EL-LOS) of mental health patients in ED	<ul style="list-style-type: none"> ▪ Retrospective case-control study ▪ Sample of 242 patients in an ED of an urban academic hospital between October 2009 and May 2010 	<ul style="list-style-type: none"> ▪ OR of EL-LOS for self-pay patients = 8.68 compared to patients having insurance ▪ OR of EL-LOS for admitted patients = 15.5 compared to patients who did not require hospital admission ▪ OR of EL-LOS for patients transferred to a remote facility = 14 compared to those who are not transferred to a remote facility.

Study	Objectives	Setting	Findings
Wolf et al. (2015)	Describe US emergency nurses' estimates of lengths of stay (LOS) and factors affecting LOS for behavioral health patients in the US	<ul style="list-style-type: none"> ▪ Mix-method study ▪ Purposive sample of 1229 emergency nurses recruited through online survey (September 10 to October 13, 2013). 	<ul style="list-style-type: none"> ▪ Availability of behavioral health nurses, availability of protocol/standards of care and higher level of perceived nursing confidence/preparation to care were associated with shorter LOS ▪ Presence of dedicated inpatient space for managing the care of behavioral health patients was associated with a reduction of 5 hours in average LOS
Misek et al. (2015)	Identify factors associated with psychiatric ED boarding	<ul style="list-style-type: none"> ▪ Retrospective cohort study of 671 patients assessed to require inpatient psychiatric hospitalization at two community EDs in Illinois from July 1, 2010 through June 30, 2012. 	<ul style="list-style-type: none"> ▪ The uninsured boarded longer than Medicare/Medicaid patients and privately insured patients. ▪ Privately insured patients boarded longer than publicly insured patients. ▪ ED lengths of stay for patients transferred to public funded psychiatric facilities (27.7 hours) were longer than those transferred to private facilities (11.8 hours)
Wharff et al. (2011)	Determine the extent and predictors of pediatric psychiatric boarding	<ul style="list-style-type: none"> ▪ Retrospective cohort study ▪ Sample of 461 patients at an ED of a large urban pediatric teaching hospital (July 2007 – June 2008) ▪ Comparing predictors of boarding for 2007-2008 and 1999-2000 patient cohorts 	<ul style="list-style-type: none"> ▪ Boarding odds increased for patients with autism, mental retardation, and/or developmental delay and by severity of suicidal ideation ▪ Patients presenting during weekend or presenting in months without school vacation were more likely to board. ▪ Age, race, insurance status and homicidal ideation did not predict boarding in 2007-2008 patient cohort but they did in 1999-2000 patient cohort.
Brennaman (2014)	Determine the extent and factors associated with psychiatric boarding for people meeting	<ul style="list-style-type: none"> ▪ Sample of 170 ED patients requiring involuntary mental health examinations in 2 hospitals Florida 	<ul style="list-style-type: none"> ▪ Men had longer waits for transfer (median= 13 hours) than did women (median = 8.5 hours) ▪ Men more frequently had episodes of boarding longer than 12 and 24 hours than did women ▪ Medicare beneficiaries had 30 times greater odds of encountering delays of 12 hours or longer than

Study	Objectives	Setting	Findings
	criteria for involuntary psychiatric examination		<ul style="list-style-type: none"> participants with private health insurance ▪ Non-intoxicated participants waited longer (median = 18 hours) than intoxicated participants (median =13 hours)
Mansbach et al. (2003)	<ul style="list-style-type: none"> ▪ Describe the extent of pediatric psychiatric ED boarding ▪ Compare patients who were placed successfully into psychiatric facilities with boarder 	<ul style="list-style-type: none"> ▪ Retrospective cohort study ▪ Sample of 315 psychiatric patients at a pediatric ED (July 1999 – June 2000) 	<ul style="list-style-type: none"> ▪ Odds ratio of boarding for age 10 to 13 years = 3.5 (95%CI: 1.8 – 6.6) (compared to age >13) ▪ Odds ratio of boarding for African Americans = 2.3 (95%CI : 1.1 – 4.8) (compared to White Americans) ▪ Odds ratio of boarding for presenting on a weekend or holiday = 3.8 (95%CI : 1.6 – 8.8) ▪ Odds of boarding increased by severity of homicidal ideation ▪ Patients with capitated insurance were less likely to board (OR = 0.08, 95% CI: 0.02-0.4)
Chang et al. (2011)	Describe lengths of stay (LOS) of ED patients receiving psychiatric evaluation by hospital types	<ul style="list-style-type: none"> ▪ Prospective study ▪ Sample of 1,000 adult patients treated between June 2008 and May 2009 at 5 hospitals in Boston (2 academic medical centers and 3 community hospitals) 	<ul style="list-style-type: none"> ▪ Academic medical centers had longest disposition decision to discharge times.
Chakravarthy et al (2015)	Examine patient and hospital factors associated with lengths of stay (LOS) and prolonged lengths of stay (PLOS) of pediatric psychiatric ED patients	<ul style="list-style-type: none"> ▪ Sample of 939 psychiatric patients (aged 3-17) in 2 urban EDs in Southern California (May 2010-May 2012) ▪ 2 EDs are the University of California, Irvine Medical Center in Orange County and Long Beach Memorial Medical Center in Los Angeles County 	<ul style="list-style-type: none"> ▪ Patients with a psychotic disorder or suicide attempt/ideation experienced a longer LOS (35% and 55% increases, respectively) and increased odds of PLOS (odds ratio, 3.07 and 8.36, respectively) compared to those admitted with substance use disorders. ▪ Being female, previous history of self-harm, and the daily census were associated with both a longer LOS and PLOS.
Warren et al. (2015)	Identify factors associated with	<ul style="list-style-type: none"> ▪ Sample of 6335 ED patients receiving a psychiatric 	<ul style="list-style-type: none"> ▪ Median LOS = 4.1 hours ▪ 15% of visits (1424 out of 9247 visits) with

Study	Objectives	Setting	Findings
	prolonged lengths of stay (PLOS) of psychiatric ED patients	consultation at an academic hospital (September 2010 - September 2013)	<p>prolonged LOS (8 hours or more)</p> <ul style="list-style-type: none"> ▪ Increased odds of PLOS in patient age 12 to 17 years (OR= 2.43) or ≥65 years (OR=1.46) ▪ Increased odds of PLOS in male patients (OR=1.24) and Medicare patients (OR=1.34) ▪ Increased odds of PLOS with use of restraints (OR=2.25); diagnoses of cognitive disorder (OR=4.62) or personality disorder (OR=3.45) ▪ Increased odds of PLOS in those transferred to an unaffiliated psychiatric hospital (OR=22.82); ED arrival from 11 pm through 6:59 am (OR=1.53) or on a Sunday (OR=1.76)
Bastiampillai et al. (2012)	Investigate relationships between duration in ED of patients requiring admission to the psychiatric ward, the day of the week of presentation and the daily number of discharges from the psychiatric ward.	<ul style="list-style-type: none"> ▪ 1925 psychiatric patients at the Queen Elizabeth Hospital, Adelaide, Australia (July 2008-June 2009). 	<ul style="list-style-type: none"> ▪ Inverse correlation between duration in ED and number of discharges per day from psychiatric wards with fewer discharges per day from the psychiatric ward on weekends. ▪ Average duration in ED of patients requiring admission to the psychiatric ward was 17.9 hours (SD=14.5) for those days when there were vacant beds and 24.9 hours (SD=17.5) for those days when there were no vacant beds
Rhodes et al. (2015)	<ul style="list-style-type: none"> ▪ Characterize behavioral health (BH) ED visits of older adults ▪ Determine risk factors of prolonged length of stay (PLOS) and adverse 	<ul style="list-style-type: none"> ▪ Sample of 213 patients aged 65 or older with BH related ED visits in a community hospital trauma level 3 ED 	<ul style="list-style-type: none"> ▪ Involuntary evaluation, aggression, medical or physical restraint, and failed discharge added nearly 30 hours on average to LOS ▪ 39.4% of patients attempted medical admission declined and 17.8% of patients failed discharged ▪ Patients from facilities (skilled nursing, long-term care, or assisted living) were more likely to be refused return compared with those coming from a private residence

Study	Objectives	Setting	Findings
	events (AEs) of BH ED visits in older adults		
Wilson et al. (2015)	Determine predicting factors of lengths of stay (LOS) for patients on involuntary mental health holds	<ul style="list-style-type: none"> ▪ Sample of 590 patient (aged >18) or 640 visits placed on involuntary mental health holds in 2 general EDs (January 2009 – August 2010) 	<ul style="list-style-type: none"> ▪ Suicidal ideation increased LOS by 36% ▪ Using antipsychotics or benzodiazepines increased LOS by 32% and 23%, respectively ▪ Presentation on weekend increased LOS by 36%
Arizona Hospital and Healthcare Association (2015)	Describe the extents, causes, impacts and solutions to psychiatric boarding in Arizona	<ul style="list-style-type: none"> ▪ Literature review 	<ul style="list-style-type: none"> ▪ Boarded patients are likely to be male, enrolled in Medicaid or uninsured, aged 25-64, diagnosed with anxiety or dissociative disorders ▪ Increased trend of boarding in commercial insured patients ▪ 50% boarded patients waited to be discharged home and 41% awaited transfer
Nesper et al. (2015)	Evaluate the effect of decreasing county mental health services on the ED	<ul style="list-style-type: none"> ▪ Retrospective before-after study at an academic university hospital adjacent to county mental health treatment center. ▪ EHRs collected for ED visits for 8 months before decrease (100 to 50 beds) in county services (October 2008 to May 2009) and 8 months after decrease (October 2009 to May 2010). ▪ Outcome measures included number of pts evaluated and ED LOS 	<ul style="list-style-type: none"> ▪ Cutting funding to inpatient and outpatient mental health services affect emergency medical services ▪ Publicly insured wait longer than privately insured

Study	Objectives	Setting	Findings
Chang et al. (2012)	Obtain perspectives on the rate-limiting steps (RLS) in patient care in the ED and compare them to patient's actual LOS	<ul style="list-style-type: none"> ▪ Prospective cohort of clinicians' perspectives on the RLS among 1092 adult ED patients ▪ Medical records collected for ED LOS and other data (integrated HC network in NE US, 2008-2009) ▪ Main outcome measures include LOS and time from disposition decision to discharge 	<ul style="list-style-type: none"> ▪ Limited ED staff availability increased LOS, ▪ Need to achieve clinical stability increased LOS ▪ Limited bed availability after ED discharge increased LOS ▪ Lack of comfort with acutely ill patients increased LOS ▪ EDs' relying on Master's level (or lower) clinicians associated with increase of 80 min in overall ED LOS ▪ More diagnostic testing increased ED LOS
Claudius et al. (2014)	Evaluate rate of admission of psychiatric patients, care provided, and estimated costs of care	<ul style="list-style-type: none"> ▪ Single-center retrospective chart review in LA County of all patients on involuntary psychiatric holds July 2009 to December 2010 ▪ Convenience sample of patients admitted to affiliated psychiatric hospital ▪ Main outcome measures were rates of medication administration, documented counseling in first 3 days of inpatient psychiatric hospitalization on pediatric medical inpatient unit 	<ul style="list-style-type: none"> ▪ Insurance benefits for inpatient and outpatient mental health treatment capped ▪ Available psychiatric beds have decreased substantially ▪ Medical units are not designed with the same therapeutic milieu or attention to suicide and violence prevention ▪ Not conducive to the counseling, group therapy, and observation performed in psychiatric units ▪ 94.2% were admitted for boarding because no psychiatric bed was available
Fieldston et al. (2014)	Describe how psychiatric patients boarding on a medical floor receive little of the care they need while incurring high costs	<ul style="list-style-type: none"> ▪ Retrospective chart review of all patients on involuntary psychiatric holds presenting to 1 pediatric ED from July 2009 to December 2010. ▪ Primary outcome measures were rate of admission to a 	<ul style="list-style-type: none"> ▪ Gross underfunding and reduction in inpatient psychiatric bed space ▪ Inadequate staffing ▪ Deinstitutionalization has led to a reduction in number of psychiatric beds ▪ Poor reimbursement or inadequate reimbursement

Study	Objectives	Setting	Findings
		<p>medical unit, rate of counseling or psychiatric medication administration, and estimated cost of nonmedical admissions (boarding)</p>	<ul style="list-style-type: none"> ▪ 523 [94.2%] admitted for boarding because no psychiatric bed was available.
Nicks & Manthey (2012)	<p>Examine the impact of resource utilization, throughput, and financial impact for psychiatric patients waiting for inpatient placement</p>	<ul style="list-style-type: none"> ▪ All psychiatric and non-psychiatric adult admissions in an Academic Medical Center ED (>68,000 adult visits) from January 2007-2008; ▪ De-identified financial facility-based data were obtained 	<ul style="list-style-type: none"> ▪ State and federal budget cuts ▪ Substantial declines in mental health resources ▪ Declining reimbursements leading to inpatient unit closures ▪ Reduced availability of community-based referral ▪ Inadequate services for uninsured or underinsured
Wood et al. (2014)	<p>Provide information on disposition and cost related to ED visits by juvenile hall patients transported for urgent psychiatric evaluation</p>	<ul style="list-style-type: none"> ▪ Retrospective cross-sectional descriptive study of patients presenting to 1 ED from juvenile detention centers for consideration of psychiatric holds ▪ Patients identified by search of ICD-9 discharge diagnosis codes and chart review 	<ul style="list-style-type: none"> ▪ More than 50% on hold (75 patients) were admitted to a medical ward for boarding because of lack of psychiatric inpatient beds ▪ Charges for 196 visits during 18-month period totaled US \$1,357,884, with most of the costs due to boarding on the medical ward
Bakhsh et al. (2014)	<p>Characterize medication errors in psychiatric patients boarded in ED, and identify risk factors associated with these errors</p>	<ul style="list-style-type: none"> ▪ Prospective observational study conducted between December 2012 and May 2013 in a 50-bed community medical center ED with an estimated annual census of 76,000 patients ▪ Study includes all patients seen in the ED for primary psychiatric complaints and 	<ul style="list-style-type: none"> ▪ 25% of the RXs patients are taking at home not recorded during initial assessment at the time of hospitalization ▪ Incomplete medication histories ▪ Concurrent medical issues, number of comorbidities; ▪ Psychiatric boarded patients have different needs than standard patients ▪ Increasing number of home medications (OR 1.17), and increasing number of comorbidities (OR 1.89)

Study	Objectives	Setting	Findings
Mapelli et al. (2015)	Describe trends in utilization of pediatric Emergency Department (PED) resources by patients with mental health concerns over the past 10 years at a tertiary care hospital	<p>remained in the ED pending transfer to a psychiatric facility</p> <ul style="list-style-type: none"> ▪ Retrospective cohort study (British Columbia Children's Hospital (BCCH)) of tertiary PED visits from 2003 to 2012. ▪ All visits with chief complaint or discharge diagnosis related to mental health were included ▪ Main outcome measures included number and acuity of mental health-related visits, length of stay, waiting time, admission rate, and return visits, relative to all PED visits 	<p>were associated with occurrence of medication errors</p> <ul style="list-style-type: none"> ▪ Suboptimal utilization of available community-based mental health services, because of complexity in accessing them ▪ Failure of EDs in establishing long-lasting and stable mental health services to prevent recurrent crises ▪ Decreased resilience in youth and their social support network in the face of present social stressors ▪ Limitations of the current system in meeting patients' needs ▪ Majority of mental health-related patients present to the ED after business hours, at a time when community resources are not accessible
Simpson et al. (2014)	Describe the frequency and characteristics of adult PES boarders	<ul style="list-style-type: none"> ▪ Extracted electronic medical records for adult patients presenting to the PES in an urban county safety-net hospital over 12 months in the state of Washington 	<ul style="list-style-type: none"> ▪ ED processes ▪ Reduced inpatient psychiatric bed capacity and mental health financing ▪ Inefficient use of affordable community-based care ▪ Law enforcement processes, legal standards for emergency care ▪ Standard EDs lack the physical environment, therapeutic milieu, programming, and consistent provider teams of an inpatient unit
Zeller et al. (2014)	Assess the effects of a regional dedicated emergency psychiatric facility design known at the "Alameda Model" on boarding times	<ul style="list-style-type: none"> ▪ Studied 30-day period beginning in January 2013 ▪ 5 community hospitals in Alameda County, CA ▪ Tracked all ED patients on involuntary mental health holds 	<ul style="list-style-type: none"> ▪ Limited, if any, onsite mental health services ▪ 2008 ACEP survey found that more than 60% of EDs board patients needing admission for over 4 hours, 33% board for over 8 hours, and 6% board for over 24 hours

Study	Objectives	Setting	Findings
	and hospitalization rates for psychiatric patients in area EDs	<ul style="list-style-type: none"> ▪ Main outcome measures were boarding time, patients were also followed to determine percentage admitted to inpatient psychiatric units after evaluation and treatment in psychiatric emergency service 	<ul style="list-style-type: none"> ▪ Prolonged boarding times are a reflection of the time required in finding a placement and transferring patients to inpatient psychiatric beds ▪ Lack of available psychiatric clinicians to evaluate patients ▪ Requirements for pre-authorization of insurance prior to admission ▪ Lack of resources to conduct psychiatric evaluations ▪ Lack of appropriate lower levels of outpatient care
Vidhya et al. (2010)	Develop and/or find solutions to ED boarding crisis via interviews with key stakeholders and evaluation of current literature	<ul style="list-style-type: none"> ▪ Literature review, consultations with experts in the field, and interviews at nine hospitals ▪ All hospitals were non-profit; 8 are urban or suburban, and 7 have a psychiatric ward; 3 have psychiatric emergency services in addition to a traditional ER 	<ul style="list-style-type: none"> ▪ Inability to gain timely access to community-based care ▪ Deinstitutionalization movement reduced amount/availability of inpatient psychiatric care (beginning 1960s) ▪ Low reimbursement rates from public health insurance deters providers/facilities ▪ Systems do not have reason to collaborate, because they don't share funding, governance, or licensing
Marciano et al. (2012)	Determine if targeted education of emergency physicians (EPs) regarding treatment of mental illness will improve their comfort level in treating psychiatric patients boarding in the ED awaiting admission	<ul style="list-style-type: none"> ▪ Pilot study ▪ Surveys used before and after an educational intervention ▪ Each survey consisted of 10 scenarios of typical psychiatric patients ▪ EPs were asked to rate their comfort levels in treating described patients on visual analogue scale ▪ Main outcome measures were calculated summary scores for the non-intervention survey 	<ul style="list-style-type: none"> ▪ Crowding of ED's ▪ Lack of available inpatient beds ▪ Comfort level of emergency physicians affects treatment of mentally ill patients ▪ Demand for mental health services exceeds supply ▪ Budget cuts for mental-health programs and services ▪ EDs unable to bill for holding PBPs

Study	Objectives	Setting	Findings
Blumstein et al. (2012)	Assess the outcomes of rounds conducted in ED each weekday at North Carolina Baptist Hospital for psychiatric patients by faculty members of the Department of Psychiatry	<p>group (NINT) and intervention survey group (INT)</p> <ul style="list-style-type: none"> ▪ Retrospective data review was performed to assess the effect of these rounds on the LOS and disposition of these patients ▪ The LOS and dispositions of subjects before and after the initiation of psychiatry rounds were compared ▪ Subjects had a primary psychiatric diagnosis with a LOS of 12 hours or greater ▪ 355 subjects in pre-implementation period and 512 in post-implementation period 	<ul style="list-style-type: none"> ▪ ED often primary source of care for psychiatric patients, or gateway to care ▪ Mental health services budget cuts ▪ Conversion of two state psychiatric hospitals to outpatient services and only one inpatient facility with a net loss of state funded beds
Polevoi et al. (2013)	Compare traditional resident consultation with a new model (co-management) to reduce LOS for patients with psychiatric emergencies, and compare the costs of this model we to those of standard care	<ul style="list-style-type: none"> ▪ Before-and-after study conducted in the ED of an urban academic medical center without an inpatient psychiatry unit from January 1, 2007 through December 31, 2009 ▪ Co-management model was fully implemented in September 2008 ▪ Interrupted time series analysis used to study the effects of intervention on LOS for all psychiatric patients transferred for inpatient psychiatric care 	<ul style="list-style-type: none"> ▪ Deinstitutionalization movement ▪ Lack of funding ▪ Political forces ▪ Critical limitation of inpatient psychiatric capacity ▪ Many different clinician "hand-offs";

Study	Objectives	Setting	Findings
		<ul style="list-style-type: none"> ▪ Secondary outcomes included average number of hours on ambulance diversion per month, and average number of patients who left without being seen from the ED 	
Berstein, (2014)	N/A; Oregon Live article	<ul style="list-style-type: none"> ▪ Legacy plans to consolidate psychiatric beds for both adults and adolescents that are at different hospitals in Portland at a remodeled building ▪ Would allow for 101 acute psychiatric beds available for estimated 25 percent of the patient population who arrive and are in need of in-patient care for up to seven or eight days 	<ul style="list-style-type: none"> ▪ ERs aren't equipped to properly care for people in mental health ▪ Need to improve community-based services ▪ Hand-offs between organizations is not smooth
Zeller & Rieger (2015)	Discuss the most prominent models of psychiatric crisis care and compare the pros and cons of each, with additional focus on the newest and most innovative approaches	<ul style="list-style-type: none"> ▪ Literature Review 	<ul style="list-style-type: none"> ▪ Design 1: Not always staffed, and have to come from home, on-call, or other areas in hospitals ▪ Design 1: No opportunity to observe and re-evaluate pt. disposition that assigned at intake, but may no longer be accurate upon discharge or after observation ▪ Design 2: Efficacy, safety, and patient satisfaction have been shown to be roughly equivalent to interactions with a psychiatrist in the same room ▪ Design 3: More therapeutically appropriate atmosphere ▪ Design 4: Most crisis centers exclude individuals who are dangerous, have a history of dangerous behavior, or who are acutely hallucinating,

Study	Objectives	Setting	Findings
			<p>medically compromised, intoxicated, or in substance withdrawal; limits overall effectiveness in reducing ED utilization for psychiatric conditions</p> <ul style="list-style-type: none"> ▪ Design 5: Can often help resolve patient's crisis without having to transport to hospital ▪ Design 6: Ideal for patients who would normally require inpatient psychiatric care, but are eager to engage in treatment, willing to participate in groups and activities, and have not reached a level of acuity or dangerousness that would necessitate only hospitalization
McCullumsmith et al. (2015)	Describe predictors of ED return visits, and increased LOS in psychiatric patients	<ul style="list-style-type: none"> ▪ Retrospective chart review data of 390 patients 	<ul style="list-style-type: none"> ▪ Lack of availability of outpatient services ▪ Homelessness ▪ Lack of insurance/public insurance ▪ Predictors of ED return included psychosis, personality disorder and increased number of prior ED visits ▪ Longer wait for the TPC was associated strongly with non-attendance ▪ TPC appointment within 3 days was associated with significantly longer time in the community without ED presentation ▪ Rapid follow-up after ED visits increased attendance at aftercare and lengthened community tenure
Grob et al., 1994	Describe history of deinstitutionalization of MHSA patients in the U.S.	<ul style="list-style-type: none"> ▪ N/A 	<ul style="list-style-type: none"> ▪ Process of deinstitutionalization has led to massive transfer of severely mentally-ill persons out of institutional care in favor of community treatment

Study	Objectives	Setting	Findings
Manderscheid et al., 2004	Examine trends in the availability and use of mental health services in state adult correctional facilities	<ul style="list-style-type: none"> Results from the 1988 Inventory of Mental Health Services in State Adult Correctional Facilities of the Center for Mental Health Services were compared with those from the 2000 Census of State and Federal Adult Correctional Facilities survey of the Bureau of Justice Statistics 	<ul style="list-style-type: none"> From 1970 to 2000 public psychiatric hospital beds dropped from 207 to 21 beds per 100,000 persons
Weithorn, 2005	Book about U.S. response to children and adolescents with issues of mental health, substance abuse, and criminality	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Overall capacity of community mental health programs has and is still limited
ACEP, 2008	Report on survey of ED medical directors from survey conducted from February to April 2008 and distributed to +1,400 ED directors. 328 respondents	<ul style="list-style-type: none"> Psychiatric and Substance Abuse Survey from February to April 2008, distributed to +1,400 ED directors. 328 respondents 	<ul style="list-style-type: none"> Difficulty obtaining insurance authorization or uninsured status included in list of reasons for ED boarding of psychiatric patients
Strauss et al. (2005)	Describe characteristics of consumers brought into N. American ED by trained police officers compared	<ul style="list-style-type: none"> Sample of 485 North American consumers brought to ED by a team of police who had received intensive mental health training 	<ul style="list-style-type: none"> Individuals with mental illness brought in by police team were more likely to be homeless, be known to mental health services, and have schizophrenia

Study	Objectives	Setting	Findings
	with consumers not brought in by this team		
Lee et al (2008)	Determine the frequency profile and characteristics of consumers of mental health services brought in by police to the ED	<ul style="list-style-type: none"> Data from the emergency department information system and psychiatric assessment from medical records of mental health presentations brought in by the police to a general ED between 2003 and 2005. The sample consisted of 542 consumers with a mental health problem brought in by the police to the ED of a 350-bed community hospital 	<ul style="list-style-type: none"> The majority of psychiatric ED boarding brought to the ED by police services occurred after working hours and on weekends while mental health services were least accessible

Appendix A Exhibit 3. Impacts of Psychiatric ED Boarding

Study	Objectives	Setting	Findings
Halmer et al. (2015)	Provide an overview of mental health and behavioral emergency treatment	<ul style="list-style-type: none"> Literature review 	<ul style="list-style-type: none"> The boarding of psychiatric patients in overburdened EDs with inadequately trained staff creates a suboptimal acute care setting that negatively impacts patient care.

Study	Objectives	Setting	Findings
	in the US; address policy considerations to improve treatment for patients with acute mental health crisis		<ul style="list-style-type: none"> ▪ Deficiencies in acute/chronic mental health care have contributed to growing rates of substance abuse, homelessness, and incarceration among the mentally ill in the United States.
Rhodes et al. (2015)	Characterize behavioral health (BH) ED visits of older adults; determine risk factors of prolonged length of stay (PLOS) and adverse events (AEs) of BH ED visits in older adults	<ul style="list-style-type: none"> ▪ Sample of 213 patients aged 65 or older with BH related ED visits in a community hospital trauma level 3 ED 	Adverse and potential adverse events increased by 20% for every additional 10 h in the ED
Abid et al. (2014)	Provide an overview of psychiatric boarding in the US	<ul style="list-style-type: none"> ▪ Policy brief 	<ul style="list-style-type: none"> ▪ Low quality of care: inadequate psychiatric services during boarding ▪ Increase psychological stress due to chaotic environment in ED ▪ Require more nursing care and thus worsen crowding that leads to longer waits of other patients to be seen and treated.
Bender et al. (2008)	Provide a literature review on psychiatric ED boarding in the US and suggestions for system-level changes	<ul style="list-style-type: none"> ▪ Literature review 	<ul style="list-style-type: none"> ▪ Psychiatric patients are more likely to be uninsured or enrolled in Medicaid that may provide inadequate reimbursement for hospitals. ▪ Hospitals are not reimbursed for boarding patients in some states. ▪ Financial strain leads to closure of psychiatric units or decline in number of psychiatric inpatient beds.

Study	Objectives	Setting	Findings
			<ul style="list-style-type: none"> ▪ Reduce availability of emergency staffs ▪ Longer waits for patients in ED ▪ Create patient frustration ▪ Lower quality of care for other patients
Arizona Hospital and Healthcare Association (2015)	Describe the extents, causes, impacts and solutions to psychiatric boarding in Arizona	<ul style="list-style-type: none"> ▪ Literature review 	The average psychiatric boarding case costs upwards of \$6,220, leading to a total statewide cost of over \$20 million each year due to psychiatric boarding.
Chang et al. (2012)	Obtain perspectives on the rate-limiting steps (RLS) in patient care in the ED and compare them to patient's actual LOS	<ul style="list-style-type: none"> ▪ Prospective cohort of clinicians' perspectives on the RLS among 1092 adult ED patients ▪ Medical records collected for ED LOS and other data (integrated HC network in NE US, 2008-2009) ▪ Main outcome measures included LOS and time from disposition decision to discharge 	<ul style="list-style-type: none"> ▪ Bottlenecks in EDs ▪ Most RLS in patient care were associated with actual increases in ED wait time for patients ▪ EDs' relying on Master's level (or lower) clinicians associated with increase of 80 min in overall ED LOS ▪ 1 in 12 adult patients receiving psychiatric consultations in study stayed in the ED for 24 hours or more (median=31 hours)

Study	Objectives	Setting	Findings
Claudius et al. (2014)	Evaluate rate of admission of psychiatric patients, care provided, and estimated costs of care	<ul style="list-style-type: none"> ▪ Single-center retrospective chart review in LA County of all patients on involuntary psychiatric holds July 2009 to December 2010 ▪ Convenience sample of patients admitted to affiliated psychiatric hospital ▪ Main outcome measures were rates of medication administration, documented counseling in first 3 days of inpatient psychiatric hospitalization on pediatric medical inpatient unit 	<ul style="list-style-type: none"> ▪ Lack of psychiatric inpatient beds prolongs ED LOS ▪ Resulted in less psychiatric medication administration ▪ Less counseling services provided ▪ Patients' previously prescribed psychiatric medications were withheld those medications (often awaiting parental consent for administration) ▪ Among pediatric psychiatric patients on involuntary holds, only 6% received counseling and 20% received medication
Fieldston et al. (2014)	Describe how psychiatric patients boarding on a medical floor receive little of the care they need while incurring high costs	<ul style="list-style-type: none"> ▪ Retrospective chart review of all patients on involuntary psychiatric holds presenting to 1 pediatric ED from July 2009 to December 2010. ▪ Primary outcome measures were rate of admission to a medical unit, rate of counseling or psychiatric medication administration, and estimated cost of nonmedical admissions (boarding) 	<ul style="list-style-type: none"> ▪ Delays in psychiatric treatment ▪ compromises all domains of quality (including safety, effectiveness, efficiency, timeliness, patient-centeredness, and equity) ▪ Thirty-two (6.1%) admitted for isolated psychiatric reasons had counseling documented ▪ 105 (20.1%) received psychiatric medications. ▪ Patients admitted to psychiatric hospital were significantly more likely to receive counseling and medications. ▪ Psychiatric patients were boarded in medical beds for 1169 days at an estimated cost of \$2,232,790 or \$4269 per patient over the 18-month period.

Study	Objectives	Setting	Findings
Nicks & Manthey (2012)	Examine the impact of resource utilization, throughput, and financial impact for psychiatric patients waiting for inpatient placement	<ul style="list-style-type: none"> ▪ All psychiatric and non-psychiatric adult admissions in an Academic Medical Center ED (>68,000 adult visits) from January 2007-2008; ▪ De-identified financial facility-based data were obtained 	<ul style="list-style-type: none"> ▪ Increased risk of symptom exacerbation or elopement; medication errors ▪ Increased ancillary resource utilization ▪ Increased labor costs for safety attendants or security officers ▪ Increased transport delays ▪ Ambulance diversion ▪ Payer mix associated with 40% decrease in avg physician reimbursement when compared to non-psychiatric cohort ▪ Psychiatric pts remained in the ED 3.2 times longer than non-psychiatric patients, preventing 2.2 bed turnovers (additional patients) per psychiatric patient ▪ Financial impact of psychiatric boarding accounted for a direct loss of (\$1,198) compared to non-psychiatric admissions ▪ Psychiatric boarding awaiting inpatient placement cost the department \$2,264 per patient
Bakhsh et al. (2014)	Characterize medication errors in psychiatric patients boarded in ED, and identify risk factors associated with these errors	<ul style="list-style-type: none"> ▪ Prospective observational study conducted between December 2012 and May 2013 in a 50-bed community medical center ED with an estimated annual census of 76,000 patients ▪ Study includes all patients seen in the ED for primary psychiatric complaints and remained in the ED pending transfer to a psychiatric facility 	<ul style="list-style-type: none"> ▪ Increase in medication administration errors; 288 medication errors in 100 patients ▪ 65 patients had one or more medication errors ▪ Concurrent medical conditions remain unknown, untreated or ignored; ▪ Psychiatric patients reside in ED for longer while waiting for transfer to psychiatric facility ▪ omission of needed home medications creates increased potential to cause harm

Study	Objectives	Setting	Findings
Mapelli et al. (2015)	Describe trends in utilization of pediatric Emergency Department (PED) resources by patients with mental health concerns over the past 10 years at a tertiary care hospital	<ul style="list-style-type: none"> ▪ Retrospective cohort study (British Columbia Children's Hospital (BCCH)) of tertiary PED visits from 2003 to 2012. ▪ All visits with chief complaint or discharge diagnosis related to mental health were included ▪ Main outcome measures included number and acuity of mental health-related visits, length of stay, waiting time, admission rate, and return visits, relative to all PED visits 	<ul style="list-style-type: none"> ▪ Mean LOS in the PED for patients with mental health concerns was significantly longer than for the rest of the PED (279 minutes vs 183 minutes) ▪ Absolute number of admissions following mental health presentations to the PED increased by 53.7%
Simpson et al. (2014)	Describe the frequency and characteristics of adult PES boarders	<ul style="list-style-type: none"> ▪ Extracted electronic medical records for adult patients presenting to the PES in an urban county safety-net hospital over 12 months in the state of Washington 	<ul style="list-style-type: none"> ▪ 521 patient encounters (9.7%, 466 unique patients) were converted to boarding status while in the PES ▪ Boarding episodes lasted a median of 27.2 hours ▪ Boarding encounters were more likely to involve physical restraint or seclusion in PES or referral for involuntary hospitalization
Vidhya et al. (2010)	Develop and/or find solutions to ED boarding crisis via interviews with key stakeholders and evaluation of current literature	<ul style="list-style-type: none"> ▪ Literature review, consultations with experts in the field, and interviews at nine hospitals ▪ All hospitals were non-profit; 8 are urban or suburban, and 7 have a psychiatric ward; 3 have psychiatric emergency services in addition to a traditional ER 	<ul style="list-style-type: none"> ▪ Because ED not equipped, boarded patients do not receive high-quality care there ▪ Psychiatric patient presence affects care received by other patients ▪ Boarded patients reduce ER capacity and increase pressure on staff ▪ Boarding has negative financial impact on hospitals because reimbursement rates do not account for boarding

Study	Objectives	Setting	Findings
Marciano et al. (2012)	Determine if targeted education of emergency physicians (EPs) regarding treatment of mental illness will improve their comfort level in treating psychiatric patients boarding in the ED awaiting admission	<ul style="list-style-type: none"> ▪ Pilot study ▪ Surveys used before and after an educational intervention ▪ Each survey consisted of 10 scenarios of typical psychiatric patients ▪ EPs were asked to rate their comfort levels in treating described patients on visual analogue scale ▪ Main outcome measures were calculated summary scores for the non-intervention survey group (NINT) and intervention survey group (INT) 	<ul style="list-style-type: none"> ▪ Lack/suboptimal appropriate treatment for psychiatric boarders ▪ Discharging psychiatric boarders when they are not completely stable ▪ Compromises in all patient care and safety ▪ Comparison of summary scores between 'NINT' and 'INT' groups showed a highly significant improvement in comfort levels with treating PBPs
Blumstein et al. (2012)	Assess the outcomes of rounds conducted in ED each weekday at North Carolina Baptist Hospital for psychiatric patients by faculty members of the Department of Psychiatry	<ul style="list-style-type: none"> ▪ Retrospective data review was performed to assess the effect of these rounds on the LOS and disposition of these patients ▪ The LOS and dispositions of subjects before and after the initiation of psychiatry rounds were compared ▪ Subjects had a primary psychiatric diagnosis with a LOS of 12 hours or greater ▪ 355 subjects in pre-implementation period and 512 in post-implementation period 	<ul style="list-style-type: none"> ▪ Ed crowding has negative effects on patient care processes ▪ Significant costs to institutions ▪ Fewer beds available for other patients ▪ Boarding patients with longest waits were affected most by reduced wait times ▪ LOS is positive associated with ED wait time and use of physical restraints and seclusion for psychiatric patients ▪ In 6-month post-implementation period 3,123 bed hours were saved (equals opportunity to see additional 726 patients during time period)

Study	Objectives	Setting	Findings
Polvoi et al. (2013)	Compare traditional resident consultation with a new model (co-management) to reduce LOS for patients with psychiatric emergencies, and compare the costs of this model we to those of standard care	<ul style="list-style-type: none"> ▪ Before-and-after study conducted in the ED of an urban academic medical center without an inpatient psychiatry unit from January 1, 2007 through December 31, 2009 ▪ Co-management model was fully implemented in September 2008 ▪ Interrupted time series analysis used to study the effects of intervention on LOS for all psychiatric patients transferred for inpatient psychiatric care ▪ Secondary outcomes included average number of hours on ambulance diversion per month, and average number of patients who left without being seen from the ED 	<ul style="list-style-type: none"> ▪ Crowding of ED's ▪ Difficulty placing psychiatric patients ▪ Resource-intensive ▪ Decreased quality of care for psychiatric patients ▪ Prolonged LOS ▪ Lack of patient turnover ▪ Negative financial impacts; compared to non-intervention ▪ With new model median ED LOS for patients transferred for inpatient psychiatric care decreased by about 22% ▪ Reduction in LOS resulted in increased capacity for new patients ▪ ED charges increased by \$2.1 million (sum of professional and technical fees) in the post-intervention phase; resulting revenue was sufficient to cover cost of hiring 1.5 FTE psychiatrists and additional social workers, the additional personnel needed for this model
McCullumsmith et al. (2015)	Describe predictors of ED return visits, and increased LOS in psychiatric patients	<ul style="list-style-type: none"> ▪ Retrospective chart review data of 390 patients 	<ul style="list-style-type: none"> ▪ Overcrowding ▪ Recidivism ▪ Poor patient outcomes ▪ Increased risks of harm to patients and staff ▪ Delays in care ▪ Compromises of privacy and confidentiality ▪ Elevated risk of morbidity and mortality upon discharge
Webster & Harris (2004)	Promote improvement in collaboration between law	<ul style="list-style-type: none"> ▪ N/A 	<ul style="list-style-type: none"> ▪ to facilitate collaboration between law enforcement and EDs in appropriately managing mental health patients that present to EDs mental health liaison

Study	Objectives	Setting	Findings
	enforcement and EDs in treatment of individuals with mental illness		teams should be established between EDs and police services
Lamb et al. (2002)	Describe the outcomes from a police mental health team in the assessment and management of psychiatric ED referrals in a community service	<ul style="list-style-type: none"> ▪ North American study of police mental health teams in management of psychiatric ED referrals 	<ul style="list-style-type: none"> ▪ Suggest the need for outreach teams consisting of both police officers and mental health service professionals to assist in the adequate care of individuals presenting to EDs for mental illness.

Appendix B1. Description of Quantitative Data Sources

Hospital ED Discharge

Hospital discharge data were obtained from Oregon Association of Hospital and Health Systems (OAHHS) and capture information on all Oregon hospital ED visits, including patient demographic characteristics, admission and discharge date and time, length of stay in EDs (measured in days), up to four ICD-9 diagnoses, charged amount, and discharge destination.

The hospital data contain ED utilization records for both Medicaid and non-Medicaid patients who were admitted to hospital EDs in Oregon. However, the data are administrative records and therefore potential reporting inaccuracy is expected. Further, approximately 81% of the discharge hour field in the raw data set is missing, which make it practically impossible to explore the ED boarding problem using information on hours of ED episodes. Finally, only billed amount is included in the raw data, making it difficult to analyze ED expenditures associated with ED boarding of psychiatric patients. To address such caveats, we augmented the raw hospital discharge data set by linking it to the EDIE and Medicaid claims data. See below for details.

EDIE

The EDIE is a web-based, real-time intra- and inter-ED communication and information technology that allows ED clinicians to exchange patient information, develop notification systems, and coordinate care for patients with complex care needs. For example, EDIE can design notifications to identify patients who utilize the ED more than five times in twelve months, or assist ED clinicians in directing patients to the right care setting based on current and previous healthcare utilization and needs.

Currently, all Oregon hospitals have completed the legal review and signed agreements with Collective Medical Technologies. The most recent report from Oregon Health Leadership Council (OHLC) indicates that 93% of Oregon hospitals have completed the IT process and are receiving EDIE notifications, with 77% considered “EDIE Utility Ready.” EDIE is used by many Oregon Coordinated Care Organizations (CCOs) and Commercial Health plans. CCOs using EDIE currently include Family Care, Pacific Source, Columbia Pacific, Jackson Care Connect, Willamette Valley, Yamhill, and Health Share. Commercial plans using EDIE include Kaiser, Humana, Providence, Centene, and United Health. OHLC is facilitating implementation of EDIE throughout the state, communication among stakeholders and communities, financing, and expanding use.

EDIE data used for our analyses included ED utilization information for October, 2014 through September, 2015. The data contain hospital ED admission and discharge date and time, discharge destination, patient demographics, and ICD-9 diagnosis and procedure codes. In total, our EDIE data set includes information for 245,645 unique individuals and 539,923 unique ED visits.

The raw EDIE data set had almost complete information on ED admission and discharge date and time, capturing both Medicaid and non-Medicaid patients. However, it does not include charge or payment information. In addition, data accuracy may be challenged by inconsistent EDIE adoption practices. As discussed below, we augment the EDIE data using the hospital discharge and Medicaid data to overcome the identified shortcomings. See below for details.

Medicaid Claims and Eligibility

ED utilization and cost data for Medicaid patients were also retrieved from Medicaid claims files supplied by the Office of Health Analytics, Oregon Health Authority (OHA). The OHA also provided Medicaid enrollment data, which were used to retrieve demographic data for Medicaid patients. The raw data included duplicate patient-episode records which were deleted based on unique person and claim identifiers. The final analytic Medicaid claims data set included unique person-episode information on ED admission and discharge date, charged and reimbursed amount, and ICD-9 diagnosis and procedure codes up to 13 codes per episode. Overall, our analysis of Medicaid data (as well as the other two data sets below) was restricted to October, 2014 through September, 2015 during which complete data were available from all three data sources. The final Medicaid analytic data set included 391,479 unique ED episodes from October, 2014 through September, 2015 on total 185,292 unique patients.

Medicaid claims provide a reliable record of the care received by the patient, and represent only source of actual payment for ED services. However, there are several significant limitations we endeavored to address in our analysis. First, Medicaid claims include data only on Medicaid patients. Second, discharge dates are often missing. Third, there is no recorded admission and discharge hours, which are critical to measure the extent of ED boarding based on hours of ED stay. To overcome the limitations, we augmented the Medicaid data using information from the two additional data sources, hospital discharge and EDIE. See below for details.

Procedure to Address Limitations of Independent Data Sources

The OAHHS performed the data linkage which identified the unique individuals across the three independently-maintained data sources and assigned random person identification numbers to unique individuals. OSU researchers then used the unique person identifier, ED admission date and time, and diagnoses to link the three data files at the person-episode level. When linking, we applied the following algorithm to overcome the caveats for each data set discussed above:

- Patient demographic information came first from Medicaid enrollment data. Missing information was then filled using hospital discharge and EDIE data.
- ED cost data came originally from Medicaid data. Missing information was filled using hospital discharge data. Charges or billed amount from hospital discharge data were converted to expected payment. To compute the expected payment, charges were multiplied by the average cost-to-charge ratio, defined as actual payment divided by billed amount for Medicaid patients. The charged amount from hospital discharge data includes only facility expenses. We computed a conversion factor, the ratio of national total ED cost (both facility and doctor costs) to ED facility cost, using data from the 2014 Medical Expenditure Panel Survey. We use the conversion factor to convert the expected payment for hospital ED facility to total ED cost.
- ED admission and discharge date and time came first from the EDIE data. Roughly 7% of discharge hour information is missing in the raw EDIE data. Missing date and time were

filled with information from hospital discharge data. Complete data on admission and discharge data and time were then appended to all three data sets.

- All augmented data sets contain unique ED visits for a one-year sample period from October 1, 2014 to September 30, 2015 during which complete data were available from all three data sources.

Full Linked Data

As we noted above, each data source has its own strengths and weaknesses and we addressed the identified caveats by augmenting the raw data sets individually. However, the raw data sets contain only records for ED patients who were successfully linked across the three data sources based on full name and birth date, and do not contain the universe of hospital ED visits in Oregon. To mitigate this concern, we combined all unique ED episodes from all three raw data sets into a single analytic ‘full-linked’ data set. Our analysis is also restricted to the one-year sample period.

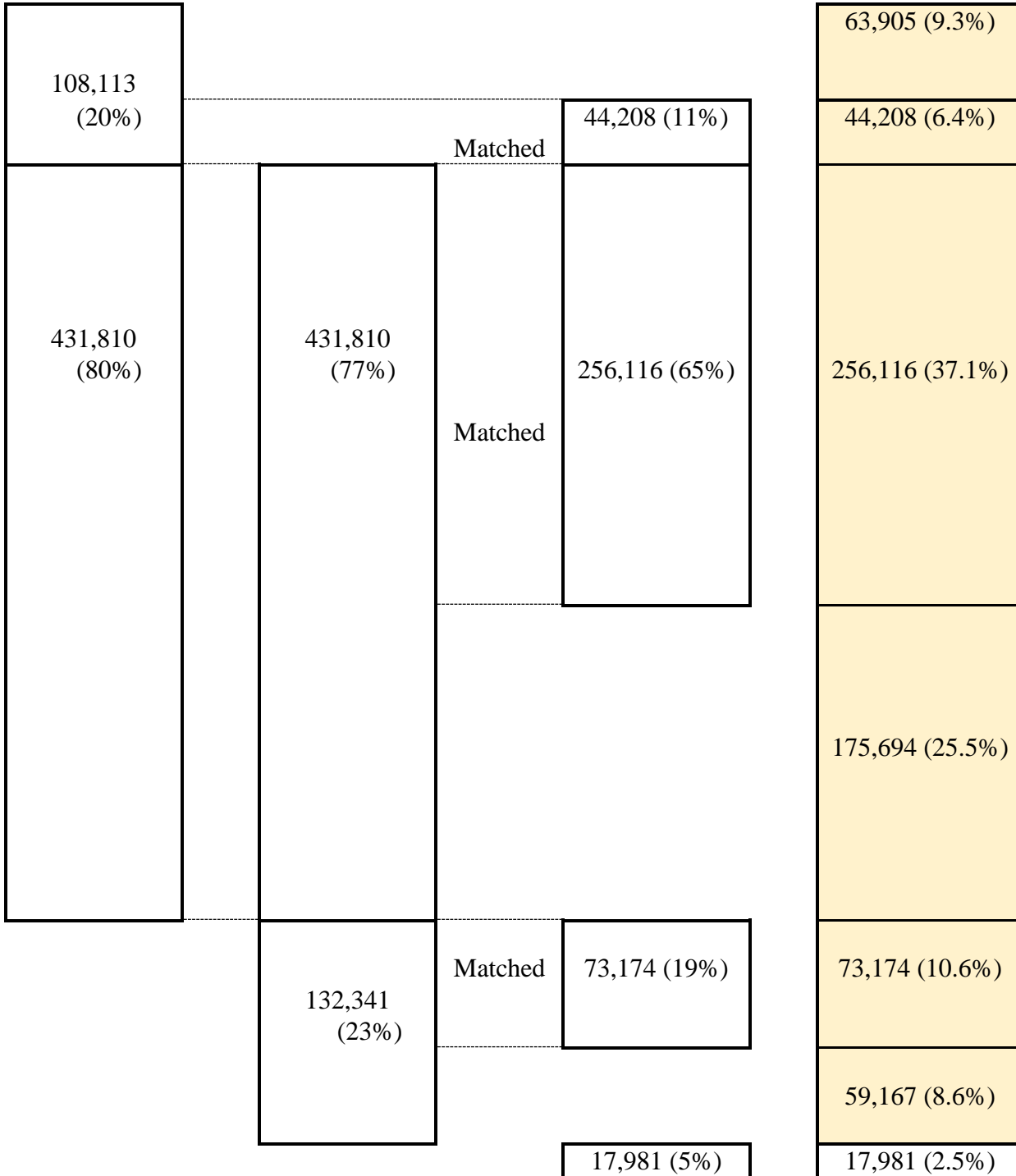
<Appendix B1 Exhibit 1> illustrates the linkage process and shows the final fully linked data set. First, The EDIE data were linked to Hospital ED discharge data, according to unique person identifier and unique episode identifier. Eighty percent of observations in the EDIE data were uniquely match-merged with the hospital ED discharge data while 77% of hospital ED discharge data were matched with EDIE data.

Second, the Medicaid claims data were then linked to create the full-linked data set. Sixty-five percent of observations in Medicaid claims data were matched with both EDIE and hospital discharge data sets. Eleven percent of Medicaid claims records were linked uniquely to EDIE data only and 19% were matched with hospital ED discharge data only. Five percent of Medicaid claims data were not linked to either of the two data sources.

The full linked data set included 690,245 unique ED episodes on 290,181 unique individuals, with an average of approximately 2.4 ED episodes per patient during the one-year sample period. In the combined data set, the EDIE data captured 78% of total unique ED visits while hospital ED discharge data captured 82%. Twenty-seven percent of all ED visits in the full-linked data set or 256,116 observations were linked across all three data sets. In comparison, 6.4% of the total ED episodes or 44,208 observations were matched between EDIE and Medicaid claims; 10.6% or 73,174 observations were reported in both hospital ED discharge and Medicaid claims datasets; 9.3% or 63,905 observations came from EDIE data only; 8.6% or 59,167 observations were only reported in hospital ED discharge data; and 2.6% or 17,981 observations in Medicaid data did not match with either of the other data sets. Roughly 20% of the entire unique episodes or 141,055 observations originated from a single data source.

Appendix B1 Exhibit 1. Linkage of hospital discharge, EDIE and Medicaid claims

EDIE (N = 539,923) + Hospital ED (N = 564,151) + Medicaid (N = 391,479) = Fully linked (N = 690,245)



Appendix B2. Description of Psychiatric ED Visit

Psychiatric ED visit describes ED episodes for both pediatric and adult patients who have been admitted with an ICD-9 code corresponding to mental health conditions. The following table shows the ICD-9 codes and their corresponding diagnoses used to define psychiatric ED visits in Oregon hospital EDs for EDIE data, Hospital ED data, and Medicaid claims data. We adopted psychiatric visit profiling suggested by Slade & Goldman (2015) and Yoon et al. (2014). The following ICD-9 codes were considered to indicate a psychiatric visit.

ICD-9 codes for psychiatric ED visit

ICD-9 code	Description
290	Organic Psychotic Conditions
293	Transient Mental Disorders due to Conditions Classified Elsewhere
294	Persistent Mental Disorders due to Conditions Classified Elsewhere
295	Schizophrenic Disorders
296	Episodic Mood Disorders
2962	Major Depressive Disorder - single episode
297	Delusional Disorders
298	Non-organic Psychoses
299	Pervasive Developmental Disorders
300	Neurotic Disorders
301	Personality Disorders
302	Sexual Disorders
305	Nondependent Abuse of Drugs
306	Psycho-physiological Disorders
307	Special Mental Symptoms Not Elsewhere Classified
308	Acute Reaction to Stress
309	Adjustment Reaction
310	Nonpsychotic Brain Syndrome
311	Depressive Disorder Not Elsewhere Classified
312	Conduct Disturbance Not Elsewhere Classified
313	Emotional Disorders of Adolescence
314	Hyperkinetic Syndrome
315	Specific Delays in Development

316	Psychic Factors with Other Disorders
317	Mild Intellectual Disabilities
318	Moderate Intellectual Disabilities
319	Unspecified Intellectual Disabilities
797	Senility without Mention of Psychosis
3310	Alzheimer's Disease
3311	Pick's Disease
3312	Senile Degeneration of Brain
3318	Cerebral Degeneration
6484	Mental Disorders in Pregnancy
E95.0	Suicide and Self-inflicted Poisoning by Solid or Liquid Substances
E95.9	Late effects of Self-inflicted Injury
V40.0	Problems with Learning
V40.1	Problems with Communication
V40.2	Mental Problems (Other)
V40.3	Mental Problems (Other)
V40.9	Mental/Behavior Problem Not Otherwise Specified
V62.8	Other Psychological or Physical Stress Not Elsewhere Classified
V66.3	Mental Disorder Convalescence
V67.3	Psychiatric Follow-up
V70.1	Psychiatric Exam - Authority Requested
V70.2	General Psychiatric Examination
V71.0	Observation for Suspected Mental Condition
V79.0	Screening for Depression
V79.8	Screening for Other Specified Mental Disorders and Developmental Handicaps
V79.9	Screening for Unspecified Mental Disorders and Developmental Handicap

Appendix B3. Comparison of Matched and Full ED Visit Sample for Medicaid Patients

We assess whether the raw data only for linked patients are representative of all ED visits in Oregon using full Medicaid claims data for the one-year sample period which included ED data for both matched and unmatched patients. Presented below are descriptive characteristics separately for all ED visits from the full Medicaid claims data and the subset of all ED visits analyzed in this report.

First, our analytic data for Medicaid patients included 319,479 unique ED visits while the full claims data included 806,403 unique ED visits. Therefore, Medicaid ED visits in our analytic data represent 40% of the entire Medicaid ED visits. In comparison, the full-linked analytic data also contain 40% of all ED visits in Oregon regardless of payers.

Second, basic demographic characteristics are similar between the matched and full Medicaid samples.

Third, the rate of psychiatric visits is higher for the matched Medicaid sample and the rate of substance abuse is also slightly higher for the matched Medicaid sample.

We also note that the rate of boarded psychiatric ED visits for Medicaid patients is identical to that for the fully-linked analytic data set as shown in <Exhibits 3-2 and 3-20>, suggesting that Medicaid ED data are representative of all ED data in Oregon. Therefore, taken together, our psychiatric ED boarding data presented in this report are likely to be representative of data for all ED visits in Oregon during the study period, although our estimates may slightly overestimate rates of psychiatric ED boarding in Oregon.

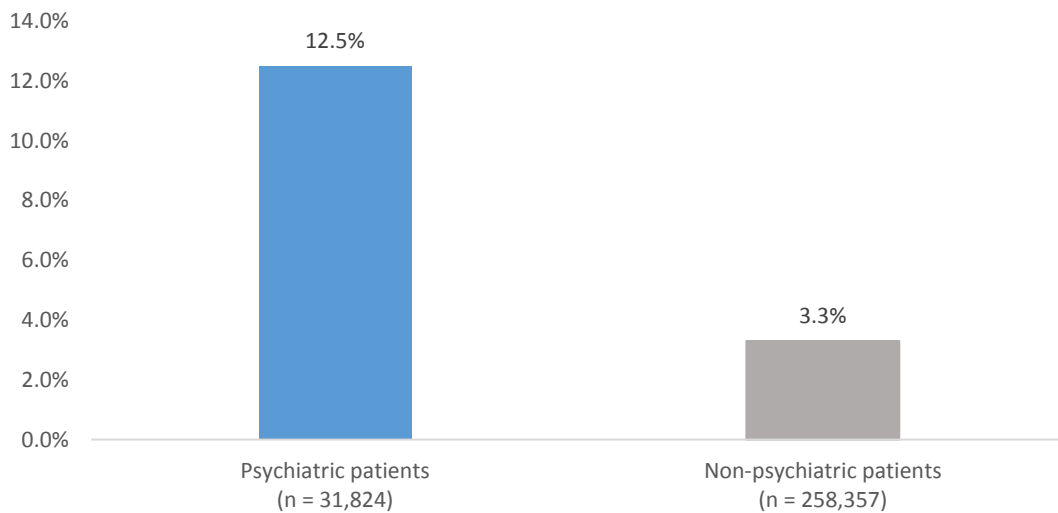
Variable	Matched Medicaid sample		Full Medicaid sample	
	Mean	Std. dev.	Mean	Std. dev.
Psychiatric visit	18.0%	0.38	12.1%	0.33
Severe psychiatric	2.5%	0.16	1.9%	0.13
Non-severe psychiatric	15.5%	0.36	10.2%	0.30
Substance abuse	4.6%	0.21	3.0%	0.17
Age	33.1	19.3	34.4	20.2
Female	58.0%	0.49	56.1%	0.50
<i>Race</i>				
White	86.9%	0.34	86.1%	0.35
Black	6.9%	0.25	6.3%	0.24
AIAN	2.5%	0.16	2.6%	0.16
Asian	1.5%	0.12	1.8%	0.13
NHPI	0.4%	0.06	0.4%	0.06
Other	1.7%	0.13	2.6%	0.16
Hispanic	11.3%	0.32	12.9%	0.34

Appendix B4. Analysis of the full-linked data set: Unique ED patients

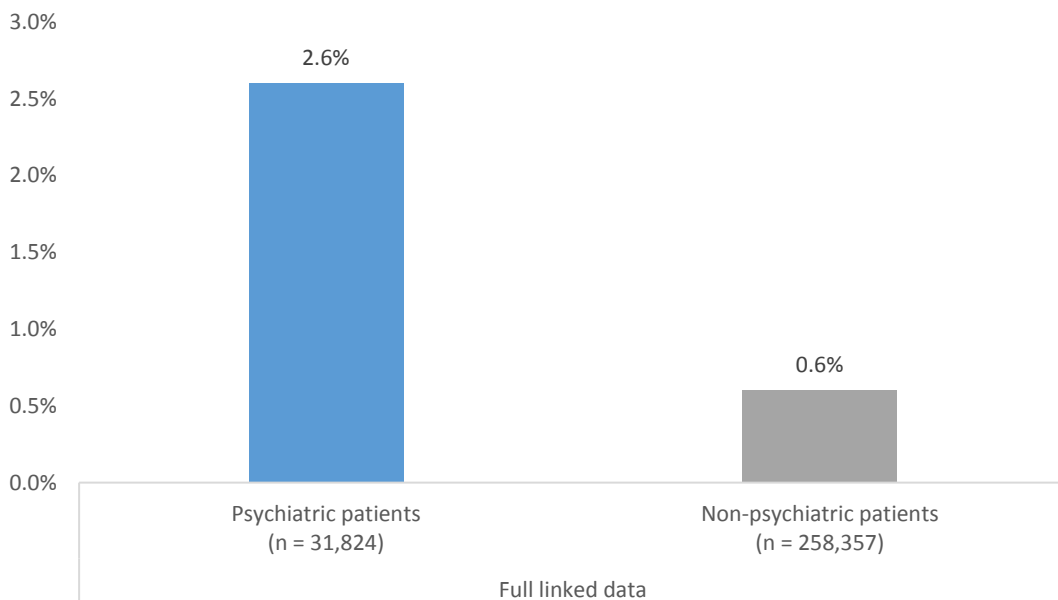
<Appendix B4 Exhibit 1> reports the proportion of boarded ED patients separately for psychiatric and non-psychiatric patients. As shown in Panel A, based on the 6-hour definition, 12.5% of all psychiatric patients were boarded, about four times larger than 3.3% for non-psychiatric ED patients.

Appendix B4 Exhibit 1. Proportions of boarded psychiatric and non-psychiatric ED patients in Oregon, Oct. 2014 – Sep. 2015

Panel A: 6-hour definition



Panel B: 24-hour definition



The severity of psychiatric conditions again appears to increase the chance of psychiatric boarding. As shown in <Appendix B5 Exhibit 2> about 12% of all psychiatric ED patients received diagnoses of severe mental illness and the remaining 88% identified as receiving diagnoses of non-severe mental illness. Based on the 6-hour definition, 865 patients (2.7% of all psychiatric ED patients) were boarded with severe psychiatric conditions while 3,118 patients (about 10% of all psychiatric patients in EDs) were boarded with non-severe psychiatric conditions. <Appendix B5 Exhibit 3> illustrates the rate of psychiatric ED boarding among severe psychiatric patients in EDs is twice as large as that for non-severe psychiatric patients in EDs. Again our findings closely mirror those from the episode-level analysis.

Appendix B4 Exhibit 2. Unique ED patients (proportions¹) in Oregon, Oct. 2014 – Sep. 2015: By severity of psychiatric conditions

	<i>Boarding definition</i>	
	24-hour definition	6-hour definition
Total psychiatric ED patients ²	31,824	31,824
Severe patients ³	3,819 (12.0%)	3,819 (12.0%)
Boarded	319 (1.0%)	865 (2.7%)
Non-severe patients	28,005 (88.0%)	28,005 (88.0%)
Boarded	492 (1.5%)	3,118 (9.8%)

¹The denominator is total psychiatric ED patients.

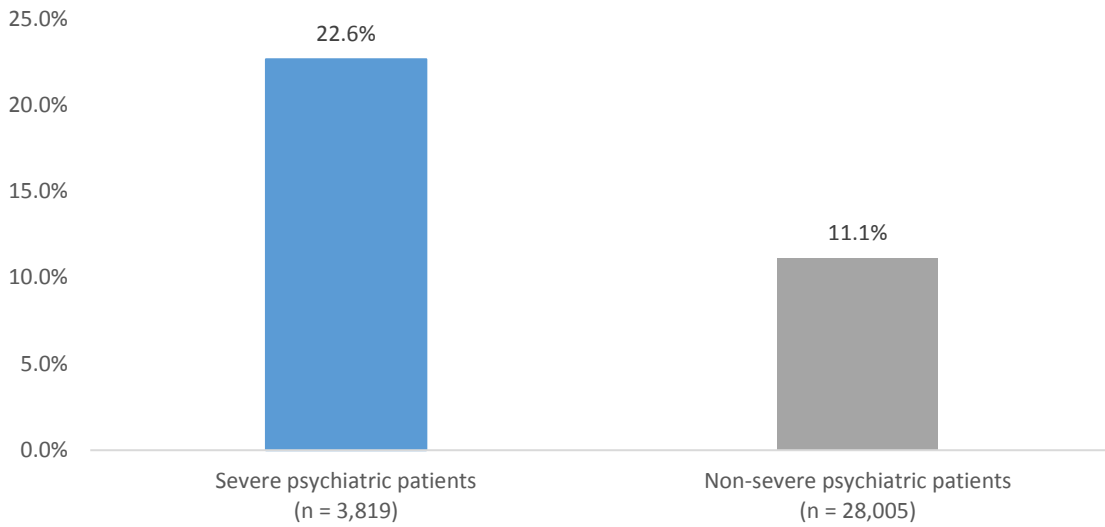
²Psychiatric patient defined as having ICD-9 diagnoses for mental illness and related injury, including: 290-319 (all mental illness); 648.4, V40.2, V40.3, V40.9, V67.3 (other miscellaneous mental disorders and problems); 331.0, 331.1, 331.2, 331.8, 797 (delirium, dementia and other cognitive limitations); V40.0, V40.1 (other developmental problems); E950-E959, V628 (suicide related); V62.8, V66.3, V67.3, V70.1, V70.2 V71.0, V79.0, V79.8, V79.9 (mental health exam and screening).

³Severe mental illness patient defined as having ICD-9 diagnoses for severe mental illness, including: 295 (Schizophrenic Disorders), 296 (Episodic Mood Disorders), 297 (Delusional Disorders), 298 (Non-organic Psychoses)

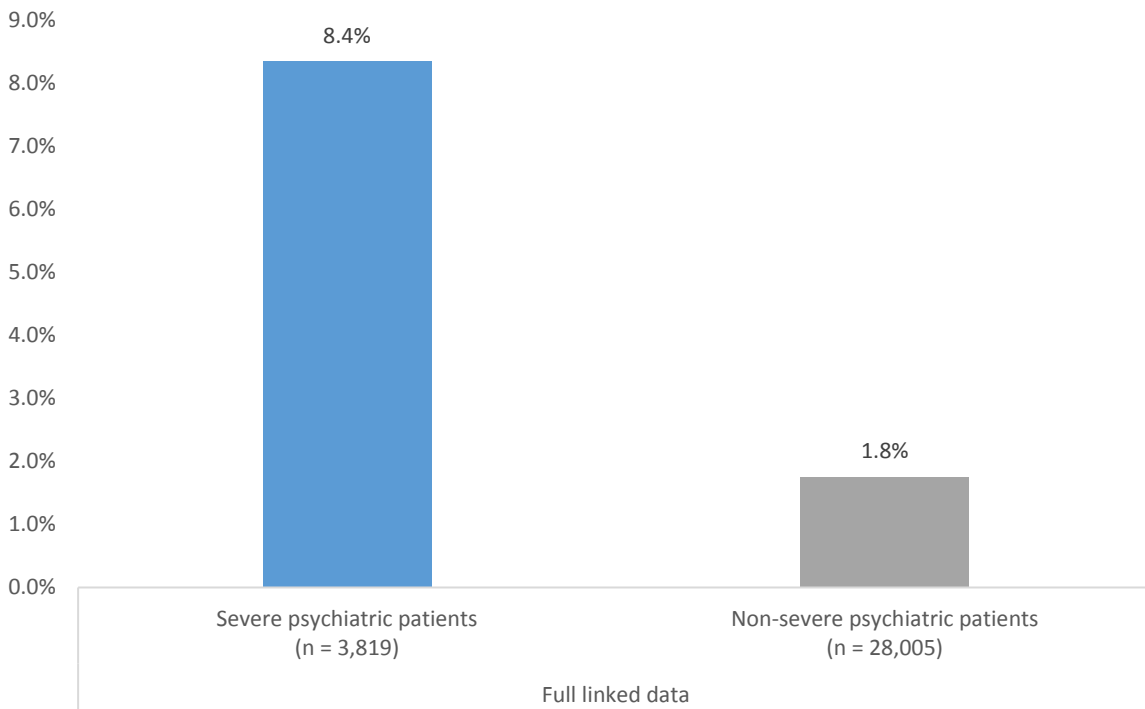
⁴The 24-hour definition defines ED boarding defined as staying in ED longer than 24 hours (AZHHA, 2015). The 6-hour definition defines ED boarding as staying in ED longer than 6 hours (Nolan et al., 2015).

Appendix B4 Exhibit 3. Proportions of boarded severe and non-severe psychiatric ED patients in Oregon, Oct. 2014 – Sep. 2015

Panel A: 6-hour definition



Panel B: 24-hour definition



Appendix B5. Analysis of data from each of the independent data sources: Unique ED visits

<Appendix B5 Exhibit 1> presents results on unique ED visits and boarding incidents in Oregon between October 2014 and September 2015, separately for the hospital discharge and EDIE data. ED utilization episodes were identified using ED admission date and hour information from the source data files. Results are reported for both 6-hour and 24-hour definitions of ED boarding.

Data from the hospital ED discharge database revealed that during the one-year period, there were total 564,151 unique ED utilization episodes. Approximately 7% of all ED episodes, psychiatric and non-psychiatric, were psychiatric episodes. Using the 24-hour and 6-hour definitions, we find that about 0.9% and 5.5% of all ED visits, psychiatric and non-psychiatric, were classified as boarding episodes, respectively. Based on the 6-hour definition, 8,888 ED visits (1.6% of all ED visits) in the hospital discharge data were classified as psychiatric ED boarding episodes.

Appendix B5 Exhibit 1. Unique ED visits (proportions¹) in Oregon, Oct. 2014 – Sep. 2015

	<i>Data Source:</i>			
	Hospital ED discharge		EDIE	
	<i>Boarding definition:</i>			
	24-hour definition	6-hour definition	24-hour definition	6-hour definition
Total ED visits	564,151	564,151	539,923	539,923
Psychiatric visits ²	39,887 (7.1%)	39,887 (7.1%)	87,005 (16.1%)	87,005 (16.1%)
Boarded visits ³	5,230 (0.9%)	30,817 (5.5%)	7,255 (1.3%)	34,074 (6.3%)
Psychiatric ED boarding ⁴	2,293 (0.4%)	8,888 (1.6%)	3,362 (0.6%)	14,110 (2.6%)

¹The denominator is total ED visits.

²Psychiatric visit defined as having ICD-9 diagnoses for mental illness and related injury, including: 290-319 (all mental illness); 648.4, V40.2, V40.3, V40.9, V67.3 (other miscellaneous mental disorders and problems); 331.0, 331.1, 331.2, 331.8, 797 (delirium, dementia and other cognitive limitations); V40.0, V40.1 (other developmental problems); E950-E959, V628 (suicide related); V62.8, V66.3, V67.3, V70.1, V70.2 V71.0, V79.0, V79.8, V79.9 (mental health exam and screening).

³The 24-hour definition defines ED boarding as staying in ED longer than 24 hours (AZHHA, 2015). The 6-hour definition defines ED boarding as staying in ED longer than 6 hours (Nolan et al., 2015).

⁴Meet both definitions of psychiatric and ED boarding episodes.

In comparison, the EDIE data captured 539,923 unique ED visits for the same study period, which is slightly less than the unique ED episodes captured in the hospital ED discharge database. Sixteen percent of all psychiatric ED visits had a psychiatric diagnosis, more than twice larger than

the corresponding 7% in the hospital discharge data. It is worth noting that the difference is partially attributable to fewer discharge diagnoses recorded in the hospital discharge data. Nonetheless, the counts and proportions of all boarded ED visits are similar to those in the hospital discharge data. Likewise, the counts and proportions of boarded psychiatric ED visits are larger than those in the hospital discharge data. Based on the 6-hour definition, 14,110 ED visits (2.6% of all ED visits) in the EDIE data were psychiatric ED boarding episodes.

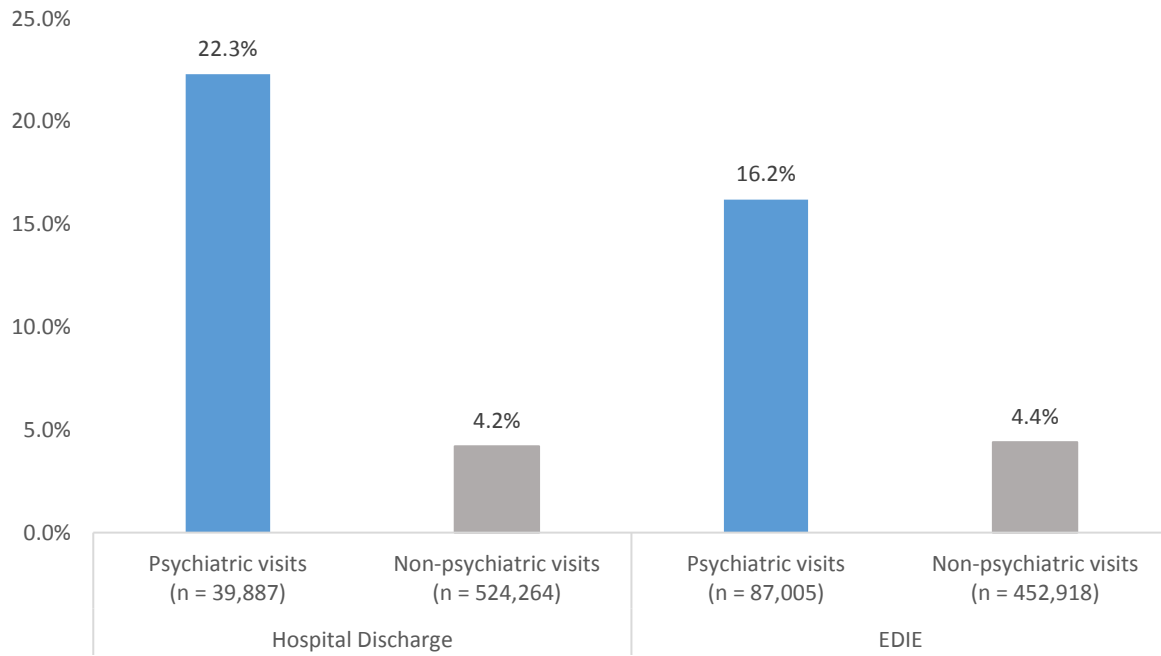
< Appendix B5 Exhibit 2> shows the proportion of boarded ED episodes separately for psychiatric and non-psychiatric visits. Data are also presented separately for the hospital discharge and EDIE databases. As shown in Panel A, based on the 6-hour definition, 22.3% of all psychiatric ED visits in Oregon were classified as boarding episodes, more than 5 times higher than that of non-psychiatric ED visits. In comparison, the EDIE data suggest that based on the 6-hour definition of ED boarding, approximately 16% of psychiatric ED visits were boarding episodes. It is smaller than the rate of 22.3% in the hospital discharge data because although more psychiatric ED boarding cases were identified in the EDIE data than in the hospital discharge data, much more psychiatric visits were identified in the EDIE data. The rate of psychiatric ED boarding from the EDIE data is closer to the national average of 12.8% in 2008 (Nolan et al., 2015).

Based on the 24-hour boarding definition, 2,293 ED visits (5.8% of all psychiatric ED visits) were classified as boarding episodes in the hospital discharge data (Panel B). The corresponding count (rate) of psychiatric ED boarding in the EDIE data was 3,362 (3.9% of all psychiatric ED visits). The Arizona Hospital and Healthcare Association similarly found 7% of psychiatric ED boarding rate in Arizona based on the same 24-hour definition (Arizona Hospital and Healthcare Association, 2015).

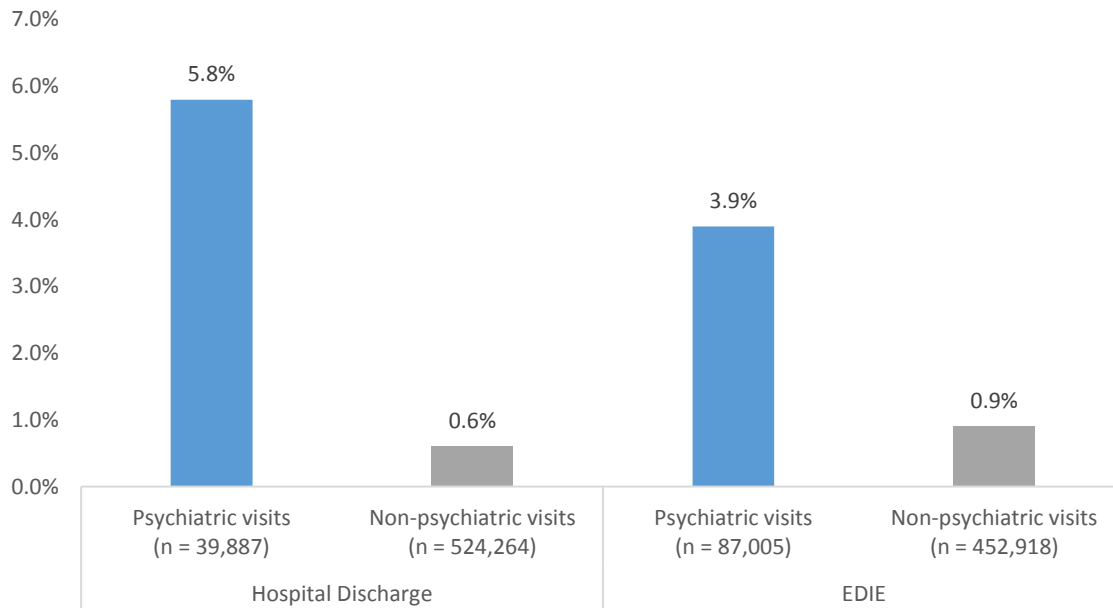
The severity of psychiatric conditions during the ED visit appears to increase the rate of ED boarding incidence, shown in < Appendix B5 Exhibit 3>. Again the EDIE data contained more psychiatric ED boarding cases than the hospital discharge data. This difference was larger for non-severe psychiatric visits than for severe psychiatric visits.

Appendix B5 Exhibit 2. Proportions of boarded episodes in psychiatric and non-psychiatric ED visits in Oregon, Oct. 2014 – Sep. 2015

Panel A: 6-hour definition



Panel B: 24-hour definition



**Appendix B5 Exhibit 3. Unique ED visits (proportions¹) in Oregon, Oct. 2014 – Sep. 2015:
By severity of psychiatric conditions**

	<i>Data Source:</i>			
	Hospital ED discharge		EDIE	
	<i>Boarding definition:</i>			
	24-hour definition	6-hour definition	24-hour definition	6-hour definition
Total psychiatric ED visits ²	39,887	39,887	87,005	87,005
Severe episodes ³	7,200 (18.1%)	7,200 (18.1%)	11,823 (13.6%)	11,823 (13.6%)
Boarded ⁴	1,039 (2.6%)	2,605 (6.6%)	1,363 (1.6%)	3,619 (4.2%)
Non-severe episodes	32,687 (82.0%)	32,687 (82.0%)	75,182 (86.4%)	75,182 (86.4%)
Boarded	1,254 (3.1%)	6,283 (8.2%)	1,999 (2.3%)	10,491 (12.1%)

¹The denominator is total psychiatric ED visits.

²Psychiatric visit defined as having ICD-9 diagnoses for mental illness and related injury, including: 290-319 (all mental illness); 648.4, V40.2, V40.3, V40.9, V67.3 (other miscellaneous mental disorders and problems); 331.0, 331.1, 331.2, 331.8, 797 (delirium, dementia and other cognitive limitations); V40.0, V40.1 (other developmental problems); E950-E959, V628 (suicide related); V62.8, V66.3, V67.3, V70.1, V70.2, V71.0, V79.0, V79.8, V79.9 (mental health exam and screening).

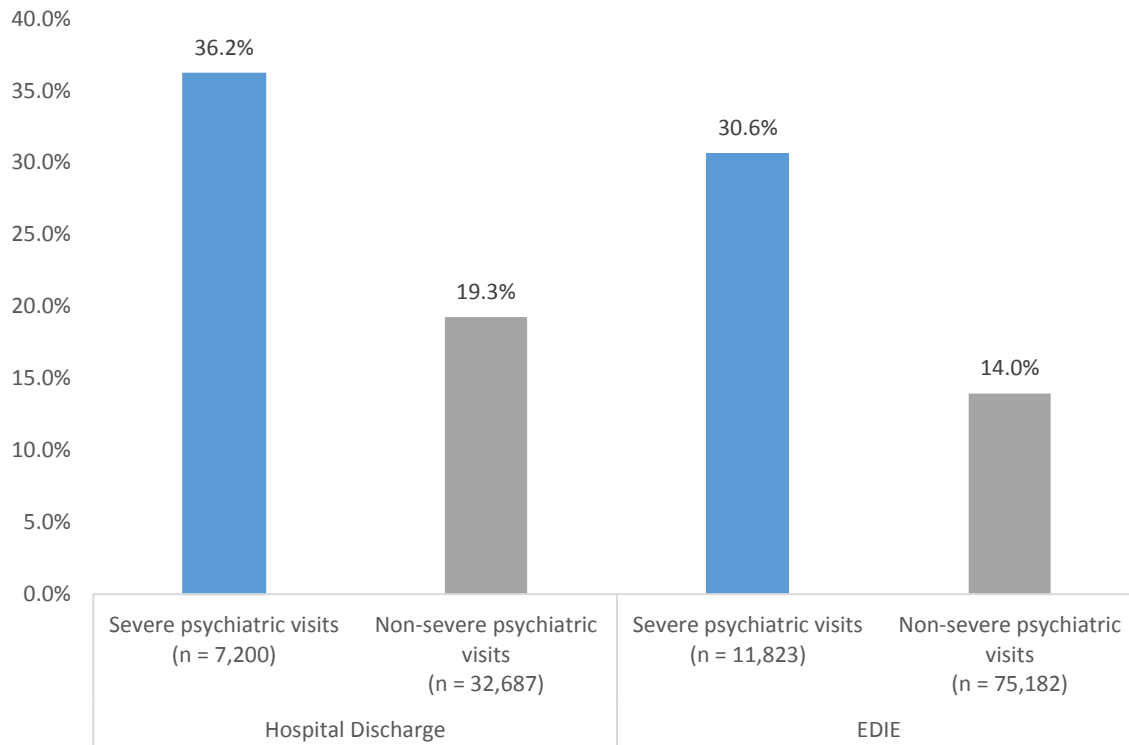
³Severe mental illness visit defined as having ICD-9 diagnoses for severe mental illness, including: 295 (Schizophrenic Disorders), 296 (Episodic Mood Disorders), 297 (Delusional Disorders), 298 (Non-organic Psychoses)

⁴The 24-hour definition defines ED boarding defined as staying in ED longer than 24 hours (AZHHA, 2015). The 6-hour definition defines ED boarding as staying in ED longer than 6 hours (Nolan et al., 2015).

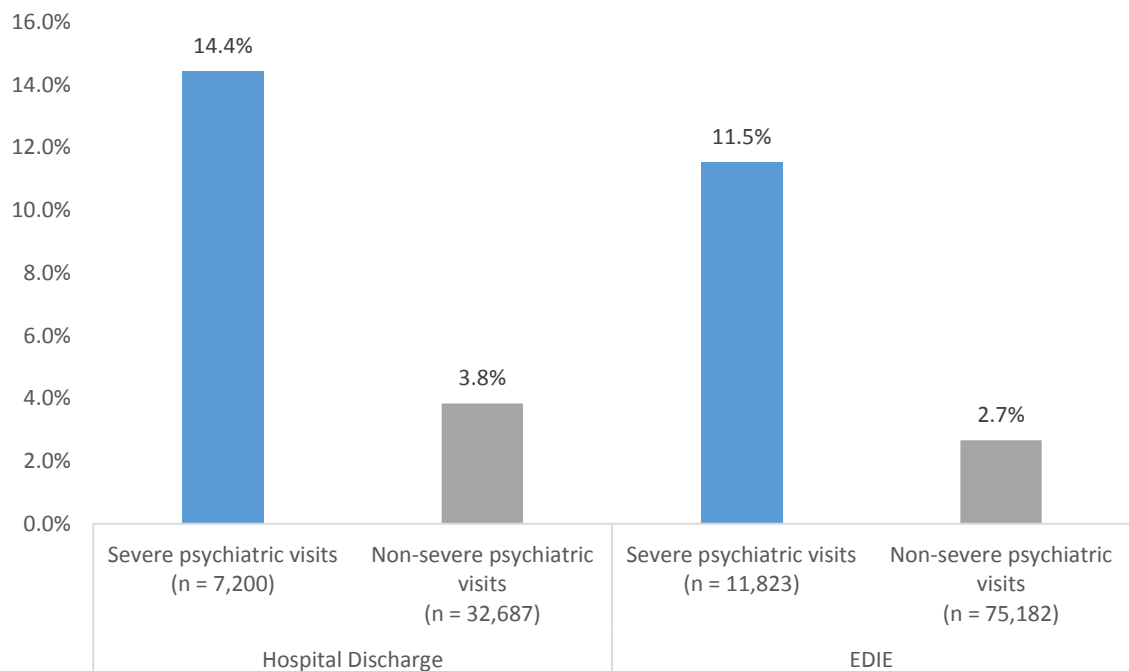
The rate of psychiatric ED boarding was greater for severe psychiatric ED visits (<Appendix B6 Exhibit 4>) in both hospital discharge and EDIE databases. Based on the 6-hour definition, 2,605 severe psychiatric ED visits (about 36% of all severe psychiatric ED visits) were classified as boarding episodes in the hospital discharge data, and 3,619 severe psychiatric visits (30.6% of all severe psychiatric visits) in the EDIE data. These rates are nearly twice greater than the rates for non-severe psychiatric ED visits.

Appendix B5 Exhibit 4. Proportions of boarded episodes in severe and non-severe psychiatric ED visits in Oregon, Oct. 2014 – Sep. 2015

Panel A: 6-hour definition



Panel B: 24-hour definition



Appendix B6. Comparison of Data from Independent Data Sources: Unique ED Patients

Appendix B6 Exhibit 1. Unique ED patients (proportions¹) in Oregon, Oct. 2014 – Sep. 2015

	<i>Data Source:</i>			
	Hospital ED discharge		EDIE	
	<i>Boarding definition:</i>			
	24-hour definition	6-hour definition	24-hour definition	6-hour definition
Total ED patients	284,609	284,609	245,645	245,645
Psychiatric patients ²	9,353 (3.3%)	9,353 (3.3%)	31,997 (13.0%)	31,997 (13.0%)
Boarded patients ³	2,009 (0.7%)	12,611 (4.4%)	2,496 (1.0%)	12,983 (5.3%)
Psychiatric ED boarding ⁴	603 (0.2%)	2,029 (0.7%)	1,041 (0.4%)	4,633 (1.9%)

¹The denominator is total ED patients.

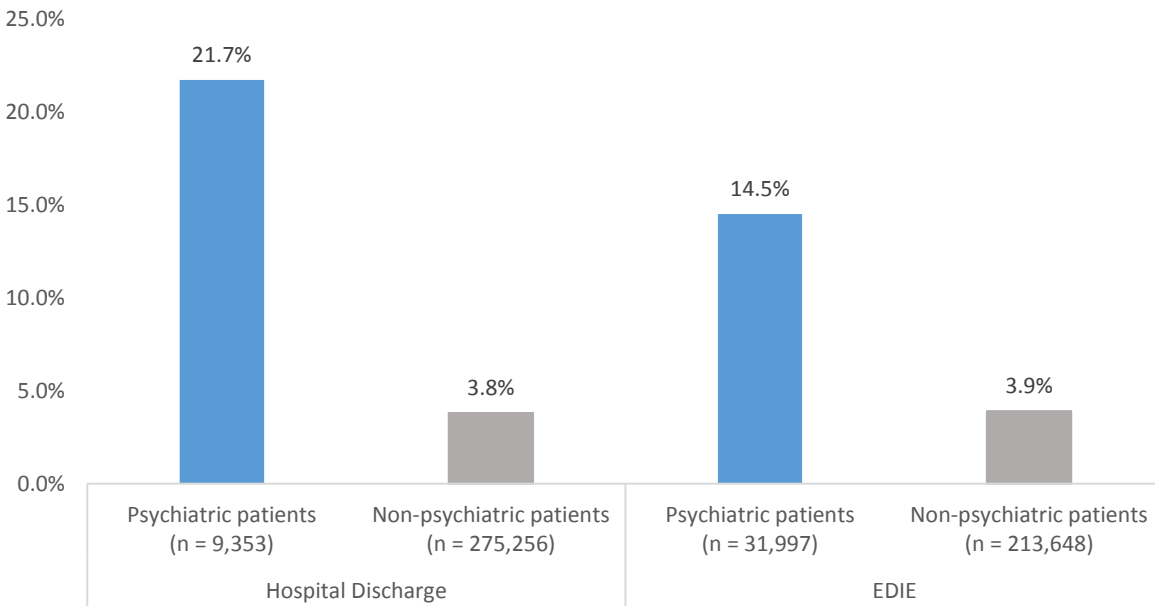
²Psychiatric patient defined as having ICD-9 diagnoses for mental illness and related injury, including: 290-319 (all mental illness); 648.4, V40.2, V40.3, V40.9, V67.3 (other miscellaneous mental disorders and problems); 331.0, 331.1, 331.2, 331.8, 797 (delirium, dementia and other cognitive limitations); V40.0, V40.1 (other developmental problems); E950-E959, V628 (suicide related); V62.8, V66.3, V67.3, V70.1, V70.2 V71.0, V79.0, V79.8, V79.9 (mental health exam and screening).

³The 24-hour definition defines ED boarding as staying in ED longer than 24 hours (AZHHA, 2015). The 6-hour definition defines ED boarding as staying in ED longer than 6 hours (Nolan et al., 2015).

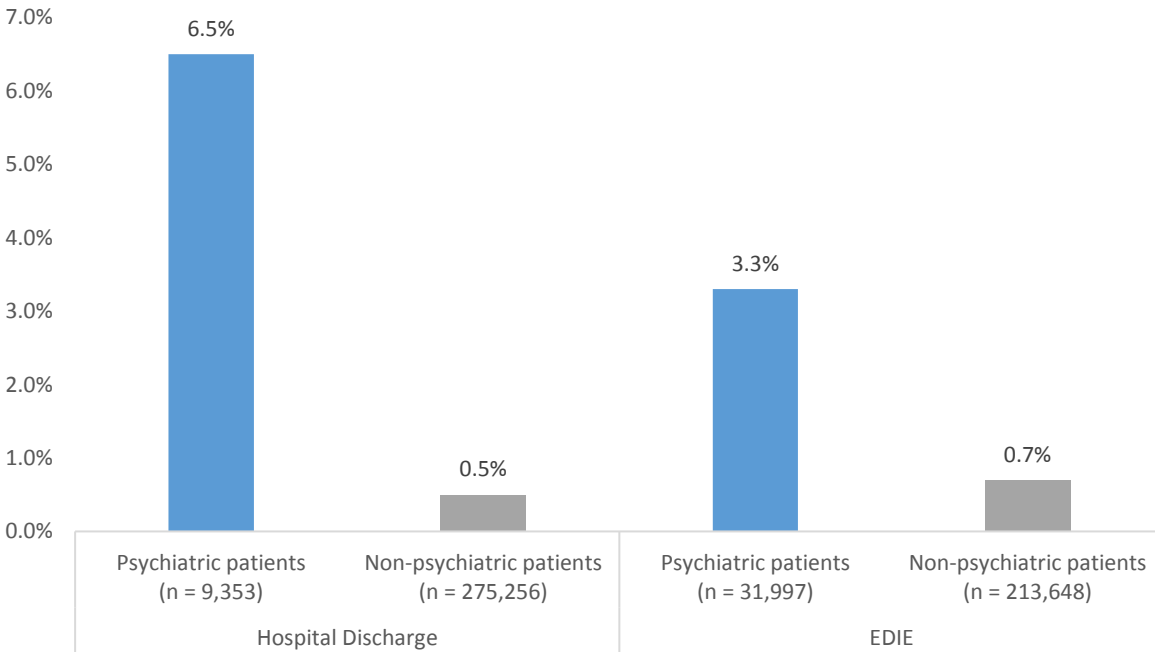
⁴Meet both definitions of psychiatric and ED boarding patients.

Appendix B6 Exhibit 2. Proportions of boarded ED patients in Oregon by psychiatric visit status, Oct. 2014 – Sep. 2015

Panel A: 6-hour definition



Panel B: 24-hour definition



Appendix B6 Exhibit 3. Unique ED patients (proportions¹) in Oregon, Oct. 2014 – Sep. 2015: By the severity of psychiatric conditions

	<i>Data Source:</i>			
	Hospital ED discharge		EDIE	
	<i>Boarding definition:</i>			
	24-hour definition	6-hour definition	24-hour definition	6-hour definition
Total psychiatric ED patients ²	9,353	9,353	31,997	31,997
Severe patients ³	1,592 (17.0%)	1,592 (17.0%)	3,571 (11.2%)	3,571 (11.2%)
Boarded	279 (3.0%)	615 (6.6%)	424 (1.3%)	1,075 (3.4%)
Non-severe patients	7,761 (83.0%)	7,761 (83.0%)	28,426 (88.8%)	28,426 (88.8%)
Boarded	324 (3.5%)	1,414 (15.1%)	617 (1.9%)	3,558 (11.1%)

¹The denominator is total psychiatric ED patients.

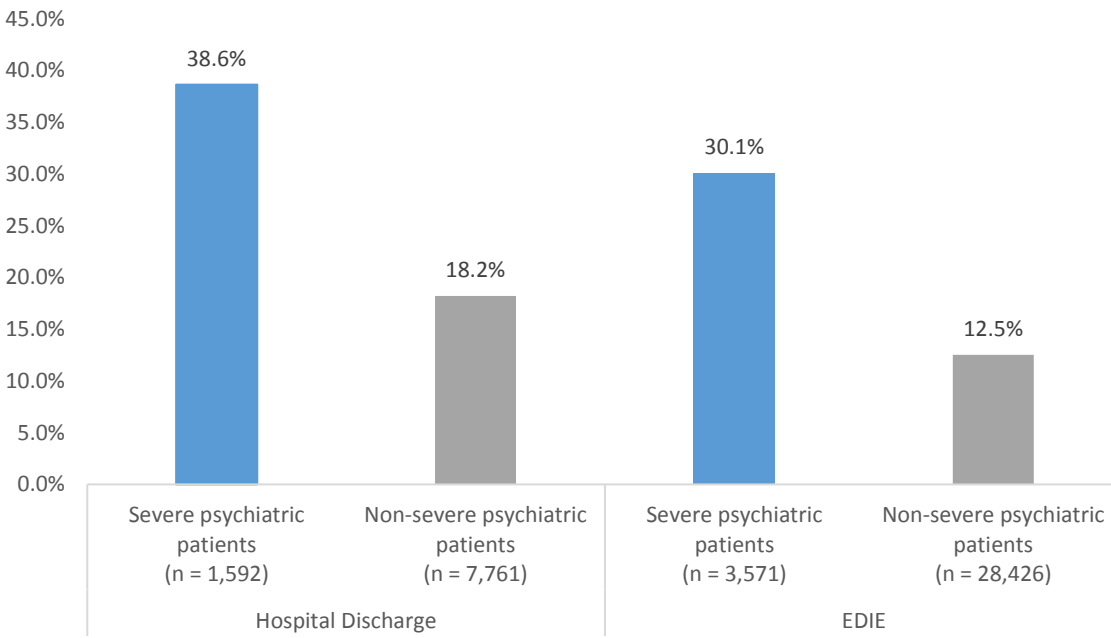
²Psychiatric patient defined as having ICD-9 diagnoses for mental illness and related injury, including: 290-319 (all mental illness); 648.4, V40.2, V40.3, V40.9, V67.3 (other miscellaneous mental disorders and problems); 331.0, 331.1, 331.2, 331.8, 797 (delirium, dementia and other cognitive limitations); V40.0, V40.1 (other developmental problems); E950-E959, V628 (suicide related); V62.8, V66.3, V67.3, V70.1, V70.2 V71.0, V79.0, V79.8, V79.9 (mental health exam and screening).

³Severe mental illness patient defined as having ICD-9 diagnoses for severe mental illness, including: 295 (Schizophrenic Disorders), 296 (Episodic Mood Disorders), 297 (Delusional Disorders), 298 (Non-organic Psychoses)

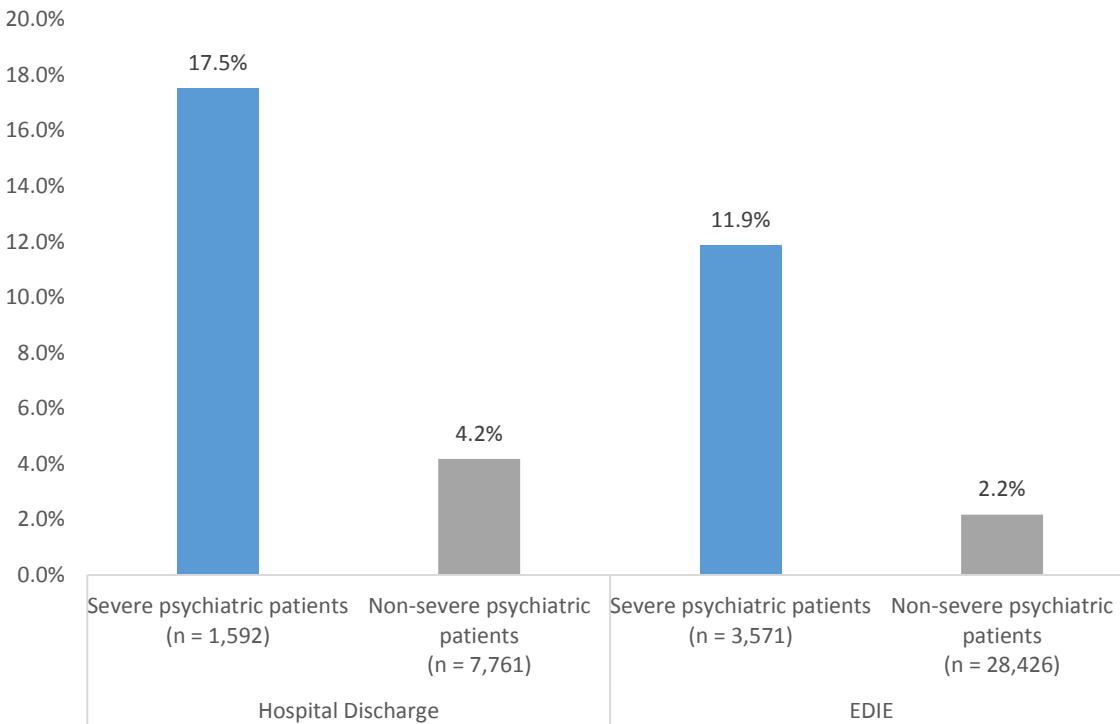
⁴The 24-hour definition defines ED boarding as staying in ED longer than 24 hours (AZHHA, 2015). The 6-hour definition defines ED boarding as staying in ED longer than 6 hours (Nolan et al., 2015).

Appendix B6 Exhibit 4. Proportions of boarded ED patients in Oregon by the severity of psychiatric conditions, Oct. 2014 – Sep. 2015

Panel A: 6-hour definition



Panel B: 24-hour definition



Appendix B6 Exhibit 5. Unique Medicaid patients (proportions¹) in Oregon EDs, Oct. 2014 – Sep. 2015

	<i>Data Source:</i>					
	Hospital ED discharge		EDIE		Medicaid claims	
	<i>Boarding definition:</i>					
	24-hour definition	6-hour definition	24-hour definition	6-hour definition	24-hour definition	6-hour definition
Total ED patients	161,438	161,438	136,621	136,621	185,292	185,292
Psychiatric patients ²	5,343 (3.3%)	5,343 (3.3%)	16,423 (12.0%)	16,423 (12.0%)	26,096 (14.1%)	26,096 (14.1%)
Boarded patients ³	1,000 (0.6%)	6,569 (4.1%)	1,148 (0.8%)	6,672 (4.9%)	1,188 (0.6%)	7,211 (3.9%)
Psychiatric ED boarding ⁴	352 (0.2%)	1,165 (0.7%)	558 (0.4%)	2,475 (1.8%)	698 (0.4%)	2,787 (1.5%)

¹The denominator is total ED patients.

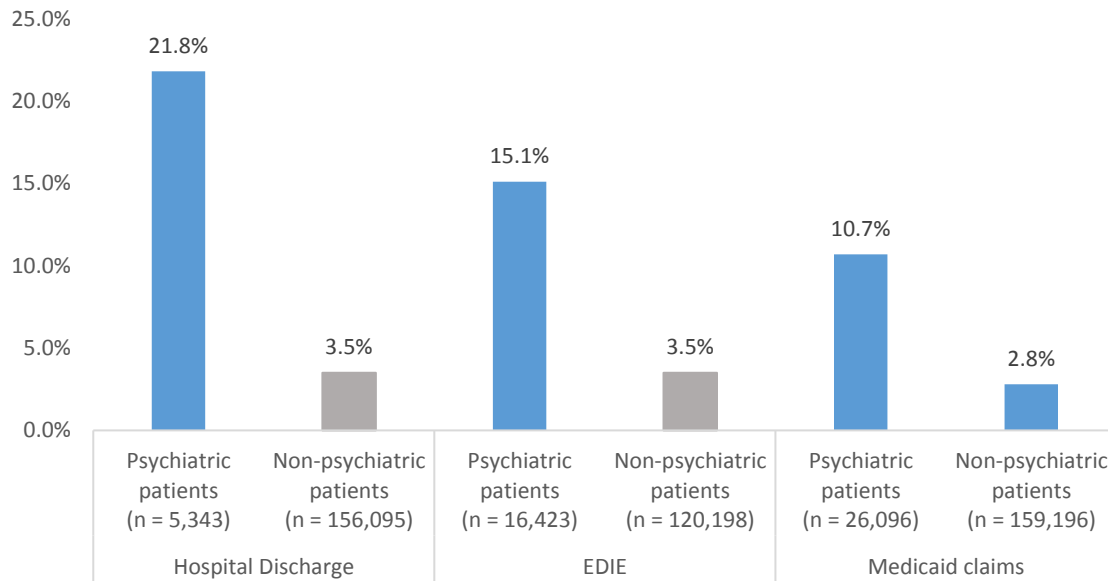
²Psychiatric patient defined as having ICD-9 diagnoses for mental illness and related injury, including: 290-319 (all mental illness); 648.4, V40.2, V40.3, V40.9, V67.3 (other miscellaneous mental disorders and problems); 331.0, 331.1, 331.2, 331.8, 797 (delirium, dementia and other cognitive limitations); V40.0, V40.1 (other developmental problems); E950-E959, V628 (suicide related); V62.8, V66.3, V67.3, V70.1, V70.2 V71.0, V79.0, V79.8, V79.9 (mental health exam and screening).

³The 24-hour definition defines ED boarding as staying in ED longer than 24 hours (AZHHA, 2015). The 6-hour definition defines ED boarding as staying in ED longer than 6 hours (Nolan et al., 2015).

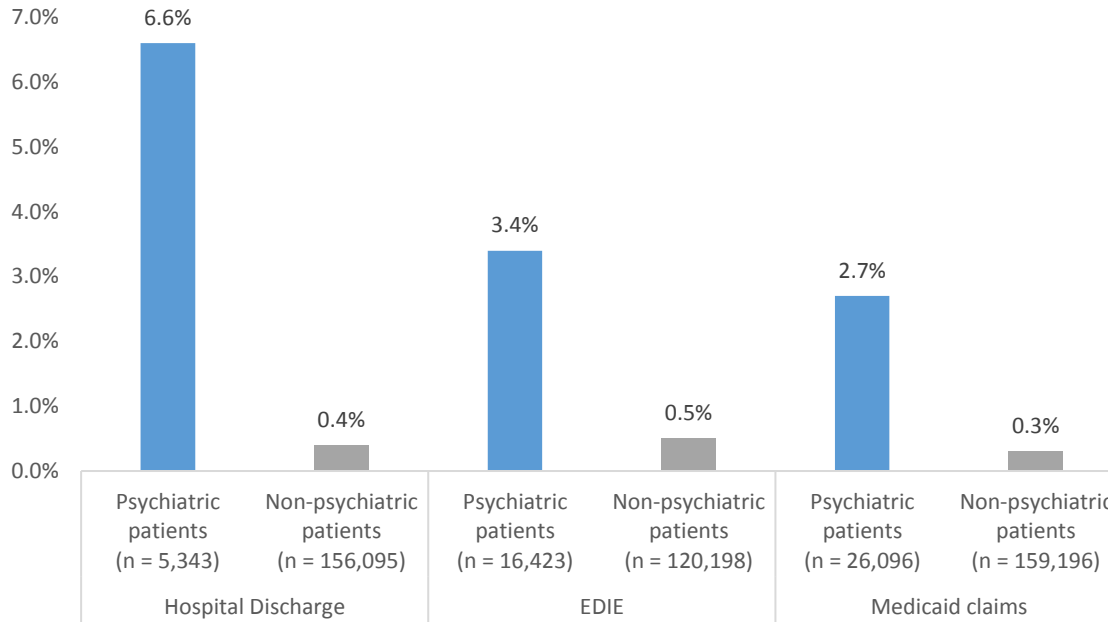
⁴Meet both definitions of psychiatric and ED boarding patients.

Appendix B6 Exhibit 6. Proportions of boarded ED patients in Oregon by psychiatric visit status, Oct. 2014 – Sep. 2015: Medicaid patients only

Panel A: 6-hour definition



Panel B: 24-hour definition



Appendix B6 Exhibit 7. Unique Medicaid patients (proportions¹) in Oregon EDs, Oct. 2014 – Sep. 2015: By the severity of psychiatric conditions

	<i>Data Source:</i>					
	Hospital ED discharge		EDIE		Medicaid claims	
	<i>Boarding definition:</i>					
	24-hour definition	6-hour definition	24-hour definition	6-hour definition	24-hour definition	6-hour definition
Total	5,343	5,343	16,423	16,423	26,096	26,096
psychiatric ED patients ²	(3.3%)	(3.3%)	(12.0%)	(12.0%)	(14.1%)	(14.1%)
Severe patients ³	886	886	1,839	1,839	2,811	2,811
	(16.6%)	(16.6%)	(11.2%)	(11.2%)	(10.8%)	(10.8%)
Boarded	169	346	243	578	299	709
	(3.2%)	(6.5%)	(1.5%)	(3.5%)	(1.1%)	(2.7%)
Non-severe patients	4,457	4,457	14,584	14,584	23,285	23,285
	(83.4%)	(83.4%)	(88.8%)	(88.8%)	(89.2%)	(89.2%)
Boarded	183	819	315	1,897	399	2,078
	(3.4%)	(15.3%)	(1.9%)	(11.6%)	(1.5%)	(8.0%)

¹The denominator is total psychiatric ED patients.

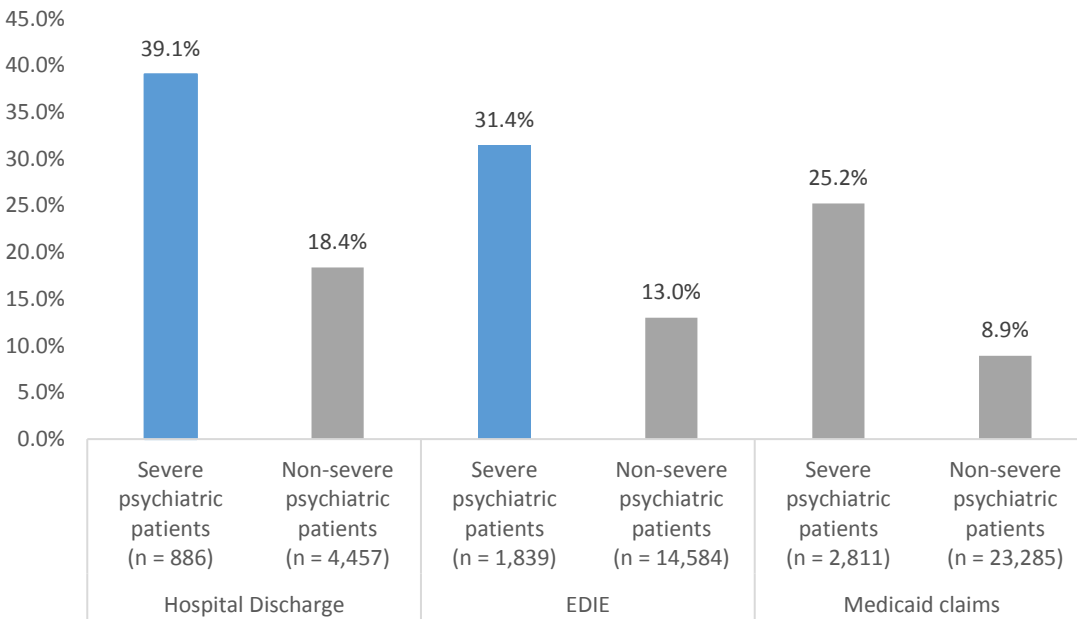
²Psychiatric patient defined as having ICD-9 diagnoses for mental illness and related injury, including: 290-319 (all mental illness); 648.4, V40.2, V40.3, V40.9, V67.3 (other miscellaneous mental disorders and problems); 331.0, 331.1, 331.2, 331.8, 797 (delirium, dementia and other cognitive limitations); V40.0, V40.1 (other developmental problems); E950-E959, V628 (suicide related); V62.8, V66.3, V67.3, V70.1, V70.2, V71.0, V79.0, V79.8, V79.9 (mental health exam and screening).

³Severe mental illness patient defined as having ICD-9 diagnoses for severe mental illness, including: 295 (Schizophrenic Disorders), 296 (Episodic Mood Disorders), 297 (Delusional Disorders), 298 (Non-organic Psychoses)

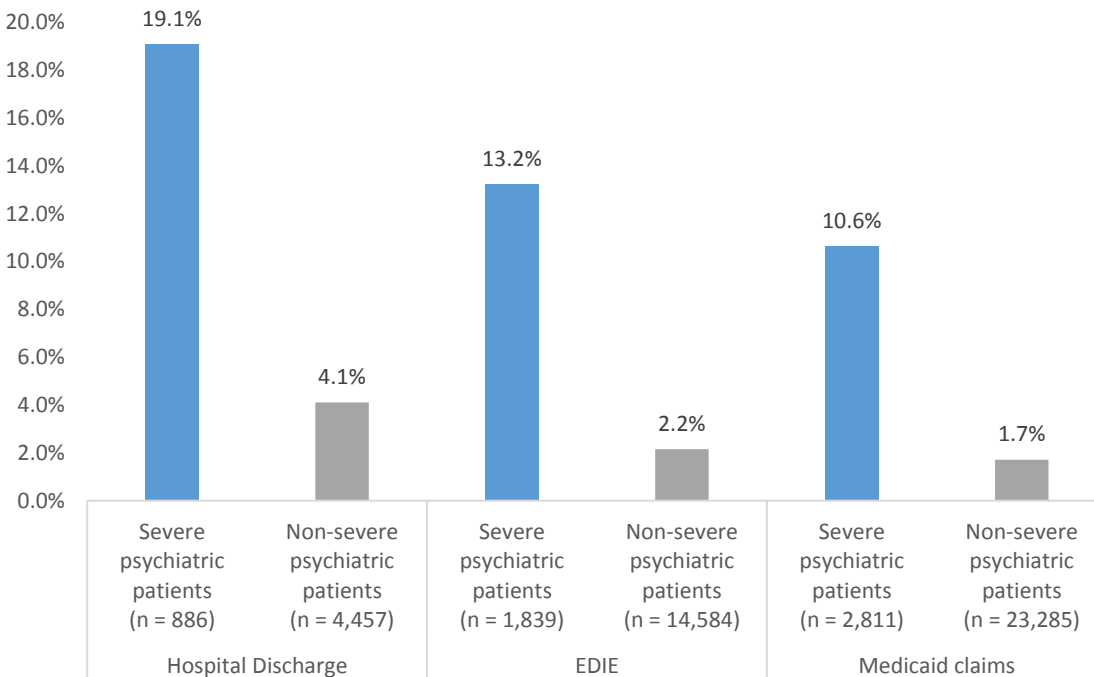
⁴The 24-hour definition defines ED boarding defined as staying in ED longer than 24 hours (AZHHA, 2015). The 6-hour definition defines ED boarding as staying in ED longer than 6 hours (Nolan et al., 2015).

Appendix B6 Exhibit 8. Proportions of boarded ED patients in Oregon by the severe of psychiatric conditions, Oct. 2014 – Sep. 2015: Medicaid patients only

Panel A: 6-hour definition



Panel B: 24-hour definition



Appendix C. Stakeholder Interview Methods and Sample

Interview Methods

We recruited stakeholders who work in the mental health field in Oregon, including mental health advocates; staff and administrators at hospitals, community mental health programs, and coordinated care organizations; and clinicians. Stakeholders were eligible to participate in an interview if they were 18 years of age or older and were knowledgeable about the problem of psychiatric boarding in Oregon. We identified interviewees through consultation with the Oregon Health Authority leadership, a review of publicly available sources, and referral from other interviewees. We aimed to include stakeholders from all regions of Oregon and a variety of mental health service areas.

We contacted potential interviewees by phone or email to request participation in the study. We then sent a formal recruitment letter soliciting their participation in the study. After we received a response from the stakeholder, we scheduled the interview.

Between January and February 2016, trained project staff conducted interviews over the phone and in-person with stakeholders. Interviews lasted 30 to 60 minutes and the interviewer recorded responses in writing.

We asked stakeholders about their experiences working in the mental health field and the mental health resources available in their community to provide context for the respondent's answers. We then asked for the stakeholder's perceptions about the causes, impacts, and potential solutions for psychiatric boarding in Oregon. All interview questions were open-ended. After we finished interviewing stakeholders, we aggregated the responses for each question and identified the main themes.

Sample Characteristics

Out of 38 potential stakeholders contacted, we completed interviews with 31 (82% response rate). We interviewed stakeholders who worked in all regions of the state. The largest proportion (29%) of stakeholders worked for organizations that serve the Portland metro area. Six respondents worked for organizations that serve all of Oregon, 5 worked in the Willamette Valley, 4 worked in Eastern Oregon, 3 worked in the coastal region, and 2 each worked in Central and Southern Oregon.

Interviewees also represented a variety of organizations. The majority (44%) of interviewees worked for a hospital system, many in the emergency department. Eight interviewees worked for county health departments, three each worked for community mental health organizations and advocacy groups, and two each worked for a Coordinated Care Organization and the state.

Appendix C Exhibit 1. Characteristics of Stakeholder Interview Sample

<i>Regional characteristics</i>		
	<i>n</i>	<i>%</i>
Portland metro	9	29
Coast	3	10
Willamette Valley	5)	16
Southern Oregon	2	6
Central Oregon	2	6
Eastern Oregon	4	13
Oregon-wide	6	19
<i>Total</i>	31	
<i>Organizational Types</i>		
	<i>n</i>	<i>%</i>
Hospital/ED Staff	14	44
Community Mental Health	3	9
County	8	25
Advocacy	3	9
CCO	2	6
State	2	6
<i>Total</i>	32	**note one interview represented 2 categories (CCO & Community Mental Health)

Appendix D1. Two-Part Models of Psychiatric ED Boarding

Model Specifications

To identify determinants of psychiatric ED boarding in Oregon, we estimated a two-part model (2PM) of psychiatric ED boarding time on the restricted sample of psychiatric ED visits. The first part estimates the probability of psychiatric ED boarding using all psychiatric ED visits, and the second part predicts psychiatric ED boarding time, conditional on psychiatric ED boarding (i.e., using only a sample of boarded, psychiatric ED visits). In our 2PM specified below, the first part predicts the extent to which psychiatric visit affects the probability of psychiatric ED boarding, defined as a psychiatric ED stay of longer than 6 hours. The second part examines factors associated with a change in continuous psychiatric ED boarding time.

Our two-part model (2PM) takes the following form:

$$\text{Part 1: } \Pr(BT_{ic} > 6) = X_{ic}\beta^1 + C_c\rho^1 + \epsilon_{ic}^1 \quad (5-1)$$

$$\text{Part 2: } (BT|bt > 6) = X_{ic}\beta^2 + C_c\rho^2 + \epsilon_{ic}^2 \quad (5-2)$$

where i and c index a psychiatric ED episode and a county of residence, respectively.

Potential determinants of psychiatric ED boarding were specified in the vector X , including: whether an episode had diagnosis of substance abuse; binary Medicaid enrollment status at the time of ED admission; whether an ED episode started during the weekend; patient demographic characteristics such as age, sex, race, ethnicity, and the rurality of patient residence based on patient ZIP code; and hospital's location (service region).

We also controlled for a set of county indicators (C). This variable set controls for fixed county effects – i.e., county-specific characteristics that affected the probability and length of ED boarding and did not change during the 1-year sample period. For example, county fixed effects may eliminate bias resulting from county-level omitted factors such as: county uninsurance rates; access to health care services for county residents, county mental health resources, average distance to psychiatric inpatient facilities for county residents, etc.

Estimation Methods

We estimate linear models for both parts of the 2PMs. For the first part of the model, we estimate linear probability models because coefficients in a linear probability model are marginal effects and thus give a more intuitive interpretation than coefficients in a non-linear model. Although there is a potential concern that linear probability models might lead to predicted probabilities (i.e. probability of ED boarding or probability of incurring ED costs) outside the unit range. In our case, all predicted probabilities for the first parts of 2PMs were contained within the unit range. We also estimated the logit model and obtained the so-called average marginal effects. Results are almost identical to those reported here.

Appendix D2. Definition: Substance Abuse

Substance abuse visit describes ED episodes for both pediatric and adult patients who have been admitted with an International Classification of Diseases (ICD-9) code corresponding to substance abuse conditions. The following ICD-9-CM codes were used to define substance abuse visits in Oregon emergency departments for EDIE data, Hospital ED data, and Medicaid claims data:

ICD-9 diagnosis code	Description
291	Acute Alcoholic Psychotic Condition
292	Drug-induced Mental Disorders
303	Chronic Disease in which a Person Craves a Drink that Contains Alcohol and is Unable to Control His or Her Drinking
304	Drug Dependence
305.0	Alcohol Abuse
305.2	Cannabis Abuse
305.9	Antidepressant Abuse
V79.1	Screening for Alcoholism

Appendix D3. Rural/Urban Definitions

Rural-Urban Commuting Area Codes (RUCA) are a new Census tract-based classification scheme that utilizes the standard Bureau of Census Urbanized Area and Urban Cluster definitions in combination with work commuting information to characterize the nation's Census tracts regarding their rural and urban status and relationships. More information is available at: <http://depts.washington.edu/uwruca/>.

We utilized a ZIP Code RUCA approximation from RUCA Version 2 codes, which are based on (a) 2000 Census work commuting information and (b) Urbanized Areas (cities of 50,000 and greater population) and Urban Clusters (cities/towns of from 2,500 through 49,999 populations) defined by the U.S. Census Bureau. We constructed three urban/rural indicators as following:

- **Urban:** Metropolitan area (population >50,000) or town of any size with high primary commuting flow (30-49%) to an urban core (UC) and/or > 30% secondary flow to an urban area (UA).
- **Large rural:** A large rural city/town (micropolitan) area (population of from 10,000-49,999) with > 10% primary commuting flow to an UC and/or < 29% secondary commuting flow to a UA.
- **Small rural:** A small rural and isolated small rural town. A city/town core with a population size of 2,500-9,999 with > 10% primary flow to a small UC and/or with 10-29% secondary commuting flow to a UA or a town with a population core < 2,500 with primary commuting flow to a tract outside an UA or UC and/or with > 10% secondary commuting flow to a UC or 10-29% secondary commuting flow to a UA.

Appendix D4. Recursive Simultaneous-Equations Model of ED Boarding

Econometric Specification

We constructed a system of recursive simultaneous equations to explore the effect of mental health system capacity on the extent of psychiatric ED boarding. In this approach, we posited that an increased capacity of the mental health system, especially for persons with severe mental illness, might reduce the frequency of psychiatric ED episodes and thereby the rate of psychiatric ED boarding. To test this hypothesis, we estimated the following equations:

$$BT_{ic} = \alpha^3 P_{ic} + X_{ic}\beta^3 + C_c\rho^3 + \epsilon_{ic}^3 \quad (5-3)$$

$$P_{ic} = MH_c\gamma^4 + \delta^4 SMI_c + X_{ic}\beta^4 + \epsilon_{ic}^4 \quad (5-4)$$

where i and c index an ED episode and patient's county of residence, respectively. BT refers to boarding time, the length of ED boarding.

The variable P was of main interest, and indicates whether an ED visit was related to psychiatric conditions. Thus, in Equation 5-3, α^3 captures the effect of the psychiatric episode on boarding time. In Equation 4, MH includes proxy variables for county mental health system capacity. Therefore its coefficients specified as γ^4 measures a relationship between the capacity of the mental health system and psychiatric ED visit, controlling for the influence of the underlying prevalence of SMI for each county. Taken together, the coefficients γ^4 and α^3 can serve as a test of (a) whether mental health system capacity influences the probability of psychiatric ED visit and at the same time (b) whether psychiatric diagnosis increase the extent of psychiatric ED boarding.

In Equation 5-4, the vector MH includes two measures of county-level mental health system capacity variables: county's inpatient and community-based mental health system capacity. The 'ratio of the quarterly average of psychiatric inpatients in private and state facilities to the quarterly average number of persons with severe mental illness' from October 2013 to September 2014 was included as a county-level proxy for the capacity of inpatient mental health system for persons with severe mental illness. This variable captures inpatient mental health system capacity during the one year prior to our sample period (Oct. 2014 – Sep. 2015) to minimize concern that psychiatric ED visits might influence the number of persons with severe mental illness in psychiatric inpatient settings. The 'ratio of the quarterly average of patients served by assertive community treatment (ACT) teams to the quarterly average number of persons with severe mental illness' for the October 2013 – September 2014 period, was included as a county-level proxy for the capacity of community mental health system especially for persons with severe mental illness. This variable is also lagged by one year to minimize concern that psychiatric ED visits might influence the number of ACT clients. SMI is the number of persons with severe and persistent mental illness per 1,000 persons. It is included to control for the prevalence of SMI population for each county, which captures underlying need factor that may affect ED boarding.

The vector X includes person and system characteristics that may be associated with the dependent variables: Substance abuse, Medicaid enrollment status at the time of ED admission, weekend admission, patient demographic characteristics, the place of patient residence based on patient ZIP code, and hospital's location. The vector C includes fixed county effects to control for county-specific characteristics that affected the probability and length of ED boarding.

Equation 5-3 was further specified as the two-part model of ED boarding as following:

$$\begin{cases} \Pr(BT_{ic} > 6) = \alpha^{3a}P_{ic} + X_{ic}\beta^{3a} + C_c\rho^{3a} + \epsilon_{ic}^{3a} \\ (BT_{ic}|BT_{ic} > 6) = \alpha^{3b}P_{ic} + X_{ic}\beta^{3b} + C_c\rho^{3b} + \epsilon_{ic}^{3b} \end{cases}$$

The first part estimates the degree to which a psychiatric episode increases the probability of boarding, based on the 6-hour definition. The second part predicts a change in continuous boarding time due to psychiatric visit, conditional on having ED boarding episode.

Estimation Strategy

We estimated the linear probability models separately for Equations (5-3) and (5-4). Results are reported in the report as main findings. Nonetheless, it is important to note that estimated coefficients from the simultaneous-equations system will be biased if the stochastic error terms (ϵ_{ic}^3 and ϵ_{ic}^4) are not independent of each other. Therefore, as a robustness check, we estimated equations (5-3) and (5-4) jointly using a bivariate probit procedure. The bivariate probit model, which is a variant of the instrumental variables method, yields consistent and efficient estimates of the effect of psychiatric ED visit on ED boarding in the presence of correlated error terms provided that valid instruments for the psychiatric episode variable are identified.

An instrument for a psychiatric visit must meet two fundamental conditions. First, the instrument must be substantially associated with the psychiatric visit variable in Eq. (5-4).²⁹ Second, the instrument must be validly excluded from the ED boarding equation, Eq. (5-3).³⁰ In our case, the mental health system capacity variables and SMI population, by design, served as prospective instruments. The instrumental variables specification checks confirm that all the candidate instruments are valid and reliable.

We confirmed that results from the bivariate probit model are qualitatively the same as our main results, providing strong support for causal interpretation of our findings.

Appendix D5. Descriptive Characteristics of Hospital ED Visits by Boarding Status, Oct. 2014 – Sep. 2015.

Boarded patients were more likely than non-boarded patients to received diagnoses of mental illness, both severe and non-severe, as well as diagnoses of substance abuse. About 39% of boarded ED episodes had psychiatric diagnoses. In comparison, psychiatric visits accounted for only 13% of the total non-boarded ED episodes. The proportion of severe-psychiatric episodes among boarded ED visits was almost 10%, 5.5 times higher than the corresponding rate for non-boarded ED episodes. Non-severe psychiatric episodes comprised about 29% of all boarded episodes, compared to 11% of non-boarded episodes. The proportion of substance abuse visits among boarded episodes was 4 times higher than that among non-boarded visits (13.6% vs. 3.4%).

Medicaid patients were relatively less likely to be present in boarded ED visits than in non-boarded visits (53.7% vs. 55.8%), suggesting that Medicaid eligibility might be associated with a reduced chance of ED boarding. On average, boarded patients were slightly older than non-boarded patients and more like to be female. In both groups, the majority of patients were whites whose visits accounted for approximately 83% in both boarded and non-boarded episodes. There was no significant difference in terms of racial composition between the two groups. ED visits by Hispanic patients comprised 7.2% of all boarded visits and 10.2% of all non-boarded visits. 26.5% and 29.1% of the entire boarded and non-boarded ED episodes started during weekends, respectively.

About 85% of ED visits were made by patients living in urban areas for both boarded and non-board patients. There was no discernable difference in terms of patients’ rural/urban residence between the two groups. For non-boarded ED visits, boarded ED visits occurred more frequently in hospital EDs in the Portland metropolitan region and less frequently in the other regions of the state.

The county-level ratio of psychiatric inpatients to persons with severe mental illness was greater for the boarded group. The ratio of ACT clients to persons with severe mental illness was similar between the two groups. The boarded group had more persons with severe mental illness than non-boarded group, which suggests a positive relationship between the prevalence of severe mental illness and ED boarding.

Appendix D5 Exhibit 1. Patient and system characteristics stratified by hospital ED boarding status

Variable	Boarded (n = 32,866)		Not boarded (n = 657,379)	
	Mean	Std. Dev.	Mean	Std. Dev.
Psychiatric visit	38.8%	-	13.2%	-
Severe psychiatric	9.9%	-	1.8%	-
Non-severe psychiatric	28.9%	-	11.4%	-
Substance abuse	13.6%	-	3.4%	-
Medicaid status	53.7%	-	55.8%	-
Age	41.6	19.6	34.2	20.8

Female	55.3%	-	56.6%	-
<i>Race</i>				
White (reference)	83.5%	-	83.1%	-
AIAN	2.1%	-	1.9%	-
Asian	1.1%	-	1.2%	-
Black	6.5%	-	5.4%	-
NHPI	0.4%	-	0.6%	-
Other	6.4%	-	7.8%	-
Hispanic	7.2%	-	10.2%	-
Weekend admission	26.5%	-	29.1%	-
<i>Rurality</i>				
Urban	85.0%	-	84.0%	-
Large rural	13.7%	-	14.0%	-
Small rural	2.3%	-	2.9%	-
<i>Hospital location (reference: Central Oregon)</i>				
Eastern Oregon	3.4%		5.0%	
Northern Oregon	6.6%		8.3%	
Portland metropolitan area	51.1%		35.5%	
Southern Oregon	15.9%		19.1%	
Valley area	21.5%		30.0%	
<i>County-level system characteristics</i>				
%Psychiatric inpatients	6.7%	2.9	6.4%	3.1
%ACT population	1.1%	1.3	1.1%	1.4
SMI population	4,018	3,190	3,426	2,936

Appendix D6. Effect of county mental health system capacity on psychiatric ED visits: Full results

A greater supply of psychiatric inpatient and intensive community mental health resources was significantly associated with a reduction in the probability of psychiatric ED visit. Our estimate suggests that holding other things constant, a 1% higher capacity of the inpatient mental health system (which was proxied by the proportion of psychiatric inpatients to persons with severe mental illness) is associated with a 1.3 percentage-point lower probability of psychiatric ED visit. This result means that a 1% increase in the capacity of the inpatient mental health system, ceteris paribus, may lead to approximately 7% decrease in the probability of psychiatric ED visit because the rate of psychiatric visits was 14.6% (see <Exhibit 3-2>).

A response in psychiatric ED visit to a change in the inpatient mental health system capacity was even more elastic. A 1% increase in the capacity of community-based mental health resources (measured by the volume of ACT clients served), ceteris paribus, was significantly associated with a 1.8 percentage-point decrease (alternatively, 12% decrease) in the probability of psychiatric ED visit. Also to be consistent with our expectation, a greater prevalence of severe mental illness in a county was significantly associated with a higher probability of psychiatric ED visit in that county.

Other findings deserve comments. Substance abuse appears to increase the probability of overall psychiatric ED visits by 86%. Medicaid patients and older patients were more likely to have psychiatric visits. Females were less likely to experience psychiatric ED visits compared to males. Compared to white patient, all other races had lower probability of having psychiatric ED visits. Hispanic patients were also less likely to have psychiatric ED visits. The probability of psychiatric ED visits was lower if an ED episode started on the weekend.

Appendix D6 Exhibit 1. Effect of county mental health capacity on the likelihood of psychiatric ED visit : Full results

	Pr(psychiatric ED visit ¹)
<i>County-level system characteristics</i>	
%Psychiatric inpatients	-0.0128*** (0.0004)
%ACT population	-0.0180*** (0.0007)
SMI population	0.0110*** (0.0004)
Substance abuse	0.8636*** (0.0011)
Medicaid status	0.0155*** (0.0012)
Age	0.0014*** (0.0000)
Female	-0.0054***

	(0.0014)
<i>Race (reference: White)</i>	
AIAN	-0.0030 (0.0050)
Asian	-0.0501*** (0.0049)
Black	-0.0286*** (0.0029)
NHPI	-0.0389*** (0.0073)
Other	0.0011 (0.0025)
Hispanic	-0.0485*** (0.0021)
Admission on weekend	-0.0062*** (0.0010)
<i>Rurality of patient residence (reference: Urban)</i>	
Large rural	0.0342*** (0.0029)
Small rural	0.0098 (0.0054)
<i>Hospital location (reference: Central Oregon)</i>	
Eastern Oregon	0.0745*** (0.0079)
Northern Oregon	-0.0549*** (0.0073)
Portland metropolitan	-0.1073*** (0.0073)
Southern Oregon	-0.0387*** (0.0072)
Valley area	-0.0902*** (0.0073)
<hr/> <i>N</i>	<hr/> 508,655

Notes: Cluster-robust standard errors are in parentheses. All models control for county fixed-effects.

¹Either severe or non-severe psychiatric visit.

* Statistically significant at the 95% level.

** Statistically significant at the 99% level.

*** Statistically significant at the 99.9% level.

Appendix D7. Factors affecting the probability of ED boarding and boarding time: Two-part model

Column (1) below shows that a psychiatric episode on average was significantly associated with 9.5 percentage-point increase in the probability of positively associated with the probability of ED boarding. This effect is almost twice as larger as the average boarding rate of 5.5% reported in <Exhibit 3-2> (based on the 6-hour boarding definition). Our finding is in line with a national estimate reported in Nolan et al. (2015), in that they discovered that psychiatric ED episodes status on average were associated with nearly five times greater odds of ED boarding when compared to non-psychiatric ED episodes.

Results from the second part of the 2PM are presented in Column (2). Again, the second part estimates factors associated with boarding time only using the subsample of boarded ED visits. Therefore, it measures the influence of psychiatric ED episode on ED boarding time only for boarded ED episodes. Psychiatric visit status was significantly associated with additional five hour of ED stay. Our estimate is comparable to a national estimate. Nolan et al. (2015) found that at the national level, in 2008, ED boarding time was higher by 3.5 hours for psychiatric ED patients, compared to non-psychiatric ED patients.

Substance abuse was also associated with an increase in the probability of ED boarding. However, average boarding time in fact decreased by 6 hours for visits with diagnoses of substance abuse once patients become boarded. Medicaid enrollment status did not affect the probability of ED boarding while it significantly reduced an average of 5.3 hours in boarding time after patients become boarded in EDs.

Patient age was positively associated with both the probability and length of ED boarding although the magnitudes were small. Sex was not significantly associated with the probability of boarding, but the length of ED boarding was shorter for females. Race and ethnicity overall were not significantly associated with ED boarding.

Compared to admission during the weekdays, weekend admissions on average were negatively associated only with the probability of ED boarding. Rurality was significantly positively associated with the probability ED boarding: Patients living in more rural areas were more likely to experience ED boarding.

The location of hospital ED was significantly associated with both probability and length of ED boarding. When compared to EDs in Central Oregon, EDs in the Portland metropolitan, Valley, and Southern regions of Oregon had greater probability of ED boarding, in that order. In comparison, the conditional boarding time was longest in EDs located in Southern Oregon, followed by Portland metropolitan area and Northern Oregon. Although not reported in the exhibit, county indicator variables were jointly significant, implying significant cross-county variations in ED boarding.

Appendix D7 Exhibit 1. Factors affecting the probability of ED boarding and boarding time: Two-part model (Full results)

	Part 1: Pr(ED boarding)	Part 2: ED boarding time, conditional on boarding
	(1)	(2)
Psychiatric ED visit	0.0954*** (0.0019)	5.0520*** (0.7534)
Substance abuse	0.0651*** (0.0036)	-6.0937*** (0.8828)
Medicaid status	0.0005 (0.0008)	-5.2616*** (0.6838)
Age	0.0007*** (0.0000)	0.1523*** (0.0221)
Female	0.0010 (0.0009)	-2.4669*** (0.7165)
<i>Race (reference: White)</i>		
AIAN	0.0008 (0.0028)	-0.2988 (1.6487)
Asian	-0.0079* (0.0034)	0.4670 (3.5515)
Black	0.0012 (0.0020)	-1.3291 (1.2035)
NHPI	-0.0041 (0.0041)	6.8339 (7.7862)
Other	-0.0050** (0.0016)	-3.7061*** (1.0875)
Hispanic	-0.0004 (0.0014)	0.2674 (1.1601)
Admission on weekend	-0.0056*** (0.0007)	0.8983 (0.7003)
<i>Rurality (reference: Urban)</i>		
Large rural	0.0107*** (0.0024)	1.8815 (1.5421)
Small rural	0.0154*** (0.0036)	0.3830 (1.9738)
<i>Hospital location (reference: Central Oregon)</i>		
Eastern Oregon	-0.0085 (0.0071)	0.9410 (3.5914)
Northern Oregon	0.0078 (0.0048)	16.2135** (5.2226)
Portland metropolitan	0.0715*** (0.0046)	18.3321*** (3.1738)

Southern Oregon	0.0136** (0.0051)	25.5816*** (4.8084)
Valley area	0.0338*** (0.0046)	8.3818** (3.1734)
<hr/> <i>N</i>	<hr/> 510,773	<hr/> 31,854

Notes: Cluster-robust standard errors are in parentheses. All models control for county fixed-effects.

* Statistically significant at the 95% level.

** Statistically significant at the 99% level.

*** Statistically significant at the 99.9% level.

Exhibit 7

From: Escarda, Ron [Ron.Escarda@uhsinc.com]
Sent: Tuesday, December 6, 2016 5:20 PM
To: Selover Dana S
Cc: FUSSELL Jana; HIGH Jere
Subject: RE: [External]RE: [External]RE: Meeting Request

Thank you Dr. Selover, I guess we will just have to trust the process works as intended. I am convinced however that the provider's opposition to our project on the basis of "no need" is clearly driven by their collective desire to protect their interest, especially the Unity (group) and stifle competition and additional beds. With the Oregon Governor's recent published plan to close the state hospital in Junction City and its 140+ beds, I think the issue of no need for additional capacity is rendered even less credible.

Regards,

Ron Escarda, CEO
Fairfax Behavioral Health System
Group Director for the Northwest Region - UHS FAIRFAX BEHAVIORAL HEALTH SYSTEM | 10200 NE 132ND St. | Kirkland, WA 98034 | Ron.Escarda@uhsinc.com | t: 425.821.2000 | f: 425.821.9010 | [\[cid:image001.png@01CEFB21.662DC050\]](#)

"Excellence is an art won by training and habituation. We do not act rightly because we have virtue or excellence, but rather have those because we have acted rightly. We are what we repeatedly do. Excellence, then, is not an act but a habit." — Aristotle

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From: Selover Dana S [<mailto:DANA.S.SELOVER@dhsoha.state.or.us>]
Sent: Tuesday, December 06, 2016 5:12 PM
To: Escarda, Ron
Cc: FUSSELL Jana; HIGH Jere
Subject: [External]RE: [External]RE: Meeting Request

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Dear Mr. Escarda:

Jana and I have met to discuss your request for a meeting. Your stated reason for the meeting is “so we can provide clarity and context to some of the testimony coming out of the public hearing.” You note that you are preparing your “rebuttal comments”.

We have now received your written rebuttal comments. As with all of the comments that we have received, we will carefully review your submission. The ability to submit these comments has provided you the opportunity to publically address the issues that you deem important to the review of your application. Thus, we suggest that a meeting is not needed or appropriate at this time.

Thank you much for your continuing cooperation and we are happy to answer any additional questions you might have about the process.

Respectfully,

Dana S Selover, MD MPH
dana.s.selover@state.or.us<<mailto:dana.s.selover@state.or.us>>
(971) 673-0546

[\[cid:image001.jpg@01D10D96.C6B9DCE0\]](#)

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From: Escarda, Ron [<mailto:Ron.Escarda@uhsinc.com>]
Sent: Thursday, December 01, 2016 6:15 PM
To: Selover Dana S
<DANA.S.SELOVER@dhsola.state.or.us<<mailto:DANA.S.SELOVER@dhsola.state.or.us>>>
Subject: Re: [External]RE: Meeting Request

Thanks for your response. I will wait to hear from Ms. Fussell.

----- Original Message -----

Subject: [External]RE: Meeting Request

From: Selover Dana S
<DANA.S.SELOVER@dhsoha.state.or.us<mailto:DANA.S.SELOVER@dhsoha.state.or.us>>

Date: Dec 1, 2016, 6:11 PM

To: "Escarda, Ron" <Ron.Escarda@uhsinc.com<mailto:Ron.Escarda@uhsinc.com>>, FUSSELL Jana
<Jana.FUSSELL@dhsoha.state.or.us<mailto:Jana.FUSSELL@dhsoha.state.or.us>>

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Dear Mr. Escarda,

I wanted to respond and let you know that I will defer to Jana on an in-person meeting to ensure that we are following a consistent and open process. She will return on Tuesday December 6th and we will contact you then to confer about next steps.

Regards,

Dana S Selover, MD MPH
dana.s.selover@state.or.us<mailto:dana.s.selover@state.or.us>
(971) 673-0546

[[cid:image001.jpg@01D10D96.C6B9DCE0](#)]

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From: Escarda, Ron [<mailto:Ron.Escarda@uhsinc.com>]
Sent: Wednesday, November 30, 2016 12:22 PM
To: Selover Dana S
<DANA.S.SELOVER@dhsoha.state.or.us<mailto:DANA.S.SELOVER@dhsoha.state.or.us>>; FUSSELL Jana
<Jana.FUSSELL@dhsoha.state.or.us<mailto:Jana.FUSSELL@dhsoha.state.or.us>>
Cc: Frank Fox, Ph.D <fgf19702@aol.com<mailto:fgf19702@aol.com>>; Hutter, Elizabeth
<Elizabeth.Hutter@uhsinc.com<mailto:Elizabeth.Hutter@uhsinc.com>>
Subject: Meeting Request

Ms. Selover & Ms. Fussell,

I would like to respectfully request a brief meeting so we can provide clarity and context to some of the testimony coming out of the public hearing. We are preparing our rebuttal comments and will be submitting them on or before the Dec. 2nd date previously discussed. We feel strongly that there is considerable demonstrable need in the counties affected by our project. We are very concerned that the Providers who are opposing this project are doing so out of self-interest and the desire to protect their current service lines and business, and are failing to address the most important issue which is

what is in the best interest of the community. The state's own data, as referenced in our submission and will be highlighted in our rebuttal, clearly shows that the 4 Unity partners in 2014 were operating at over a 90% occupancy rate. Legacy's assertion that the PES will solve the behavioral health need flies in the face of fact and operational realities, since opening the PES will only draw more patients into their system which is currently operating at well over 90% capacity. This will inevitably put additional pressure on community beds for the provision of additional inpatient capacity. Even if they are successful in diverting half of the patients who are seen at the proposed PES, the remaining half of those who could not be deflected will need inpatient services. Services Unity will not have the ability to serve. The current capacity of the Unity partners doesn't even factor in the net 10 bed reduction that there project actually represents.

The SEIU issues that were raised are a whole other matter and we will be strongly rebutting their claims as most are untrue or simply taken out of context. They have been engaged in a national corporate campaign against UHS resulting from some prominent Union de-certifications in the Las Vegas market. We believe the purpose of this campaign is intended to force UHS into a neutrality agreement with SEIU. We believe if we were to have a neutrality agreement with them, they would immediately pull their objections and sing our praises. This is more about declining membership and financial impacts than any legitimate quality issues or concerns. Ironically, issues which are even more prominent and egregious at several hospitals in which SEIU is actually the primary labor representative of the staff. This will also be highlighted in our rebuttal response.

It should not take longer than an hour and I will make myself available at your earliest convenience for the meeting.

Best Regards,

Ron Escarda, CEO
Fairfax Behavioral Health System
Group Director for the Northwest Region - UHS

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Financial Analysis - NEWCO

UNAUDITED

						Percentage of Overall Patient Revenue				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
Operating Revenue										
Inpatient Revenue	\$ 10,294,590	\$ 25,736,475	\$ 45,162,056	\$ 60,847,014	\$ 65,715,226	[a]	88%	88%	88%	88%
Outpatient Revenue	1,399,928	3,499,815	6,124,675	8,274,437	8,936,391		12%	12%	12%	12%
Patient Service Revenue	11,694,518	29,236,290	51,286,731	69,121,451	74,651,617		100%	100%	100%	100%
Other Revenue	18,000	18,000	18,000	18,000	18,000	[M]				
Total Revenue	\$ 11,712,518	\$ 29,254,290	\$ 51,304,731	\$ 69,139,451	\$ 74,669,617					
Deductions										
Contractual Adjustments, Inpatient	\$ 5,362,571	\$ 13,406,428	\$ 23,525,439	\$ 31,695,915	\$ 34,231,823	[b]	52.1%	52.1%	52.1%	52.1%
Medicare Impact	920,923	-	-	-	-					
Contractual Adjustments, Outpatient	943,342	2,358,355	4,127,122	5,575,741	6,021,801		67.4%	67.4%	67.4%	67.4%
Charity Care	245,842	614,604	1,078,500	1,453,067	1,569,323		2.1%	2.1%	2.1%	2.1%
Other Deductions	68,836	172,089	301,980	406,859	439,411		0.6%	0.6%	0.6%	0.6%
Bad Debt	137,671	344,175	603,960	813,718	878,821		1.2%	1.2%	1.2%	1.2%
Total Deductions	\$ 7,679,185	\$ 16,895,651	\$ 29,637,001	\$ 39,945,300	\$ 43,141,179		65.6%	57.8%	57.8%	57.8%
TOTAL OPERATING REVENUE	\$ 4,033,333	\$ 12,358,639	\$ 21,667,730	\$ 29,194,151	\$ 31,528,438		34.5%	42.3%	42.2%	42.2%
Operating Expenses										
Salaries	\$ 4,209,298	\$ 5,854,872	\$ 8,346,886	\$ 10,286,295	\$ 10,974,918	[c]	20.4%	20.0%	20.0%	20.0%
EE Benefits	856,800	1,171,259	1,669,783	2,057,760	2,195,518	[c]				
Professional Fees	866,346	1,554,016	2,418,955	3,117,423	3,334,178	[d]	7.4%	5.3%	4.7%	4.5%
Supplies	170,382	425,954	747,459	1,007,054	1,087,626	[e]	1.5%	1.5%	1.5%	1.5%
Travel/Education	96,000	96,000	96,000	96,000	96,000	[f]				
Maintenance	40,322	123,586	216,677	291,942	315,284	[g]	1.0%	1.0%	1.0%	1.0%
Purchased Services	350,113	496,335	654,791	847,428	906,588	[h]	3.0%	1.7%	1.3%	1.2%
Other Expenses	334,788	334,788	334,788	334,788	334,778	[i]	2.9%	1.1%	0.7%	0.5%
Insurance	50,704	126,642	222,099	299,305	323,245	[e]	0.4%	0.4%	0.4%	0.4%
Non-allocated	204,000	204,000	204,000	204,000	204,000	[e]				
Lease expenses	108,000	108,000	108,000	108,000	108,000	[e]				
Total Operating Expenses	\$ 7,286,753	\$ 10,495,452	\$ 15,019,438	\$ 18,649,995	\$ 19,880,135		62.3%	35.9%	29.3%	27.0%
Operating Income	\$ (3,253,420)	\$ 1,863,187	\$ 6,648,292	\$ 10,544,156	\$ 11,648,303		-27.8%	6.4%	13.0%	15.3%
Fixed Costs										
Depreciation	\$ 1,835,109	\$ 1,835,109	\$ 1,835,109	\$ 1,835,109	\$ 1,835,109	[j]				
Allocated Cost	242,000	741,518	1,300,064	1,751,649	1,891,706	[e]	6.0%	6.0%	6.0%	6.0%
Total Fixed Costs	\$ 2,077,109	\$ 2,576,627	\$ 3,135,173	\$ 3,586,758	\$ 3,726,815					
Excess Revenue over Expenses, Pre tax	\$ (5,330,529)	\$ (713,440)	\$ 3,513,119	\$ 6,957,398	\$ 7,921,488		-45.6%	-2.4%	6.8%	10.1%
Bottom Line Ratio	-132%	-6%	16%	24%	25%	[k]				
Operating Margin	-81%	15%	31%	36%	37%	[k]				

[a] Revenue analysis based on applicants project number of patient days

	2018	2019	2020	2021	2022
Number of Adjusted Patient Days	5,204	12,998	22,795	30,719	33,177
Increase in Days		150%	75%	35%	8%
Gross Revenue per Patient Day	\$ 2,247	\$ 2,249	\$ 2,250	\$ 2,250	\$ 2,250
Gross Revenue per Patient Day- Cedar Hills	2016	2015	2014		
Annualized Rev	\$ 74,740,479	\$ 76,914,074	\$ 72,332,369		
Patient Days	Not available	Not available	28,337		
Gross Revenue per Patient Day			\$ 2,553		

Revenue per patient day for the proposed project is consistent with Cedar Hills location based on financial data provided by the applicant.

[b] Deductions from revenue analysis

Medicare impact expense in year one is related to the proposed project not receiving reimbursements for the first five months of operations using the assumption that a Medicare Survey/Join Commission accreditation will need to occur. Further we noted deductions as percentage of revenue is consistent with Cedar Hills.

Deductions as % of Revenue- Cedar Hills

	2016	2015	2014
Annualized Rev	\$ 74,740,479	\$ 76,914,074	\$ 72,332,369
Deductions	\$ 42,325,782	\$ 44,043,646	\$ 41,676,246
	57%	57%	58%

[c] Salaries and benefits analysis

	2018	2019	2020	2021	2022
Projected FTE	71.7	99.5	141.74	176.17	187.62
Salaries per FTE	\$ 58,707	\$ 58,843	\$ 58,889	\$ 58,388	\$ 58,495

We noted employee benefits as a percentage of salaries is ~20% consistently year over year and does not factor in COLA adjustments. Per 150.04 page 8, 2.5-3% merit increases are typical therefore if these additional amounts were incorporated in the expense, it would change net income by:

COLA Adjusted- Salaries per FTE	\$ 58,707	\$ 60,468	\$ 62,282	\$ 64,151	\$ 66,075
Total COLA adjusted salaries	\$ 4,209,298	\$ 6,016,596	\$ 8,827,900	\$ 11,301,449	\$ 12,397,056
Impact on Net Income	\$ -	\$ (161,724)	\$ (481,014)	\$ (1,015,154)	\$ (1,422,138)

Based on analysis, it appears the applicant would still be in a net income position in year 3 and each year afterwards even with the increase in salaries and expenses.

(d) Professional fees

Based on application, these fees include medical director stipends, medical staff compensation, compensation for physician call coverage, patient follow up, etc. and is based on Cedar Hills actuals. Based on continued improvement, the applicant expects these to improve after year one.

(e) Supplies, Insurance, Allocated costs

We noted expenses as a percentage of revenue is consistent each period and is a reasonable expectation. The applicant noted 6% of allocated cost is for standard overhead allocations not directly attributable to operations however it is being based on net revenues. The cost would capture corporate staff activities for human resources, legal, financial services, planning/marketing, etc. The non-allocated expenses is an internal classification related to audit fees, consulting fees, property taxes which is not expected to fluctuate year over year based on size of operations. Lease expenses are related to copies and other minor equipment not purchased.

(f) Travel/Education

The applicant does not believe travel to be effected by FTEs.

(g) Maintenance	2018	2019	2020	2021	2022
Increase from previous year		206%	75%	35%	8%

The applicant noted based on experience at numerous of its locations, maintenance runs about 1% of net revenue. MA analyzed maintenance expense at Cedar Hills as noted below. We noted the projected expense is slightly higher and conservative from Cedars Hills

Cedar Hills Maintenance	2016	2015	2014
Net Revenue	\$ 32,414,697	\$ 32,870,428	\$ 30,656,123
Maintenance Expense	\$ 305,289	\$ 296,265	\$ 265,877
	0.94%	0.90%	0.87%

(h) Purchased services

The applicant expects purchase service expenses to stabilize during year three.

(i) Other expenses

Include utilities and plant maintenance and is based on square footage of the building, based on Cedar Hills actuals.

Sq foot of building:	61,936
Cost per Sq foot \$	5.41

[j] Depreciation

Depreciation is set consistent year over year as expected. See analysis based on expected cost of project

Purchase Price	\$ 2,975,000	<i>not depreciable as land</i>
Equipment Cost	1,975,000	
Construction Cost	30,884,000	
	<u>\$ 35,834,000</u>	

Expected depreciation for equipment	\$ 282,142.86	
Useful life based on depreciation -equipment	7.00	<i>Reasonable</i>
Expected depreciation for building	\$ 1,552,966.14	
Useful life based on depreciation -building	19.89	<i>Reasonable</i>

[k] Ratio Analysis - Cedar Hills Info

Bottom Line Ratio (excess revenue over expense pre tax divided by total operating income) for Cedar Hills

	2016	2015	2014
Net Revenue	\$ 32,490,746	\$ 32,925,259	\$ 30,708,941
Income Before Intercompany	\$ 10,464,959	\$ 10,812,745	\$ 10,263,376
Bottom Line Ratio	32.21%	32.84%	33.42%
Income After Intercompany Before Taxes	\$ (2,086,661)	\$ (1,631,381)	\$ (1,871,800)
Bottom Line Ratio	-6.4%	-5.0%	-6.1%

Operating Margin

Income from Operations	\$ 11,104,956	\$ 11,463,464	\$ 10,769,408
Operating Margin	34%	35%	35%