HMA

HEALTH MANAGEMENT ASSOCIATES

Financial Model and Analysis of Potential Statewide Savings from Statewide Adoption of the CCO Health Care Delivery System Redesign

PRESENTED TO

OREGON HEALTH AUTHORITY

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Research and Consulting in the Fields of Health and Human Services Policy, Health Economics and Finance, Program Evaluation, Data Analysis, and Health System Restructuring

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Financial Projections for Greater System Efficiency and Value

Current State

For the year ending June 30, 2013, total Oregon Medicaid payments are expected to approach $3.2 billion. Oregon's Medicaid enrollment has been growing in recent years and the base cost for services has increased historically – these trends are expected to continue. Inflationary factors include higher wages for care providers, changes in medical practice, and the introduction of new treatment protocols and new drugs and technology.

Based upon projected enrollment growth and anticipated cost inflation, total Medicaid expenditures may grow to as much as $11.7 billion in the FY 2017/2019 biennium with over 950,000 individuals enrolled in the program. This figure includes about 250,000 newly-eligible under federal health reform expansion provisions that take effect in 2014.

HB 3650 directs the Oregon Health Authority (OHA) to "prepare financial models and analyses to demonstrate the feasibility of a coordinated care organization being able to realize health care cost savings." OHA contracted with Health Management Associates (HMA) to prepare a financial model and analysis of potential savings from statewide adoption of the Coordinated Care Organizations (CCO) health care delivery system redesign. In addition, HMA was asked to expand the environmental scan prepared for the Portland area Oregon Health Leadership Council to represent statewide values.

Estimates of Health Transformation Savings

This financial model projects Medicaid payments through the State's FY 2018/2019 biennium and identifies potential savings in five areas:

- Improved Management of the Population
- Integration of Physical and Mental Health
- Implementation of the Mental Health Preferred Drug List
- Patient Centered Primary Care Homes
- Administrative Savings from managed care organization (MCO) Reductions

Below is a brief discussion of each area. See Appendix D for selected references reviewed in developing the savings estimates.

Improve to a Well-Managed System of Care

In 2011, a report by Milliman for the Portland area Oregon Health Leadership Council projected savings for a well-managed Medicaid sub-population (TANF) between $118 million and $141 million statewide. According to Milliman, well-managed status reflects attainment of utilization at defined

levels equal to optimal benchmarks. Savings reflect the difference between existing service levels and those benchmarks.

This financial model projects those findings to the entire Medicaid population by extending Milliman projections to additional Medicaid populations: aged, blind and disabled and the expansion population. We believe that these projections are conservative because the complexity and level of chronic disease in these groups is higher and generally management of these populations has the potential to yield higher savings.

The integration of care and payment mechanisms would reduce costs primarily on the Medicare side for dually eligible individuals. Based upon a study by the Lewin Group and in conjunction with the report from Milliman, we have estimated a combined savings rate of 8.5% and applied that figure to Medicaid expenditures. Since these savings come primarily from Medicare expenditures, a shared savings arrangement with Medicare is essential to obtaining this level of benefit to the State.

Integration of Physical and Mental Health

A key strategy in Oregon's health system transformation efforts includes the integration of mental health and physical health. While at least one study of integration savings projected results as high as 20% to 40%, this model uses a lower figure of 10% to 20% given the extent of other savings already applied in Oregon. The model assumes both the integration of physical health with certain mental health settings as well as the addition of mental health into appropriate physical health settings. These estimates do not include integrating dental health into the overall system. Dental integration and expanded access will also reduce costs and increase the quality of the consumer's experience.

Implementation of Mental Health Preferred Drug List

OHA supplied a value of $16 million per biennium savings estimate for implementing a mental health preferred drug list. Since this opportunity requires legislative approval, OHA asked that savings be reflected only for periods beginning July 1, 2013 and after.

Increased Program Integrity Efforts

Improved and expanded resources will be employed to audit claims, review Medicaid coverage criteria, correct inappropriate coding assignments, determine medical necessity, identify third party liability, and recoup overpayments.

The estimated savings should be treated as preliminary pending an evaluation of the extent that these efforts go beyond what is currently being done in Oregon.

Patient-Centered Primary Care Homes

Statewide implementation of the patient-centered primary care home model can further reduce costs. Early implementation of similar models has been shown to reduce total expenditures by up to 7%. By further enhancing the abilities of these homes through connections to specialty care and improving care transitions between levels of care, we believe you can go beyond well managed and this savings is reflected in the financial model.

Administrative Savings from MCO Reductions

As described by OHA, the newly formed CCOs will be larger and more comprehensive than existing MCOs and mental health organizations (MHOs). Consequently, economies of scale are available from the consolidation and redesign of current administrative functions.

The model assumes phased-in cost savings. In year one, the projected savings are between 10% and 20% of a fully achieved status. In the biennium ending June 30, 2015.the achievement rate increases to 40% to 50%. In year one this equates to $155 million to $308 million in total savings. While we believe that these assumptions are reasonable based on the initiatives underway, it is also possible that greater savings could be achieved with more aggressive implementation.

While not included in the table below, the savings from electronic connectivity and reduction in duplicate testing should be noted. Witter & Associates, LLC, estimate avoided services savings at $16 million a year from the widespread adoption and use of health information exchange (HIE). While implementation of statewide HIE is projected to take four to five years, the resultant savings over time are substantial. These estimates are not net of provider and health system implementation costs. However, the federal investment in provider incentive payments is providing considerable financial support for these efforts. Additionally, we believe that the savings would be measurable if the costs of implementation could be shared across other payers.

Table 1: Estimated Medicaid Savings Due to Health System Transformation[1]

Low Savings	**7/12 to 6/13**	**7/13 to 6/15**	**7/15 to 6/17**	**7/17 to 6/19**
Average Enrolled	672,430	733,522	887,750	955,475
Projected Paid	**$3,178,000,000**	**$7,439,550,000**	**$10,018,650,000**	**$11,680,350,000**
Improve to "Well Managed"	($43,700,000)	($311,050,000)	($972,900,000)	($1,282,700,000)
Integration of Physical and Mental Health	($31,300,000)	($285,100,000)	($678,400,000)	($1,039,800,000)
Mental Health Preferred Drug List	$0	($16,000,000)	($27,000,000)	($53,100,000)
Program Integrity Efforts	($62,700,000)	($142,600,000)	($180,900,000)	($208,000,000)
Patient-Centered Primary Care Homes	($11,000,000)	($99,800,000)	($237,500,000)	($363,900,000)
Admin Savings from MCO Reductions	($6,300,000)	($14,300,000)	($18,100,000)	($20,800,000)
Savings from Redesign	**($155,000,000)**	**($868,850,000)**	**($2,114,800,000)**	**($2,968,300,000)**
	$3,023,000,000	**$6,570,700,000**	**$7,903,850,000**	**$8,712,050,000**
Savings as a % of Projected Paid	-4.9%	-11.7%	-21.1%	-25.4%

High Savings	**7/12 to 6/13**	**7/13 to 6/15**	**7/15 to 6/17**	**7/17 to 6/19**
Average Enrolled	672,430	733,522	887,750	955,475
Projected Paid	**$3,178,000,000**	**$7,439,550,000**	**$10,018,650,000**	**$11,680,350,000**
Improve to "Well Managed"	($65,500,000)	($401,050,000)	($1,113,400,000)	($1,603,850,000)
Integration of Physical and Mental Health	($124,500,000)	($703,900,000)	($1,781,100,000)	($2,015,300,000)
Mental Health Preferred Drug List	$0	($16,000,000)	($27,000,000)	($51,800,000)
Program Integrity Efforts	($62,300,000)	($140,800,000)	($178,100,000)	($201,500,000)
Patient-Centered Primary Care Homes	($43,600,000)	($246,300,000)	($623,400,000)	($705,400,000)
Admin Savings from MCO Reductions	($12,500,000)	($28,200,000)	($35,600,000)	($40,300,000)
Savings from Redesign	**($308,400,000)**	**($1,536,250,000)**	**($3,758,600,000)**	**($4,618,150,000)**
	$2,869,600,000	**$5,903,300,000**	**$6,260,050,000**	**$7,062,200,000**
Savings as a % of Projected Paid	-9.7%	-20.6%	-37.5%	-39.5%

[1] Each column represents expenditures and savings for that period only.

Environmental Scan

Target Population

Projected Enrollment

The target population includes all current and future Oregon Health Plan (OHP) enrollees. Between 2010 and 2011, enrollment grew rapidly, due primarily to growth within the expansion group. OHP staff estimates project modest (3%) annual enrollment growth through state fiscal year 2014, followed by a rapid jump between 2014 and 2015 when the Affordable Care Act Medicaid expansion goes into effect. While the vast majority of new enrollees are expected to be non-disabled adults, OHP is projecting that the annual rate of growth among the disabled and dual-eligibles, which is approximately 6 percent (excluding the year of the Medicaid expansion), will be roughly three times that of the TANF-related population's 2%. This trend is critical, as the disabled and dual-eligible populations are, on average, far more costly than their TANF-related counterparts, and also stand to benefit most from effective care management.

Figure 1: Projected Enrollment by Sub-group

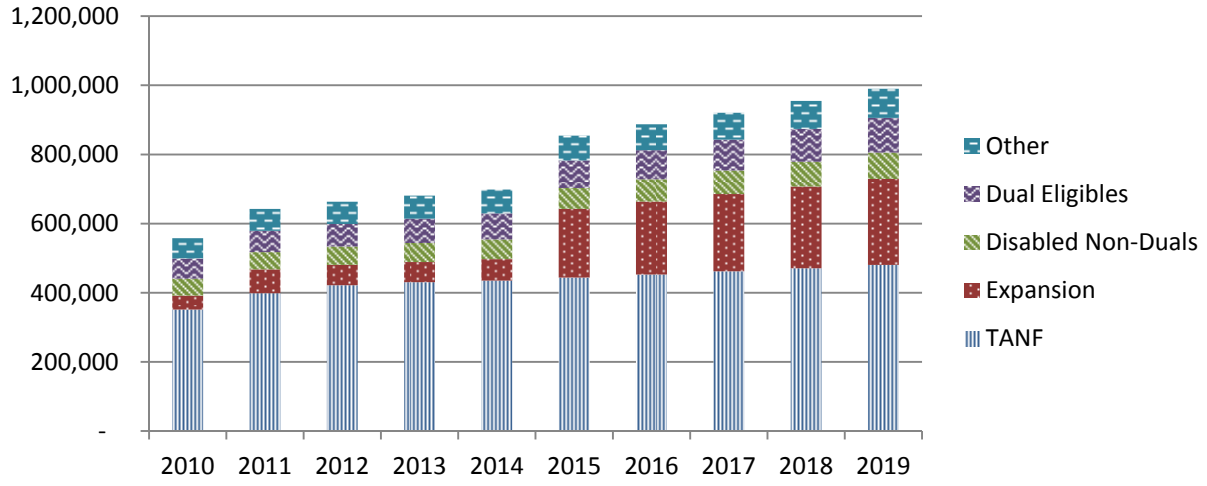


Figure 1: OHP data, December 28, 2011.

The following table shows the demographic distribution of the Oregon Medicaid population in 2011. The racial/ethnic makeup of the population has remained virtually unchanged over the last three years. The age profile of the Oregon Medicaid population has also remained stable over the last three years, though there has been a slight shift from the 0-18 age group to the adult group. This trend is expected to be much larger beginning in 2014, as the majority of new Medicaid enrollees will be previously uninsured adults. Approximately 56 percent of Medicaid enrollees are women and 44 percent are men. While this distribution has remained constant over the last several years, it is expected to shift somewhat toward men when the 2014 expansion is implemented.

Table 2: Oregon Medicaid Demographics (2011)

Demographic	%
Race/Ethnicity	
White	61%
African American	4%
Hispanic or Latino	22%
Asian, Native Hawaiian or Other Pacific Islander	3%
American Indian or Alaska Native	2%
Other/Unknown	8%
Age	
0-18	56%
19-64	37%
65+	7%
Gender	
Male	44%
Female	56%

Table 2: Data were extracted from the demographic reports published by the Oregon Health Plan for July 2011.

FFS and Managed Care Overview

The current OHP program is fragmented, resulting in diluted accountability for patient care and likely duplication of infrastructure and services. Care is delivered through a system that includes three kinds of health plans (16 physical health organizations, 10 mental health organizations and eight dental care organizations), while some individuals continue to receive care on a fee-for-service basis. Specifically:[2]

- Approximately 78% of OHP clients are enrolled in physical health managed care.
- Nearly 90% of OHP clients are enrolled in managed dental care.
- Approximately 148,000 clients not enrolled in managed care receive services on a Fee-for-Service (FFS) arrangement. Some providers receiving FFS also get a case management fee (in areas where there are no managed care plans)
- 88% of OHP enrollees are enrolled in capitated mental health organizations (MHOs). In many cases, the state provides capitated mental health organization (MHO) payments to the counties and the counties administer the programs. The counties function as the MHO, bearing full risk for the services, and contract with panels of providers to provide direct services to enrollees. Addiction services for Medicaid clients are covered in fully capitated health plans, not through MHOs or counties.

Please see Appendix C for detailed information on plan enrollment by type, the counties each plan serves, and the total enrollment.

Population Health Status and Health Disparities

The need for more effective service integration and care management for OHP enrollees is evident in statewide and Medicaid-specific data. This section provides an overview of several key indicators of

[2] Oregon Health Authority. Oregon Health Policy Board Meeting slides, January 18, 2011

population health. Many of these indicators are also reflective of major cost-drivers within the Medicaid program.

- *Perinatal Indicators.* Maternal and child health indicators are important factors in assessing the relative health of a community. Risk factors for poor birth outcomes such as low birth weight, short gestation, maternal smoking, inadequate maternal weight gain during pregnancy and substance abuse can often be addressed as a woman receives prenatal care.
- *Chronic Conditions.* Experts estimate that chronic diseases are responsible for 83 percent of all health care spending.[3] Health care spending for a person with one chronic condition on average is two and a half times greater than spending for someone without any chronic conditions.[4]
- *Smoking.* Direct Oregon Medicaid costs related to smoking are an estimated $287 million per year. This is equivalent to approximately 10 percent of total annual expenditures for Medicaid in Oregon.[5] While overall tobacco use rates in Oregon are below national levels and trending downward, adult Medicaid clients are nearly twice as likely to smoke as Oregon adults in general.[6] Specifically, 37 percent of adult Medicaid clients smoke, compared to 17 percent of Oregon adults. In addition, studies have shown that economic status is the single greatest predictor of tobacco use.[7]
- *Obesity.* Similarly, Medicaid payments for obesity-related care accounted for nearly nine percent of Medicaid costs between 2004 and 2006, a figure that has likely grown as obesity rates have increased (Washington DOH, 2004-2006; Oregon DHS, 2007).

The following chart show statewide trends in perinatal indicator rates for the Medicaid population. Teen birth rates and low birth rate babies have remained relatively constant over the past ten years. However, rates of late prenatal care have shown a troubling increase, and the percentage of Medicaid enrollees who smoke during their pregnancy has increased after dropping off in 2007.

[3] Partnership for Solutions, Chronic Conditions: Making the Case for Ongoing Care. September 2004 Update.
[4] Ibid
[5] OREGON HEALTH PLAN*, Tobacco Cessation Services: 2011 Survey of Fully Capitated Health Plans and Dental Care Organizations.*
[6] Oregon Health Plan, Tobacco Cessation Services: 2011 Survey of Fully Capitated Health Plans and Dental Care Organizations, May 2011.
[7] OREGON HEALTH PLAN*, Tobacco Cessation Services: 2011 Survey of Fully Capitated Health Plans and Dental Care Organizations.*

Figure 2: Perinatal Indicators for the OHP Population

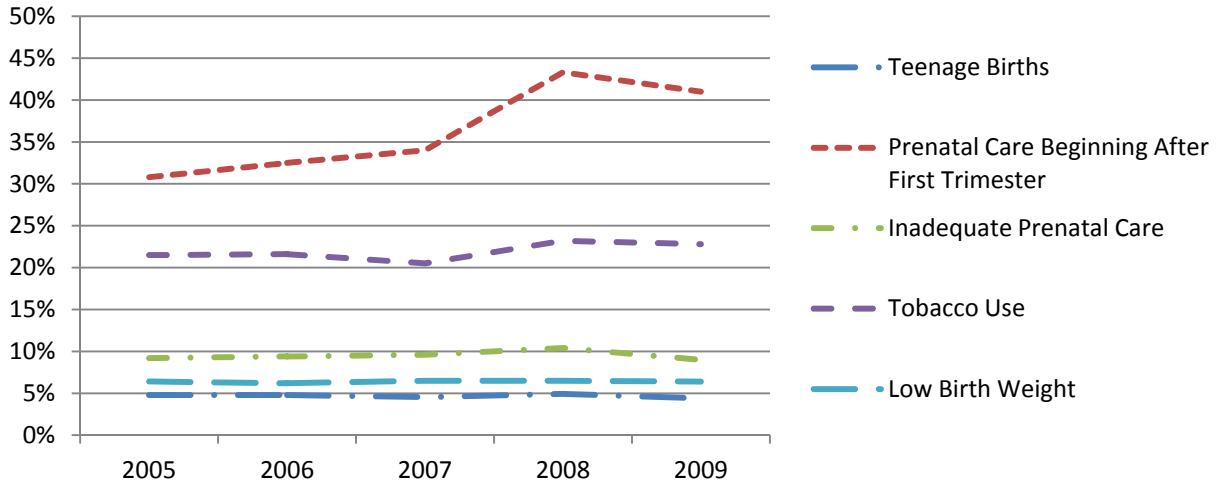


Figure 2: Oregon Vital Statistics Annual Reports 2005-2009

Figure 3 below shows the variance across the state when looking at the prevalence of chronic conditions among current OHP enrollees based on diagnosis codes. The statewide bar shows the average across all seven regions for each of the seven chronic conditions. The regions are defined as follows:

- Region 1: Clatsop, Columbia, Tillamook, Lincoln
- Region 2: Coos, Curry
- Region 3: Benton, Clackamas, Linn, Marion, Multnomah, Polk, Washington, Yamhill
- Region 4: Douglas, Jackson, Josephine, Lane
- Region 5: Crook, Deschutes, Gilliam, Grant, Hood River, Jefferson, Morrow, Sherman, Wasco, Wheeler
- Region 6: Baker, Umatilla, Union, Wallowa
- Region 7: Klamath, Lake, Henry, Malheur

In many instances, there are large disparities across regions. For example, Region 2's population has a diabetes prevalence rate that exceeds the statewide average by more than 30 percent and exceeds the Region 5 prevalence rate by 42 percent. Similarly, Region 2's population has an asthma prevalence rate that exceeds the statewide average by 14 percent and the Region 6 rate by 25 percent.

Figure 3: Rates of Chronic Conditions Per 1,000 Clients

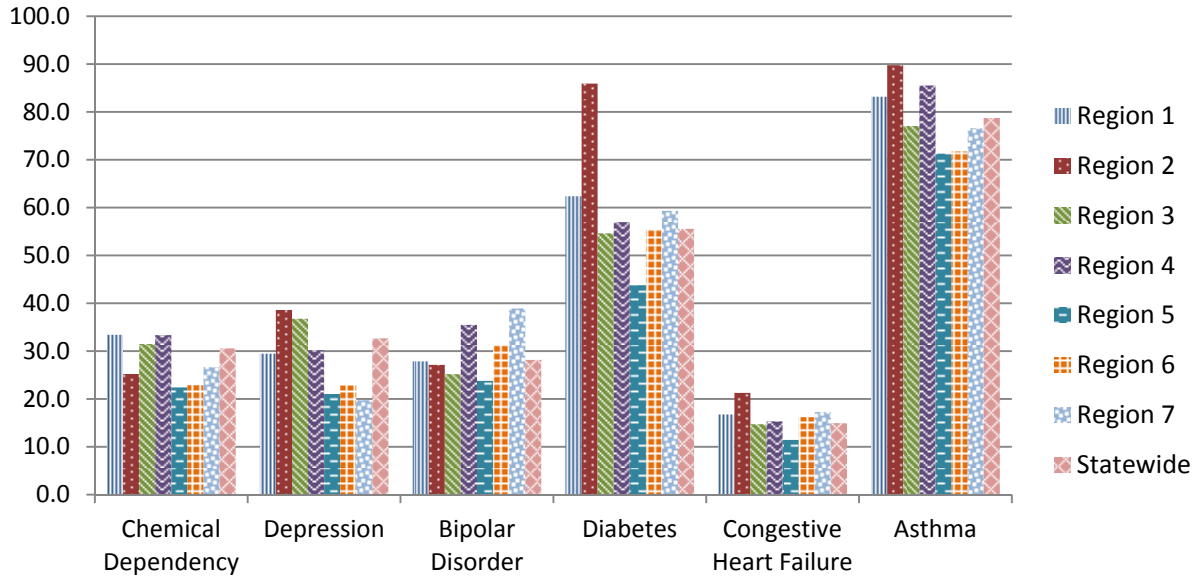


Figure 3: Oregon Health Authority Division of Medical Assistance Programs 8/15/2011.

Figure 4 below illustrates the overweight/obesity trend in Oregon and nationally. The lower portion of each stack represents the percent of the population considered "obese" according to their body mass index (BMI). The total stack represents the percentage of the population considered "overweight or obese". While the percentage of the Oregon population considered "overweight or obese" has stayed relatively stable from 2002-2009, the portion that are classified as "obese" has grown. While overall rates of obesity in Oregon are below national levels, this is a troubling trend, as obesity is one of the most important risk factors for developing diabetes, as well as numerous other chronic conditions and certain types of cancer.

Figure 4: Percent of Population Overweight and Obese

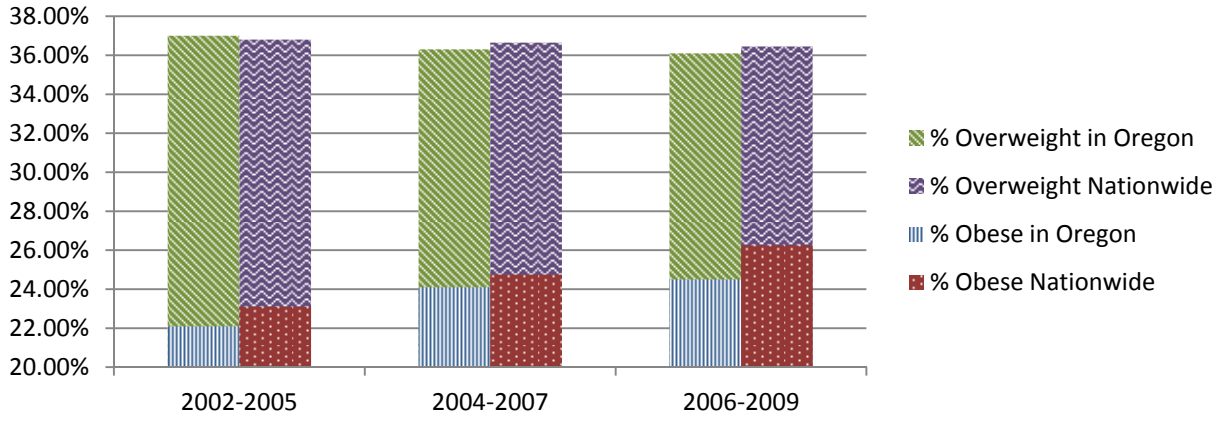


Figure 4: The lower stacks represent the percentage of the population classified as "obese". The total stacks represent the percentage of the population considered "overweight". The data comes from the Behavioral Risk Factor Surveillance System, accessed 12/2011.

Racial and Ethnic Disparities

In addition to overall rates of chronic disease and utilization of preventive services, it is important to look at disparities among racial and ethnic groups. A 2008 study by the Oregon Division of Medical Assistance compared racial and ethnic disparities in Oregon and in the Oregon Health Plan and found that disparities exist but vary by race/ethnic group.[8] The prevalence of chronic disease is worse among certain minority groups compared to whites. For Oregon Health Plan clients, asthma prevalence was higher for American Indians and Alaska Natives than for any other group – and other minority groups' prevalence was lower than whites'. For Oregon Health Plan clients, all minority groups had a higher prevalence of diabetes, except for African Americans, where the prevalence was the same as for whites.

In its 2011 "State of Equity Report," the Department of Human Services and the Oregon Health Authority identified two disparities in key performance measures across race and ethnicity. For the first measure, the utilization rate of preventative services for children from birth to 10 years of age covered by the Oregon Health Plan, a higher rate is favorable. When comparing across the benchmark of non-Hispanic whites, the chart shows Native Americans utilizing preventative services at a rate of less than 75% of the utilization seen in the white population.

[8] Division of Medical Assistance Programs and the Public Health Division, "Oregon Department of Human Services' Efforts to Reduce Racial and Ethnic Health Care Disparities." May 23, 2008.

Figure 5: Utilization Rate of Preventive Services for Children 0-10 Years Old Covered by the OHP Per Person Year - 2009

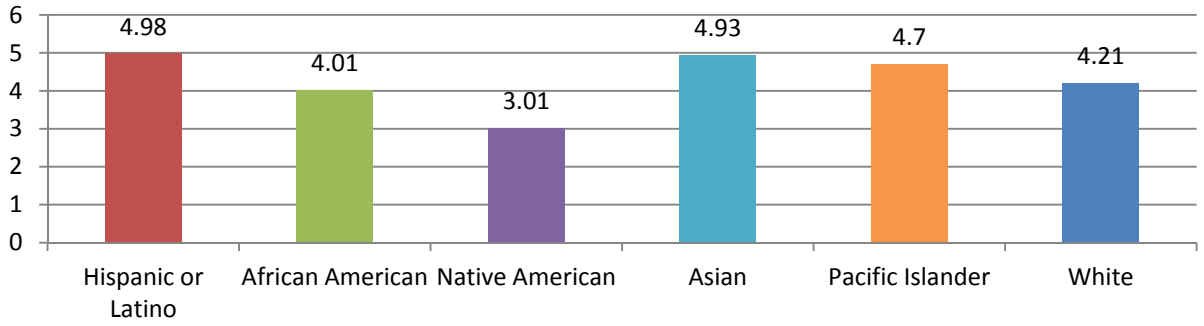


Figure 5: Data extracted from the "State of Equity Report" published by the Department of Human Services and the Oregon Health Authority in June 2011. Rates reflect the number of preventive services provided per person year.

In the second measure, the rate of ambulatory care sensitive condition hospitalizations of OHP clients, a lower rate is more favorable. Again, when comparing rates to the benchmark of non-Hispanic whites, the Native American population showcases less positive measures. High rates of hospitalization for ambulatory care sensitive conditions indicate that a condition is not being properly managed. These two disparities together highlight a population in which there is a lack of health care needs being met and indicate a need for outreach and interventions targeted to specific groups.

Figure 6: Rate of Ambulatory Care Sensitive Condition Hospitalizations of OHP Clients per 100,000 Person Years - 2009

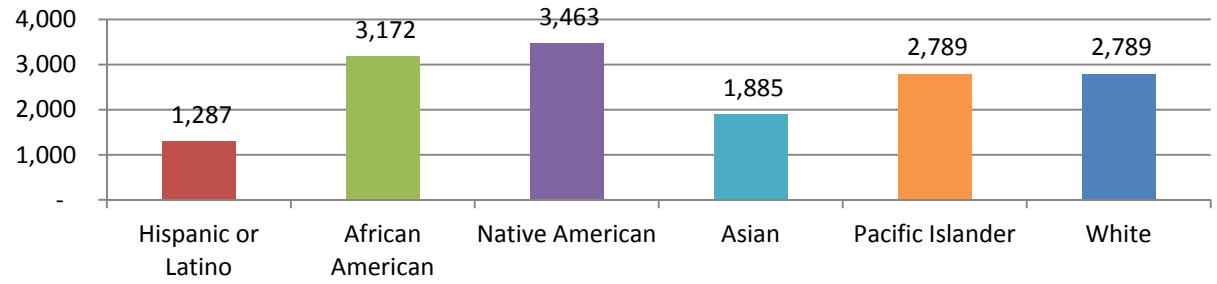
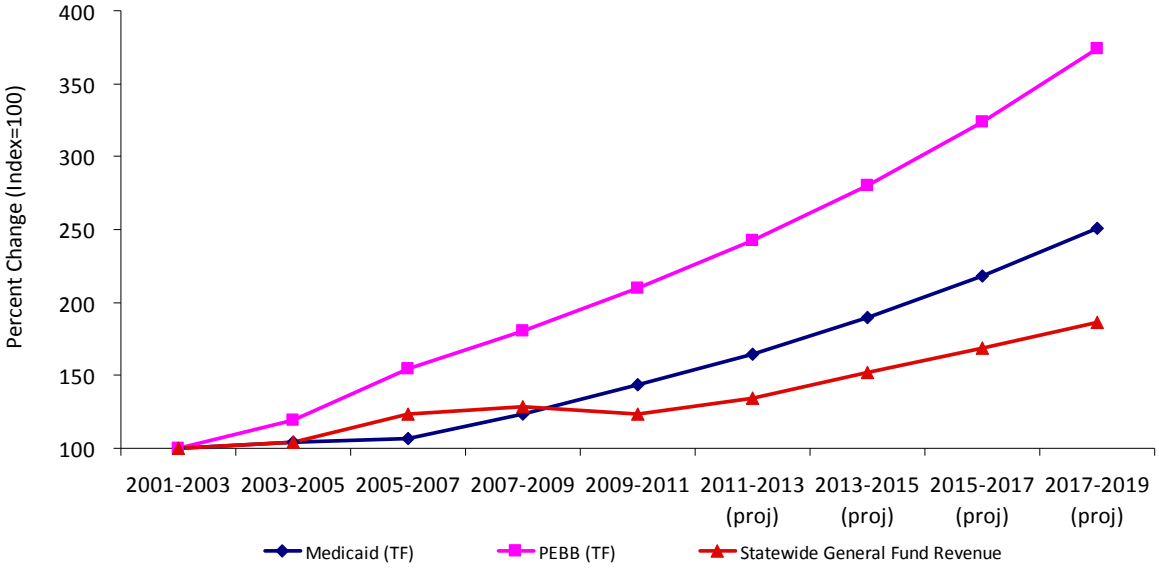


Figure 6: Data extracted from the "State of Equity Report" published by the Department of Human Services and the Oregon Health Authority in June 2011.

Unsustainable Cost Growth

While the rate of cost growth in the Medicaid program was effectively controlled in the early 2000s, the rate of growth has increased significantly and now far exceeds the current and projected rate of increase in state General Fund revenue (see Figure 11 below). This trend is clearly unsustainable.

Comparing the rate of increase in Medicaid and PEBB health care expenditures vs rate of increase in state General Fund revenue



Appendix A: Projected Medicaid Enrollment

Enrollment projects through 2014 were derived from OHA projections as well as the Gruber Report. Enrollment growth to 2019 assumes increases at levels comparable to recent years.

The number of dual eligibles was taken from an OHA fact sheet for the Medicare-Medicaid Integration Workgroup.

Calendar Year	TANF	Expansion	Disabled not Dual	Dual Eligibles	Other	Total
2010	351,738	40,572	49,000	58,100	58,847	558,259
2011	398,997	68,806	50,300	61,600	63,015	642,680
2012	422,055	58,851	53,500	65,200	64,099	663,723
2013	430,829	58,550	55,100	70,300	66,387	681,137
2014	435,565	62,199	56,700	75,500	69,088	699,050
2015	444,300	198,550	60,700	79,400	71,900	854,850
2016	453,200	211,050	64,300	84,200	74,800	887,550
2017	462,300	223,550	68,100	89,300	77,800	921,050
2018	471,500	236,050	72,100	94,700	80,900	955,250
2019	480,900	248,550	76,400	100,400	84,100	990,350

Appendix B: Implementation of "Well-Managed" by Program

Data are by calendar year but were pro-rated and accumulated into state fiscal years for the summary report.

TANF

	Enrolled	Projected Paid	Low Savings	"Well Managed"	High Savings	"Well Managed"	Difference
2010	351,738	$1,312,400,000	$0	$1,312,400,000	$0	$1,312,400,000	$0
2011	398,997	$1,528,000,000	$0	$1,528,000,000	$0	$1,528,000,000	$0
2012	422,055	$1,658,900,000	($12,200,000)	$1,646,700,000	($24,700,000)	$1,634,200,000	($12,500,000)
2013	430,829	$1,738,200,000	($38,900,000)	$1,699,300,000	($51,800,000)	$1,686,400,000	($12,900,000)
2014	435,565	$1,803,600,000	($67,100,000)	$1,736,500,000	($94,000,000)	$1,709,600,000	($26,900,000)
2015	444,300	$1,888,300,000	($140,600,000)	$1,747,700,000	($168,600,000)	$1,719,700,000	($28,000,000)
2016	453,200	$1,977,300,000	($220,700,000)	$1,756,600,000	($235,500,000)	$1,741,800,000	($14,800,000)
2017	462,300	$2,070,300,000	($246,500,000)	$1,823,800,000	($308,100,000)	$1,762,200,000	($61,600,000)
2018	471,500	$2,167,800,000	($258,100,000)	$1,909,700,000	($322,800,000)	$1,845,000,000	($64,700,000)
2019	480,900	$2,270,100,000	($270,300,000)	$1,999,800,000	($338,000,000)	$1,932,100,000	($67,700,000)

Disabled Non-Dual

	Enrolled	Projected Paid	Low Savings	"Well Managed"	High Savings	"Well Managed"	Difference
2010	49,000	$745,800,000	$0	$745,800,000	$0	$745,800,000	$0
2011	50,300	$800,100,000	$0	$800,100,000	$0	$800,100,000	$0
2012	53,500	$872,300,000	($4,800,000)	$867,500,000	($9,800,000)	$862,500,000	($5,000,000)
2013	55,100	$946,200,000	($15,900,000)	$930,300,000	($21,300,000)	$924,900,000	($5,400,000)
2014	56,700	$1,024,800,000	($28,800,000)	$996,000,000	($40,200,000)	$984,600,000	($11,400,000)
2015	60,700	$1,115,600,000	($62,600,000)	$1,053,000,000	($75,100,000)	$1,040,500,000	($12,500,000)
2016	64,300	$1,214,700,000	($102,200,000)	$1,112,500,000	($108,900,000)	$1,105,800,000	($6,700,000)
2017	68,100	$1,322,500,000	($118,500,000)	$1,204,000,000	($148,300,000)	$1,174,200,000	($29,800,000)
2018	72,100	$1,440,100,000	($129,200,000)	$1,310,900,000	($161,400,000)	$1,278,700,000	($32,200,000)
2019	76,400	$1,568,000,000	($140,700,000)	$1,427,300,000	($175,800,000)	$1,392,200,000	($35,100,000)

Expansion

	Enrolled	Projected Paid	Low Savings	"Well Managed"	High Savings	"Well Managed"	Difference
2010	40,572	$219,500,000	$0	$219,500,000	$0	$219,500,000	$0
2011	68,806	$389,400,000	$0	$389,400,000	$0	$389,400,000	$0
2012	58,851	$348,400,000	($2,600,000)	$345,800,000	($5,200,000)	$343,200,000	($2,600,000)
2013	58,550	$362,600,000	($8,100,000)	$354,500,000	($10,800,000)	$351,800,000	($2,700,000)
2014	62,199	$402,900,000	($15,000,000)	$387,900,000	($21,000,000)	$381,900,000	($6,000,000)
2015	198,550	$1,345,300,000	($100,200,000)	$1,245,100,000	($120,100,000)	$1,225,200,000	($19,900,000)
2016	211,050	$1,495,800,000	($167,000,000)	$1,328,800,000	($178,200,000)	$1,317,600,000	($11,200,000)
2017	223,550	$1,657,300,000	($197,300,000)	$1,460,000,000	($246,600,000)	$1,410,700,000	($49,300,000)
2018	236,050	$1,830,500,000	($217,900,000)	$1,612,600,000	($272,600,000)	$1,557,900,000	($54,700,000)
2019	248,550	$2,016,100,000	($240,100,000)	$1,776,000,000	($300,200,000)	$1,715,900,000	($60,100,000)

Dual Eligibles -- Medicaid Data

	Enrolled	Projected Paid	Low Savings	"Well Managed"	High Savings	"Well Managed"	Difference
2010	58,100	$168,300,000	$0	$168,300,000	$0	$168,300,000	$0
2011	61,600	$182,300,000	$0	$182,300,000	$0	$182,300,000	$0
2012	65,200	$201,800,000	($1,100,000)	$200,700,000	($2,300,000)	$199,500,000	($1,200,000)
2013	70,300	$227,600,000	($3,800,000)	$223,800,000	($5,100,000)	$222,500,000	($1,300,000)
2014	75,500	$255,700,000	($7,200,000)	$248,500,000	($10,000,000)	$245,700,000	($2,800,000)
2015	79,400	$281,300,000	($15,800,000)	$265,500,000	($18,900,000)	$262,400,000	($3,100,000)
2016	84,200	$314,600,000	($26,500,000)	$288,100,000	($28,200,000)	$286,400,000	($1,700,000)
2017	89,300	$351,900,000	($31,500,000)	$320,400,000	($39,500,000)	$312,400,000	($8,000,000)
2018	94,700	$393,600,000	($35,300,000)	$358,300,000	($44,100,000)	$349,500,000	($8,800,000)
2019	100,400	$440,500,000	($39,500,000)	$401,000,000	($49,400,000)	$391,100,000	($9,900,000)

Appendix C: Plan Enrollment

Fully Capitated Health Plan (FCHP) and Physician Care Organization (PCO) Enrollment[9]

Plan	Organization Type	Counties Served	Enrollment
Care Oregon, Inc.	FCHP	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Tillamook, Umatilla, Union, Wasco, Yamhill, Washington	145,400
Cascade Comprehensive Care, Inc.	FCHP	Clackamas, Clatsop, Coos, Crook, Curry, Deschutes, Douglas, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Linn, Malheur, Marion, Multnomah, Polk, Umatilla, Union, Wasco, Washington, Yamhill	9,724
DCIPA, LLC	FCHP	Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Grant, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Multnomah, Polk, Tillamook, Union, Washington, Yamhill	15,708
Docs of the Coast South	FCHP	Benton, Clackamas, Coos, Curry, Deschutes, Douglas, Hood River, Jackson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Marion, Multnomah, Polk, Tillamook, Union, Washington, Yamhill	11,366
Family Care, Inc.	FCHP	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Gilliam, Grant, Hood River, Jackson, Jefferson, Josephine, Klamath, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Tillamook, Umatilla, Union, Wasco, Washington, Yamhill	50,686
Intercommunity Health Network	FCHP	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Harney, Jackson, Jefferson, Josephine, Klamath, Lane, Lincoln, Linn, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Yamhill	28,344
Kaiser Permanente or Plus, LLC	PCO	Baker, Clackamas, Clatsop, Columbia, Coos, Deschutes, Douglas, Jackson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Marion, Multnomah, Polk, Sherman, Umatilla, Wasco, Washington, Yamhill	12,240
Lane Individual Practice Association	FCHP	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Grant, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Washington, Yamhill	44,630

[9] Enrollment numbers represent the annual average enrollees for state fiscal year 2011. Data supplied by the Oregon Health Authority, December 2011.

Plan	Organization Type	Counties Served	Enrollment
Marion Polk Community	FCHP	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Deschutes, Douglas, Gilliam, Grant, Harney, Hood River, Jackson, Josephine, Klamath, Lane, Lincoln, Linn, Malheur, Marion, Multnomah, Polk, Sherman, Tillamook, Umatilla, Wallowa, Wasco, Washington, Yamhill	57,901
Mid-Rogue Holding Company	FCHP	Baker, Benton, Clackamas, Coos, Crook, Curry, Deschutes, Douglas, Jackson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Marion, Multnomah, Umatilla, Union, Washington	20,499
ODS Community Health, Inc.	FCHP	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Deschutes, Douglas, Gilliam, Grant, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Umatilla, Union, Wallowa, Wasco, Washington, Yamhill	10,303
Oregon Health Management Services	FCHP	Benton, Clackamas, Coos, Curry, Deschutes, Douglas, Jackson, Josephine, Klamath, Lane, Linn, Marion, Multnomah, Sherman	5,404
Pacific Source Community Solutions, Inc.	FCHP	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Gilliam, Grant, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Wheeler, Yamhill	34,875
Providence Health Assurance	FCHP	Benton, Clackamas, Clatsop, Columbia, Coos, Deschutes, Gilliam, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Marion, Multnomah, Polk, Sherman, Tillamook, Wasco, Washington, Yamhill	19,070
Tuality Health Alliance	FCHP	Baker, Benton, Clackamas, Clatsop, Columbia, Deschutes, Douglas, Harney, Jackson, Josephine, Lane, Lincoln, Marion, Multnomah, Polk, Tillamook, Washington, Yamhill	10,462

Mental Health Organization (MHO) and Dental Care Organization (DCO) Enrollment

Plan	Organization Type	Counties Served	Enrollment
Access Dental Plan, LLC	DCO	Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Deschutes, Douglas, Gilliam, Grant, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Tillamook, Umatilla, Union, Wasco, Washington, Yamhill	7,327

Plan	Organization Type	Counties Served	Enrollment
Accountable Behavioral Health	MHO	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Gilliam, Grant, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Wheeler, Yamhill	14,531
Advantage Dental	DCO	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Gilliam, Grant, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Wheeler, Yamhill	170,989
Capitol Dental Care, Inc.	DCO	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Gilliam, Grant, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Wheeler, Yamhill	183,934
Clackamas Mental Health Organization	MHO	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Gilliam, Grant, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Wheeler, Yamhill	33,183
Family Care, Inc.	MHO	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Gilliam, Grant, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Wheeler, Yamhill	38,079
Family Dental Care	DCO	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Gilliam, Grant, Hood River, Jackson, Jefferson, Josephine, Klamath, Lane, Lincoln, Linn, Malheur, Marion, Multnomah, Polk, Sherman, Tillamook, Union, Washington, Yamhill	6,673
Greater Oregon Behavioral Health, Inc.	MHO	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Gilliam, Grant, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Wheeler, Yamhill	61,308
Jefferson Behavioral Health	MHO	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Gilliam, Grant, Harney, Hood River, Jackson, Jefferson,	76,073

Plan	Organization Type	Counties Served	Enrollment
		Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Yamhill	
Lane Care	MHO	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Gilliam, Grant, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Wheeler, Yamhill	51,222
Managed Dental Care of Oregon	DCO	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Grant, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wasco, Washington, Yamhill	17,095
Mid Valley Behavioral Care Network	MHO	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Gilliam, Grant, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Yamhill	106,701
Multicare Dental	DCO	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Gilliam, Grant, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Yamhill	34,174
Multnomah Verity	MHO	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Gilliam, Grant, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Wheeler, Yamhill	90,512
ODS Community Health, Inc.	DCO	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Gilliam, Grant, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Wheeler, Yamhill	66,055
Pacific Source Community Solutions, Inc.	MHO	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Grant, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk,	27,374

Plan	Organization Type	Counties Served	Enrollment
		Sherman, Tillamook, Umatilla, Union, Wasco, Washington, Yamhill	
Washington County Department of Mental Health	MHO	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Gilliam, Grant, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Yamhill	45,453
Willamette Dental Group	DCO	Baker, Benton, Clackamas, Clatsop, Columbia, Coos, Crook, Curry, Deschutes, Douglas, Gilliam, Grant, Harney, Hood River, Jackson, Jefferson, Josephine, Klamath, Lake, Lane, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Yamhill	77,300

Appendix D: Selected References

Health Management Associates is responsible for the projections in the cost savings model. The assumptions and methodology used represent the professional judgment of Health Management Associates staff and are based not only on the references cited below but also experiences derived from many years working in the health care industry.

Attainment of "Well-Managed" Status

2010 Oregon Medicaid Cost Models and Benchmarks
Prepared for: Oregon Healthcare Leadership Council
November 17, 2011

Milliman, Inc.
1301 Fifth Ave.
Seattle, WA 98101-2605
John Pickering, FSA, MAAA
john.pickering@milliman.com
206 504 5884

"The Oregon Healthcare Leadership Council (OHLC) engaged Milliman to develop cost models of 2010 Oregon Medicaid experience and to compare the experience for the Low Income Medicaid and SCHIP eligibility categories to Milliman loosely-managed and well-managed utilization benchmarks."

Increasing Use of the Capitated Model for Dual Eligibles:
Cost Savings Estimates and Public Policy Opportunities
Sponsored by: Association for Community Affiliated Plans Medicaid Health Plans of America
November, 2008

The Lewin Group
3130 Fairview Park Dr.
Suite 500
Falls Church, VA 22042

"This report estimates that large-scale savings can be achieved in transitioning the dual eligible population into a fully integrated, capitated setting. The clinical and eligibility characteristics of the dual eligibles population are exceptionally well-matched to the strengths of a fully integrated care program operated by at-risk health plans. For any given dual eligibles subgroup moved into a capitated setting, encompassing the fully benefits package of Medicare and Medicaid covered services, we estimate initial, CY2010 net savings (across the Medicare and Medicaid programs) of approximately 3% per year, growing to nearly 5% per year as of CY2024. Given the large baseline size of the per capita spending on dual eligibles (more than $7 trillion nationwide across the upcoming 15 years), these relatively modest percentage savings translate into rather massive dollar amounts. Nationally, each percentage point reduction in dual eligibles' spending will yield more than $70 billion in savings across the 2010-2024 timeframe."

Physical and Mental Health Integration

The Business Case for Bidirectional Integrated Care Mental Health and Substance Use Services in Primary Care Settings and Primary Care Services in Specialty Mental Health and Substance Use Settings

June 30, 2010

Barbara J. Mauer
Dale Jarvis
MCPP Healthcare Consulting

"This business case paper is intended for use by audiences who share the desire to simultaneously accomplish the three critical healthcare objectives of the Institute for Healthcare Improvement's Triple Aim:

- Improve the health of the population
- Enhance the patient experience of care (including quality, access, and reliability)
- Reduce, or at least control, the per capita cost of total healthcare"

Selected findings:

- IMPACT Research Trials – Net savings of $3,363 in total cost over 4 years
- Colorado Access – 12.9% reduction in for high-cost, high-risk patients
- Aetna – net cost savings of 39%
- VA Integrated Clinics – lower inpatient was offset by higher primary care costs
- Northern California Kaiser – Integrated Medical Care – Cost reductions of 48%

Health Plan Mental Health Integration Projects

Initiative Name	Colorado Access[72]
Brief description	• Non-profit managed care plan with contract as regional Medicaid HMO and Regional MH Carve-Out • 64% of enrollees in Aged/Blind/Disabled Medicaid aid code • Part of MacArthur Initiative and RWJ Depression in Primary Care Project • Analysis of overlapping populations in two plans showed that 40% of people had a MH diagnosis yet only 33% had ever seen a MH provider, and for most, this was a one-time visit
Quality Outcomes	• The focus of this analysis was healthcare cost , data not available on outcomes
Healthcare Costs	• ED visits/1000: from 220.3 at 12 months pre to 163 24 months post • Office visits/1000: from 211.8 at 12 months pre to 358.2 at 24 months post • Admits/1000 from 49.7 at 12 months pre to 37.4 at 24 months post • Days/1000 from 232.5 at 12 months pre to 205.4 at 24 months post • Savings of $170 PMPM, $2040/year • 12.9% reduction in costs in high-cost, high-risk patients
Key Model Components	• Centralized care management in the plan, with telephonic, onsite in primary care or in-community care contacts based on risk stratification • Care managers were nurses or MH specialists • Registry to track PHQ-9, treatment adherence, self-management goals and progress, educational interventions, case management and comorbid disorders and treatments • Focus on top 2-3% of population using Kronick risk assessment methods • Three levels of risk stratification, based on PHQ-9, presence of psychiatric or medical comorbidities, high risk for non-adherence, psychosocial stressors and treatment-resistant depression.

Initiative Name	Aetna[73]
Brief description	• Integration with PCPs o Depression o Pediatrics o SBIRT o Integrated BH
Quality Outcomes	• 61% drop in PHQ-9 score between admission and discharge (45% have moderate to severe depression >14 on PHQ-9) • 48% of enrollees with major depression achieve PHQ-9 < 5 (remission)

Vision of the Integration Policy Initiative—Overall Health and Wellness is Embraced as a Shared Community Responsibility

Initiative Name	Aetna[73]
Healthcare Costs	• Cost impact: reduction on completion (n=375) o ED 39% o Inpatient 30% o Outpatient 47% o Psychiatric visit 3% o Psychotherapy visits 290% increase • Net total cost savings 39%
Key Model Components	• Health plan penetration o Office identification by volume, diagnosis, and pharmacy claims o Creation of virtual disease registry o Initiative with employer groups and multiple health plans • Infrastructure-Practice models o Quality infrastructure—EMR, registries, population management o Facilitated implementation—PCP office implementation toolkit o Web Site: http://www.aetna.com/aetnadepressionmanagement/ o Role of office administrator- training module • Lack of utilization—adoption and persistency o Academic detailing o Office manager single point of contact o Recurrent communication—Email reminders o Community physician thought leader communications • Reluctant to refer to health plan care management o Focus care management on facilitated access to BH • BH provider network issues o Conceptual framework and training models o Training BH and PCPs o Incentives • Health plan integration o Similar to provider integration and cultural issues o Integration of BH and medical health data set and care management system o Data sharing and privacy issues • Behavioral Health Financing o Transactional reimbursement and claims payment systems o Silos between BH and medical financing—carve in vs. carve out o Lack of standardized reimbursement codes to support screening, case management o Funding cost of integration

IPI: The Business Case for Integrated Care, Page 21

HEAL 9 Grantee Conference-- Integrating Physical & Behavioral Health

Albany, NY
April 28, 2011

Kathleen Plum, PhD, RN, NPP
Director, Monroe County Office of Mental Health
Co-Chair, NYCCP Steering Committee

Grant Mitchell, MD
Commissioner, Westchester County Department of Mental Health
Member, NYCCP Steering Committee

The focus was on those with serious behavioral health issues and the reported savings were 35% for Medicaid other than hospital and 78% for hospital expenses.

St. Luke's Health Initiatives: Arizona Health Futures -- Integration and Behavioral Health
Winter, 2003

Jill Jamison Rissi, RN, MPA
Roger A. Hughes, Ph.D.
Researcher: Debra Trachy

"Advocates for the closer integration of behavioral and primary care health services point to savings of 20-40 percent of total system costs – and a general increase in system efficiency – from well-designed integration programs. (Strosahl, 2001)."

Integration of Mental Health/Substance Abuse and Primary Care
October 2008

Prepared for: Agency for Healthcare Research and Quality
U.S. Department of Health and Human Services
540 Gaither Road
Rockville, MD 20850
www.ahrq.gov

Prepared by: Minnesota Evidence-based Practice Center, Minneapolis, Minnesota

Investigators
Mary Butler, Ph.D., M.B.A.
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Donna McAlpine, Ph.D.
Roger G. Kathol, M.D.
Steven S. Fu., M.D., M.S.C.E.
Hildi Hagedorn, Ph.D.
Timothy J. Wilt, M.D., M.P.H.

The report contained general background information and did not specifically address cost savings.

MH Preferred Drug List
HMA used the OHA budget figures.

Program Integrity Savings

2011-2013 Medicaid Efficiencies
State of Wisconsin, Department of Health Services
September 30, 2011

This is a communication to the legislature from Dennis Smith, Secretary listing several program integrity initiatives and associated savings.

$23M Savings in Program Integrity for Iowa Medicaid
Iowa Department of Human Services Press Release

July 21, 2011

A new Iowa Medicaid program integrity initiative saved taxpayers more than $23 million in cost avoidance or recoveries in its first year of operation, according to Medicaid Director Jennifer Vermeer.

Patient-Centered Primary Care Homes

Oregon's Patient-Centered Primary Care Home Model and the Medicare Health Support Pilot Program

December 21, 2011

Oregon Health Authority

Attachment 1. Cost-savings achieved through medical home model implementation.

Location	Model	Sample Size	Covered Population	Size of Implementation	Utilization Reductions	Cost Savings
Colorado	Colorado Medical Home	N= 10,781	Medicaid / CHIP children	310 physicians working at 97 different practices.		• Total savings per patient = $169–530. [1]
Michigan	Genesee Health Plan (GHP) Medical Home	Plan serves 27,000	low-income, uninsured adults	network of 192 primary care physicians, 289 specialists.	• 50% reduction in ED use • 17% reduction in hospital admissions • 27% fewer total hospital days per 1,000 enrollees than competitors [2]	• Savings of more than $1 million for the health plan's hospital partners. [3]
North Carolina	Community Care of North Carolina PCMH	N = 970,000	Medicaid population	State-wide	• 40% decrease in hospitalizations for asthma • 16% lower ED visit rate. [2] • ED utilization 23% less than projected • Outpatient care 25% less than projected • pharmacy 11% less than projected [4]	• Total savings per patient = $516. [1] • Cumulative savings of $974.5 million over 6 years (2003-2008). [2] • $160 million annual savings. [4]
Pennsylvania	Geisinger ProvenHealth Navigator PCMH Model	N= 8,634	Medicare Advantage enrollees, not selected for risk status or health conditions.	11 Geisinger primary care practices	• 18% reduction in hospital admissions	• 7% reduction in total PMPM costs • $500 per enrollee per year • Geisinger has estimated in unpublished reports an ROI of more than 2:1. [2] • $3,800 per patient per year in drug cost savings for chronic kidney disease patients • 7 % total medical cost savings. [5]
Utah	Care Management Plus, a multi-disease care management program	N= 1,144	Seniors enrolled in Medicare, where 75% had two or more chronic diseases	7 Clinics, and larger expansion beyond Utah	• 8% Reduction in hospitalizations	• Per clinic, hypothesized savings from decreased hospitalizations was $17,384 to $70,349. [6] • Total savings per patient = $640. [1]
Vermont	Vermont Blueprint for Health PCMH	N= 60,000	General population	3 Initial Communities, but planning state-wide rollout	• Early trends in reduction of avoidable acute care are promising	• Total savings per patient = $215. [1] • 1.9% reduction in total system costs. [7]
Washington	Group Health Cooperative PCMH	N= 7,018	Typical adults, not selected for risk status or particular health conditions	1 Seattle clinic	• 16% reduction in hospital admissions • 29% reduction in ED use	• $10 PMPM reduction in total costs • $14 PMPM reduction in inpatient hospital costs • $4 PMPM reduction in ER costs relative to controls • When fully accounting for all additional PCMH investments, ROI was 1.5:1. [2]

1. Fields D, Leshen E, Patel K (2010). Driving Quality Gains And Cost Savings Through Adoption Of Medical Homes. *Health Affairs*, 29(5): 819–826.
2. Grumbach K, Grundy P (2010). *Outcomes of Implementing Patient Centered Medical Home Interventions: A Review of the Evidence from Prospective Evaluation Studies in the United States*. Washington DC: Patient-Centered Primary Care Collaborative.
3. Klein S, McCarthy D (2010) *Geneseys HealthWorks: Pursuing the Triple Aim Through a Primary Care-Based Delivery System, Integrated Self-Management Support, and Community Partnerships*. New York: The Commonwealth Fund.
4. Steiner BD, Denham AC, Ashkin E, Newton WP, Wroth T, Dobson LA (2008). Community Care of North Carolina: Improving Care Through Community Health Networks. *Annals of Family Medicine*, 6:361-367.
5. Paulus RA, Davis K, Steele GD (2008). Continuous Innovation In Health Care: Implications Of The Geisinger Experience. *Health Affairs*, 27(5): 1235–1245.
6. Dorr DA, Wilcox AB, Brunker CP, Burdon RE, Donnelly SM (2008). The effect of technology-supported multidisease care management on the mortality and hospitalization of seniors. *Journal of the American Geriatric Society*, 56(12):2195-202.
7. Vermont BluePrint for Health. 2009 annual report. Burlington (VT): Vermont Department of Health; 2010 Jan.