

Executive summary

This report is the second update to *Oregon's Health Professions: Occupational and County Profiles*, which was first published in April 2011. The report includes workforce-related data from 10 health profession licensing boards and the following 21 professions:

- Counselors and therapists
- Dentists
- Dental hygienists
- Dietitians
- Registered nurses
- Nurse practitioners
- Certified registered nurse anesthetists
- Clinical nurse specialists
- Licensed practical nurses
- Certified nursing assistants
- Occupational therapists
- Occupational therapy assistants
- Pharmacists
- Pharmacy technicians
- Physical therapists
- Physical therapist assistants
- Physicians
- Physician assistants
- Podiatrists
- Psychologists
- Social workers

For most health care professions, there are identifiable trends related to supply, demographics, geographic distribution, and employment.¹ Below are some of the highlights found in the data collected from Oregon's providers.

Supply of health care providers

Overall, the number of people working in the profiled health professions has increased since Oregon began collecting health care workforce data.

The professions with the largest percentage increase in licensed workers in Oregon from 2009 to 2014 are:

- Physician assistants (27%, from 918 to 1,167)
- Certified registered nurse anesthetists (25%, from 307 to 383)
- Nurse practitioners (23%, from 1,955 to 2,404)

Two professions, dental hygienists and certified nursing assistants, experienced a decrease (9% and 3%, respectively) in licensees from 2009 to 2014.

The majority of health care professionals profiled in this report say they intend to keep their practice hours "as is" in the next two years.² A higher percentage of nursing assistants (16%), dietitians (14%) and licensed practical nurses (13%) than other professionals intend to increase their practice hours in the future. Nurse practitioners, clinical nurse specialists, and certified registered nurse anesthetists (9% each) had the largest proportion of providers reporting plans to decrease their practice hours in the next two years. The professions with the largest percentage of licensees who intend to stop practicing in Oregon during the next two years, either by moving out of state, retiring or leaving their respective fields, are physical therapists (6%), pharmacists (5%), occupational therapists (5%) and occupational therapy assistants (5%).

Geographic distribution

Except for the Portland Metro region, where health care professionals are overrepresented (51% of Oregon's health care professionals work in the Metro area, which has 43% of the state's population), the professionals profiled in this report follow a similar distribution pattern as the state's general population: 20% work in Southwest Oregon, 17% in the Northwest region, 8% in Central Oregon and 4% in Eastern Oregon.

¹ The Boards of Licensed Professionals Counselors and Therapists, Licensed Social Workers, and Psychologist Examiners have been collecting and submitting workforce data from their licensees on a voluntary basis since 2012. Because licensees are not required to complete the questionnaires, response rates are very low (less than 25%) among counselors, therapists, social workers, and psychologists. Due to low response rates, these health care professionals are described only in the occupational profiles and are excluded from all other discussions in this report.

Demographics

Oregon's population is growing older, and so are Oregon's health care providers. More than one out of 10 dentists, physicians and clinical nurse specialists is 65 years of age or older, indicating that many of these professionals are working past the traditional retirement age. A majority of professionals reported their race as White/Caucasian only. Professions with a higher percentage of workers reporting a race other than White/Caucasian are:

- Certified nursing assistants (22%)
- Pharmacists (19%)
- Physicians (16%)

Missing race and ethnicity data for health care professionals have been a significant limitation to this dataset in past years. Continued efforts are being made to increase collection of licensees' race and ethnicity, with marked improvements already being identified in the current dataset.

Many professions do not reflect the racial diversity of Oregon's population, including Black/African American, American Indian or Alaska Native, and Hispanic/Latino racial and ethnic groups. However, certified nursing assistants closely mirror Oregon's Hispanic/Latino population at 11%.

As do most Oregonians, the majority of health care providers profiled in this report speak only English. However, 35% of dentists and 34% of physicians speak another language and are the most language-diverse occupations.

Employment characteristics

Employment in Oregon's health care industry stayed relatively strong overall during the recent economic recession. The majority of licensed health professionals are full-time employees and from 2012 to 2014, most occupations reported an increase in the number of those working full-time. This increase could be a sign of a strengthened state economy and the impact of health reform efforts.

Although most licensed health professionals work full-time, not all of their time is spent in direct patient care. The amount of time spent in direct patient care varies from profession to profession.

About this report

More detail about the professionals included in the data collection can be found in the Occupational and County Profile pages. Information about the distribution of health care professionals at both state and county levels can be found in the Statewide and County Profiles. How the professions have changed since data collection began is reported in Overview, directly following the Executive Summary.

While not all health professions in Oregon are profiled in this report, the information provides a valuable overview of Oregon's health care workforce and presents quality health care workforce data.

These data can:

- Inform efforts to target resources and increase access to health care services;
- Help professionals and policy makers understand the impacts of the aging workforce;
- Identify gaps in geographic distribution;
- Better tailor education and training;
- Evaluate policies and programs; and
- Address health disparities.

Overview

Supply of health care providers

As Oregon's population ages² and the need for health care services increases, it is important to know more about the supply of health care providers to make sure there are enough professionals to meet the potential demand. The Affordable Care Act has expanded health insurance coverage to roughly 470,000 additional Oregonians, which could further stress the capacity of health care providers to provide needed services.

Determining the supply of health care workers involves more than adding up the number of people

working in health care in Oregon. Other factors must be considered such as the ratio of providers to the population served and the future plans of providers to expand or contract their practice. The number of students graduating from health care training programs and future migration of health care workers to Oregon from other states, are also important, but are outside the scope of the licensing data on which this report is based.

TABLE 1. NUMBER OF ACTIVE LICENSEES WORKING IN OREGON*

Occupation	Number working in Oregon			Trend	Percent change ‡
	2009–10	2011–12	2013–14		
Dental hygienists	2,369	2,371	2,153		-9.1%
Certified nursing assistants	16,674	16,558	16,232		-2.6%
Dentists	2,559	2,335	2,152		0.1%
Physicians	10,822	10,509	11,099		2.6%
Dietitians	451	536	479		4.0%
Certified pharmacy technicians	4,492	4,991	4,694		4.5%
Occupational therapists	1,030	1,150	1,082		5.0%
Registered nurses	35,849	37,773	38,832		8.3%
Licensed practical nurses	3,331	3,548	3,737		12.2%
†Clinical nurse specialists	140	172	165		13.0%
Occupational therapy assistants	99	215	225		13.1%
Physical therapists	2,400	2,662	2,782		15.9%
Physical therapist assistants	578	658	687		18.9%
†Nurse practitioners	1,955	2,173	2,404		23.0%
†Certified registered nurse anesthetists	307	380	383		24.8%
Physician assistants	918	972	1,167		27.1%
Pharmacists	N/A	3,298	3,041		N/A
Podiatrists	N/A	144	154		N/A

* For all occupations except nurses, numbers are those licensees who: 1) renewed their license; 2) identified their employment status as employed in the field full-time, part-time, per-diem or other, retired but still practicing, volunteer, or faculty/student. Counts do not include new licensees. Nursing estimates account for all licensees (new and renewing).

† Increases in number working in Oregon may be due to change in methodology rather than increases in the occupation.

‡ Percent change is from 2009-10 to 2013-14.

² Various between census data tables with Oregon population estimates by age group from Portland State University Population Research Center (www.pdx.edu/prc/population-estimates-0).

Number of health care professionals

Since 2009, when Oregon began collecting workforce data for multiple health care professions, the number of people licensed and working in health care in Oregon has increased³ (see Table 1). From 2009 to 2014, the professions with the largest increases in number of providers were:

- Physician assistants (27%)
- Certified registered nurse anesthetists (25%)
- Nurse practitioners (23%)

Other professions with substantial increases include physical therapist assistants (19%), physical therapists (16%), occupational therapy assistants (13%), clinical nurse specialists (13%) and licensed practical nurses (12%). The increases among nurse practitioners, certified registered nurse anesthetists and clinical nurse specialists may be attributed to changes to questions related to employment status. Prior to 2012, the “self-employed” option was not present in the nursing workforce survey, and self-employed individuals may not have responded to the question or may have been counted in other categories.

Only two professions showed a decrease in the number of licensed health care workers practicing in Oregon from 2009 to 2014. The number of dental hygienists shrank by 8% (or 126 licensees), and certified nursing assistants by 3% or 441 licensees.

Population-to-provider ratio

Another way to understand the health care workforce supply is to determine how many individuals each health care provider might serve, or a population-to-provider ratio. This ratio is found by dividing the number of people living in an

area by the number of health care providers practicing in the same area. A lower population-to-provider ratio means more access to care for individuals living in a certain region. A higher ratio means less access to providers. When we examine the change in these ratios over time, a decrease means that, on average, people had more access to health care providers, while an increase means that there were more people for each health provider to serve.

In 2014, population-to-provider ratios vary drastically by profession from 101 people per registered nurse to 25,752 people per clinical nurse specialist. To put these ratios into context, one must consider the demand for services provided by the health care worker and the amount of time a provider may spend with a patient. For example, dental hygienists, providing preventive care to a wide range of the population, generally have a smaller population-to-provider ratio than podiatrists, who provide specialized care to a smaller segment of the population.

From 2010 to 2014, the majority of professions saw decreases in their population-to-provider ratios. Oregonians had better access to pharmacists, physician assistants, certified registered nurse anesthetists and nurse practitioners. Pharmacists saw the greatest decrease in population-to-provider ratios: 25%. In 2010, there were 1,716 Oregonians for every pharmacist. In 2014, that ratio decreased to 1,289 people for every pharmacist, a drop of more than 400 people per pharmacist.⁴ The physician assistant ratio also had a significant decrease of 19%. Certified registered nurse anesthetists and nurse practitioners ratios decreased 18% and 17%, respectively.

³ For all professions other than nursing, data account for only those licensees who renewed their license and identified their employment status as full-time, part-time, temporary, retired but still practicing, engaged in patient care, volunteer, or faculty/student, and do not include new licensees. Nursing data account for new and renewing licensees.

⁴ Complications during a transition to an on-line license renewal system in 2010 at the Board of Pharmacy resulted in a loss of licensee workforce data that prohibits a comparison of 2010 data with current 2014 pharmacist data. Instead a comparison of 2012 and 2014 pharmacy data was used in conjunction with 2010, 2012 and 2014 data from the other health care professionals profiled in the narrative section.

The population-to-provider ratios increased for three professions from 2010 to 2014. Dental hygienists saw the largest increase in their population-to-provider ratio. In 2014, there were 1,820 Oregonians for every dental hygienist. This is an increase of 13%, or 206 more people per provider than in 2010. Certified nursing assistants saw a ratio increase of 5% (12 more people per provider), and dentists saw a 2% increase (36 more people per provider).

Population-to-provider ratios for each profession have been calculated for the state as a whole and each county and can be found in the state and county profiles. Maps of selected professions and change of population-to-provider ratios over time (from 2010 to 2014) are included in this report.

Future practice plans

Some health care providers change how much and where they practice on a fairly regular basis. Professionals may move out of state, change the number of hours they work per week, or retire; each of these affects the overall supply of health care workers. To understand the total picture of health care workforce supply, future practice plans must be considered.⁵

Of the occupations analyzed, the majority of providers plan to make no changes to their practice hours in the next two years.

The professions with the highest percentage of people who plan to increase their practice hours are:

- Certified nursing assistants (16%)
- Dietitians (14%)
- Licensed practical nurses (13%)
- Dental hygienists (12%)
- Dentists (11%)
- Physical therapist assistants (11%)
- Occupational therapy assistants (10%)

FIGURE 1. PLAN TO REDUCE PRACTICE HOURS IN THE NEXT TWO YEARS

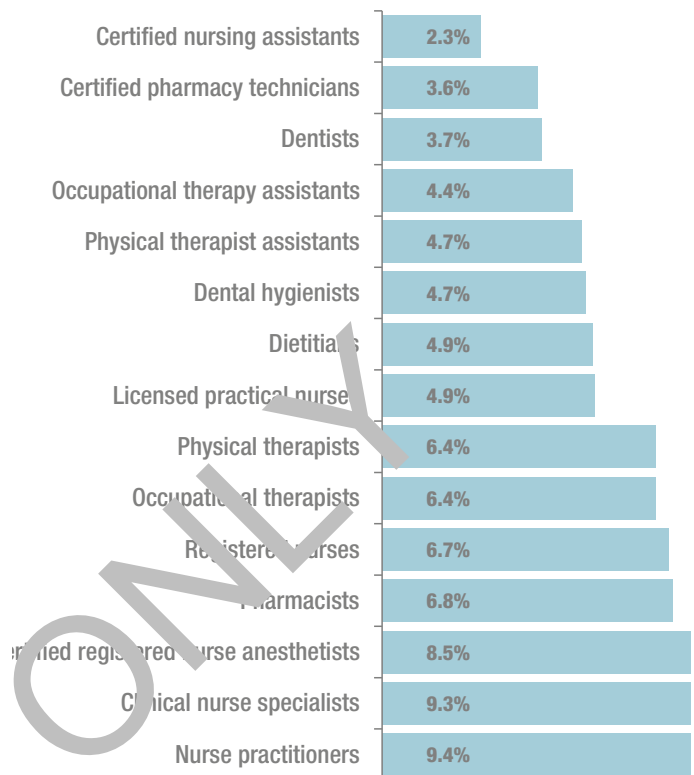
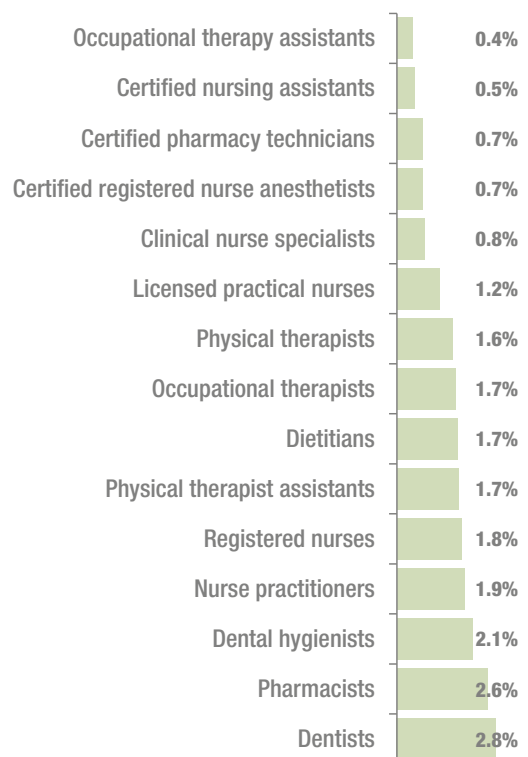


FIGURE 2. PLAN TO RETIRE IN THE NEXT TWO YEARS



⁵ Due to a large amount of missing data, future practice plans for physicians, physician assistants and podiatrists are not mentioned.

The professions with the highest percentage planning to decrease their hours are nurse practitioners, clinical nurse specialists and certified registered nurse anesthetists (9%).

In the next two years, about 4% of physical therapists, pharmacists, dentists and occupational therapists plan to move out of the state, retire or leave their fields.

Comparing 2010 to 2014 data, there was little change for most professions in the number of providers who plan to maintain or increase their practice hours (less than 5% difference). The exceptions were nurse practitioners, clinical nurse specialists and certified registered nurse anesthetists, where the difference was in the range of 8 to 10%. Changes in these nursing professions may be due in part to changes in data collection. This comparison was not possible for the licensees of the Oregon Medical Board due to missing data.

Summary

From 2010 to 2014, the majority of health professions included in this report saw increases in the number of professionals working in Oregon and consequently decreases in population to provider ratios. Whether these changes were significant enough to keep pace with the growing population of Oregon and increasing demand for health care cannot be determined without looking at additional factors such as utilization patterns, geographic differences across the state, the demand for subspecialties within certain professions, and the number and location of medically underserved communities.

Geographic distribution

This section analyzes the distribution of Oregon’s licensed health care professionals across five geographic regions from 2010 to 2014.⁶ For simplicity, only those able to practice without direct supervision are included in this analysis. This includes professionals in the areas of:

- Medicine (physicians, physician assistants)
- Nursing (registered nurses, nurse practitioners, and advanced practice nurses, which include certified registered nurse anesthetists and clinical nurse specialists, CRNA/CNS)
- Dentistry (dentists, dental hygienists)
- Pharmacy (pharmacists)
- Rehabilitative therapy (occupational and physical therapists)

County by county data for almost all the occupations profiled in this report are included in the county profiles section.⁷

We examined workforce distribution for five regions: Northwest, Southwest, Portland Metro, Central, and Eastern.

Except for the Metro region, where health care professionals are overrepresented, the selected health care providers follow a similar distribution pattern as the state’s general population.

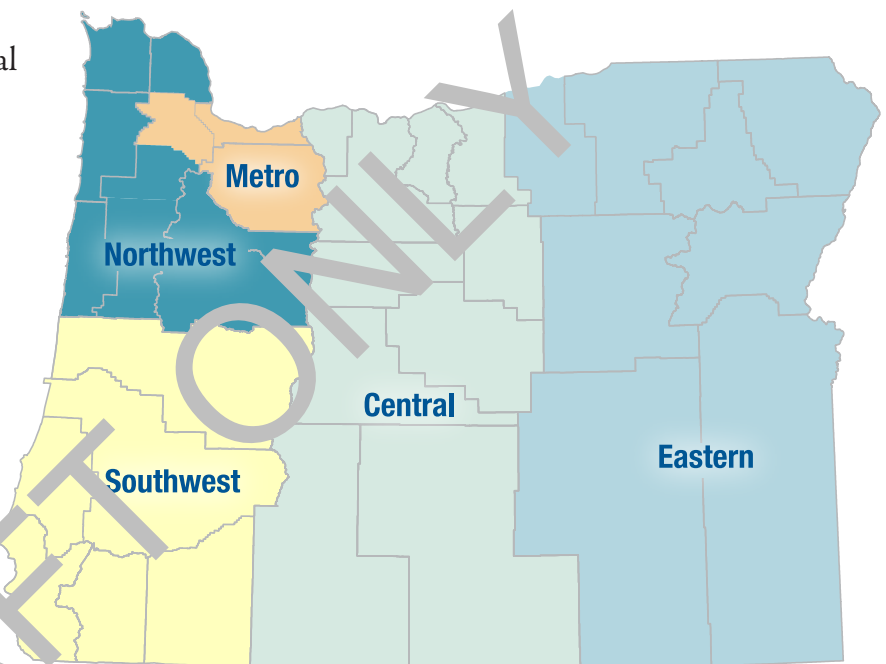


TABLE 2. OREGONIANS AND HEALTH CARE PROFESSIONALS BY REGION 2010-2014

Region	Percentage of Oregon population	Percentage of health care professionals	Percentage change of health care professionals
Portland Metro	43%	51%	7%
Southwest	21%	20%	1%
Northwest	22%	17%	11%
Central	9%	8%	7%
Eastern	5%	4%	10%

In the next pages, changes in the number of health professionals (from 2010 to 2014) are indicated by arrows. An upward arrow indicates an increase of providers while a downward arrow indicates a decrease. The percentage change is presented for each county and region.

⁶ Due to lack of data, dietitians are not included in the analysis of geographic distribution.

⁷ Increases in nursing professions may be due in part to changes in methodology rather than increases in workforce participation.

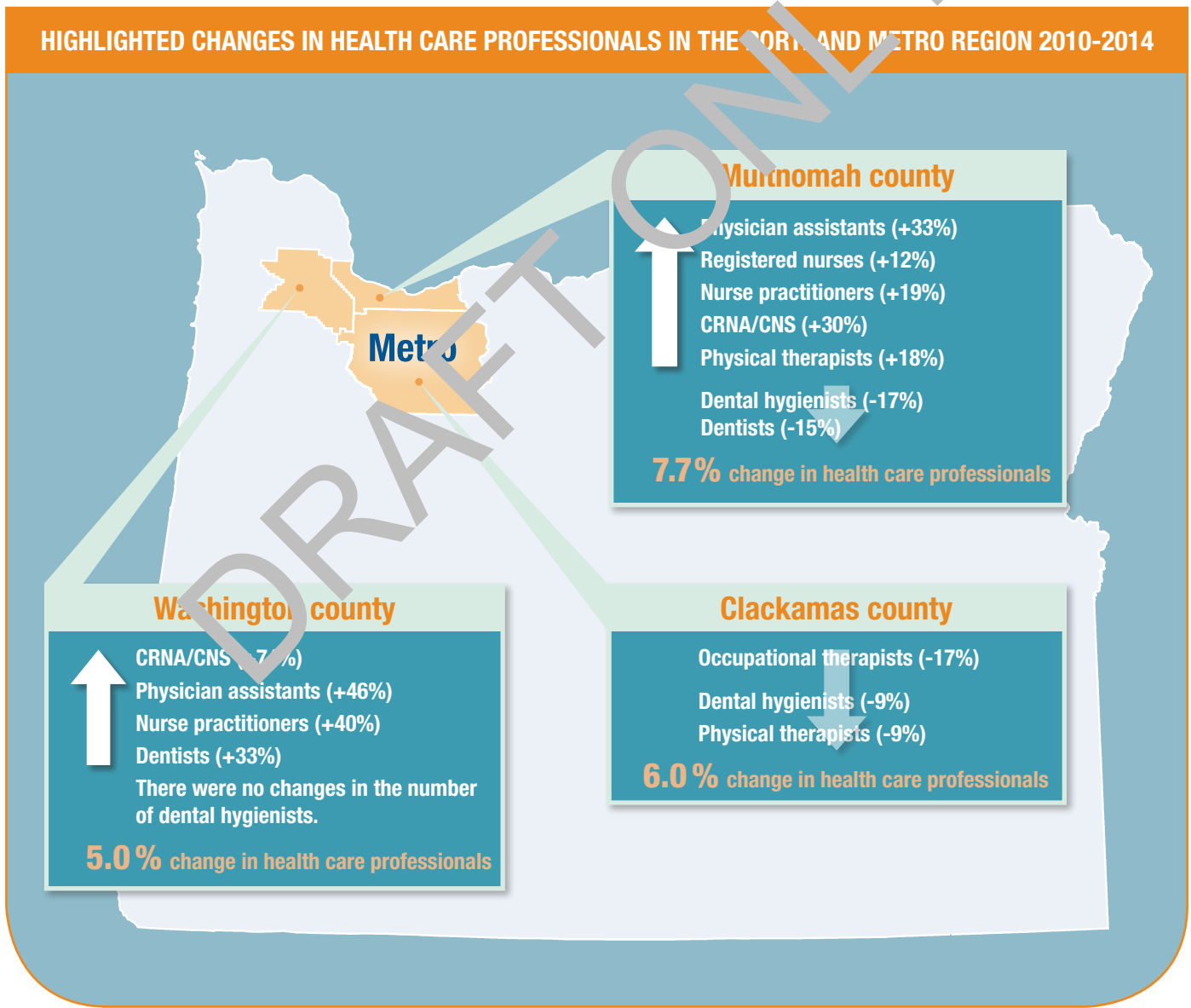
Portland Metro region (Clackamas, Multnomah, Washington counties)

The Portland Metro region is the most heavily populated area in the state and contains much of the state's health care infrastructure. These three counties house 14 of the state's 60 acute care inpatient hospitals, including the largest ones, employing thousands of health care professionals. More than half of the professionals included in this section's analysis worked in this region in 2014.

Within the tri-county region, Multnomah County experienced the highest growth rate of health care

professionals since 2010 at 8%. The number of health care providers in Clackamas County grew by 6% and those in Washington County increased by 5%. Overall, the region's growth rate was 6.8%, ranking third in the five regions.

Most professions in this region grew from 2010 to 2014, with the exception of dental hygienists.



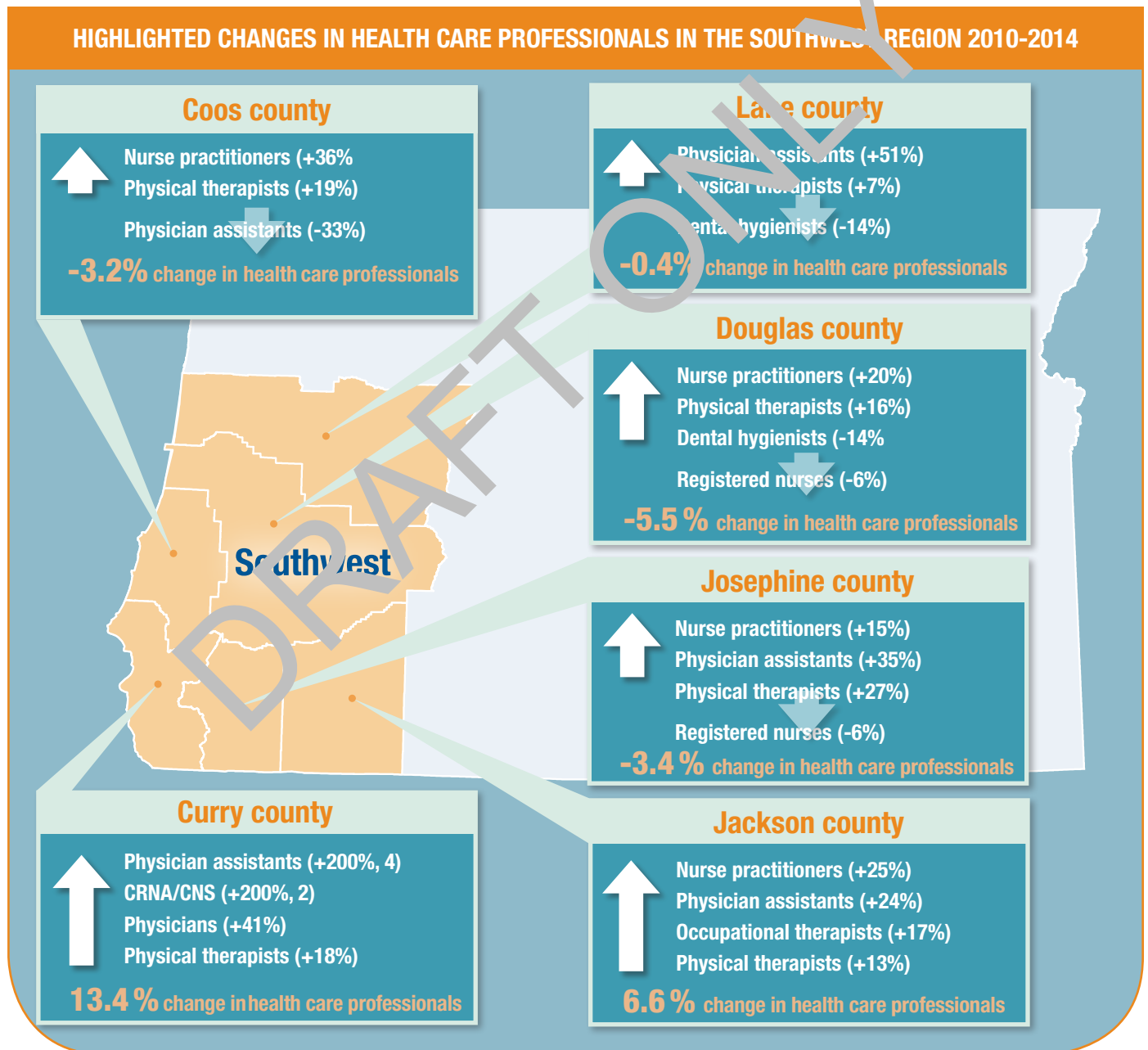
Southwest region (Coos, Curry, Douglas, Jackson, Josephine, Lane counties)

Southwest Oregon has the second highest percentage (20%) of the health care professionals included in this section. Most are located in Lane County (43%), followed by Jackson County (29%). Only a small portion (2%) practice in Curry County.

Overall, the Southwest region experienced a slight (1%) increase in the number of health care providers from 2010 to 2014. Curry County experienced the highest growth rate (13%) in this region, although

this is most likely due to the small counts of health professionals working in the county.

Four counties in this region experienced some reduction in the selected health care professionals presented in this section. Specifically, Douglas County had a 6% reduction, Josephine County had more than a 3% drop, Coos County had more than a 3% decrease, and Lane County fell by less than 1%.



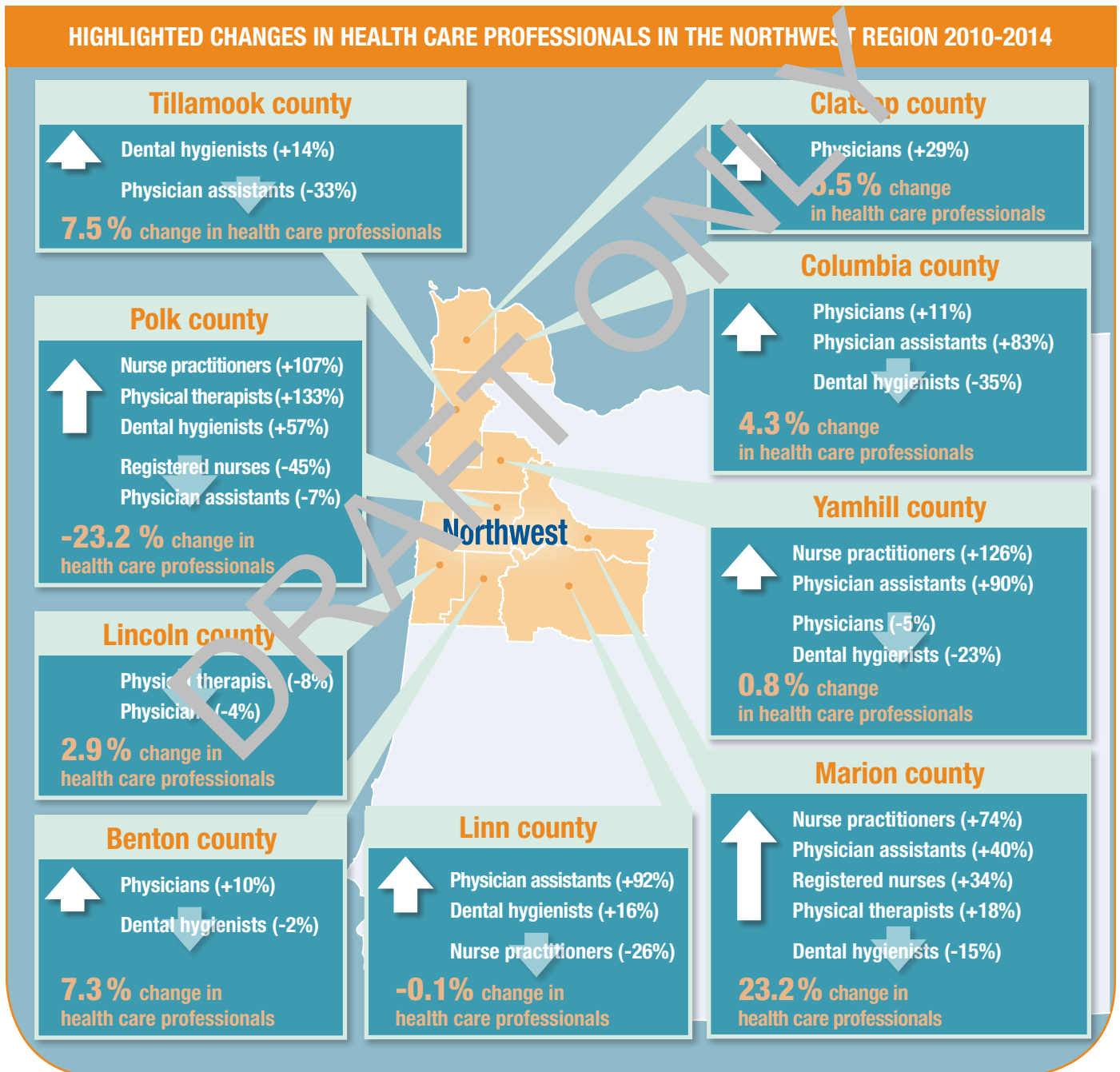
Northwest region

(Benton, Clatsop, Columbia, Lincoln, Linn, Marion, Polk, Tillamook, Yamhill counties)

Seventeen percent of the health care professionals identified in this section practice in the Northwest region. From 2010 to 2014, the Northwest region experienced an 11% growth of these professionals.

The largest growth rate was seen in nursing with the addition of 788 registered nurses (13% increase),

131 nurse practitioners (50% increase) and 10 CRNA/CNS (15% increase). The number of physician assistants practicing in this region grew by an additional 48 (28%) and physical therapists increased by 96 (25%). Most of the growth in these three professions occurred in Marion County.



Northwest region (continued)

- All counties in this region but Linn County experienced increases in their nurse practitioner workforce.
- All counties in this region except Lincoln County experienced growth in the physical therapist workforce.
- Seven of the nine counties in this region had a growth in the physician workforce from 2010

to 2014. The exceptions were Yamhill and Lincoln counties.

- Only three of the nine counties in this region had increases in dental hygienists: Polk, Linn and Tillamook counties.
- Columbia County has the smallest number of physicians (20) and registered nurses (52) of all counties in this region.

Central region (Crook, Deschutes, Gilliam, Hood River, Jefferson, Klamath, Lake, Sherman, Wasco, Wheeler counties)

Eight percent of Oregon's health care professionals identified in this section work in Central Oregon. Within this region, nearly 60% of health care professionals practice in Deschutes County, followed by Klamath County with 14%. Gilliam, Sherman and Wheeler counties combined have less than 1% of Central Oregon's health care providers.

Overall, the number of health care professionals practicing in Central Oregon has increased 7% since 2010.

The overall gains seen in the Central Oregon region overshadow the significant losses in Gilliam and Sherman counties, with each losing more than 75% of the already small number of practicing health care providers. Together, the profiled health care providers for these two counties combined include three registered nurses, two physician assistants, one nurse practitioner, one pharmacist and one physical therapist.

At the regional level, there was not a net change in the number of physicians shown in table 3. At the county level, the changes are shown in table 4.

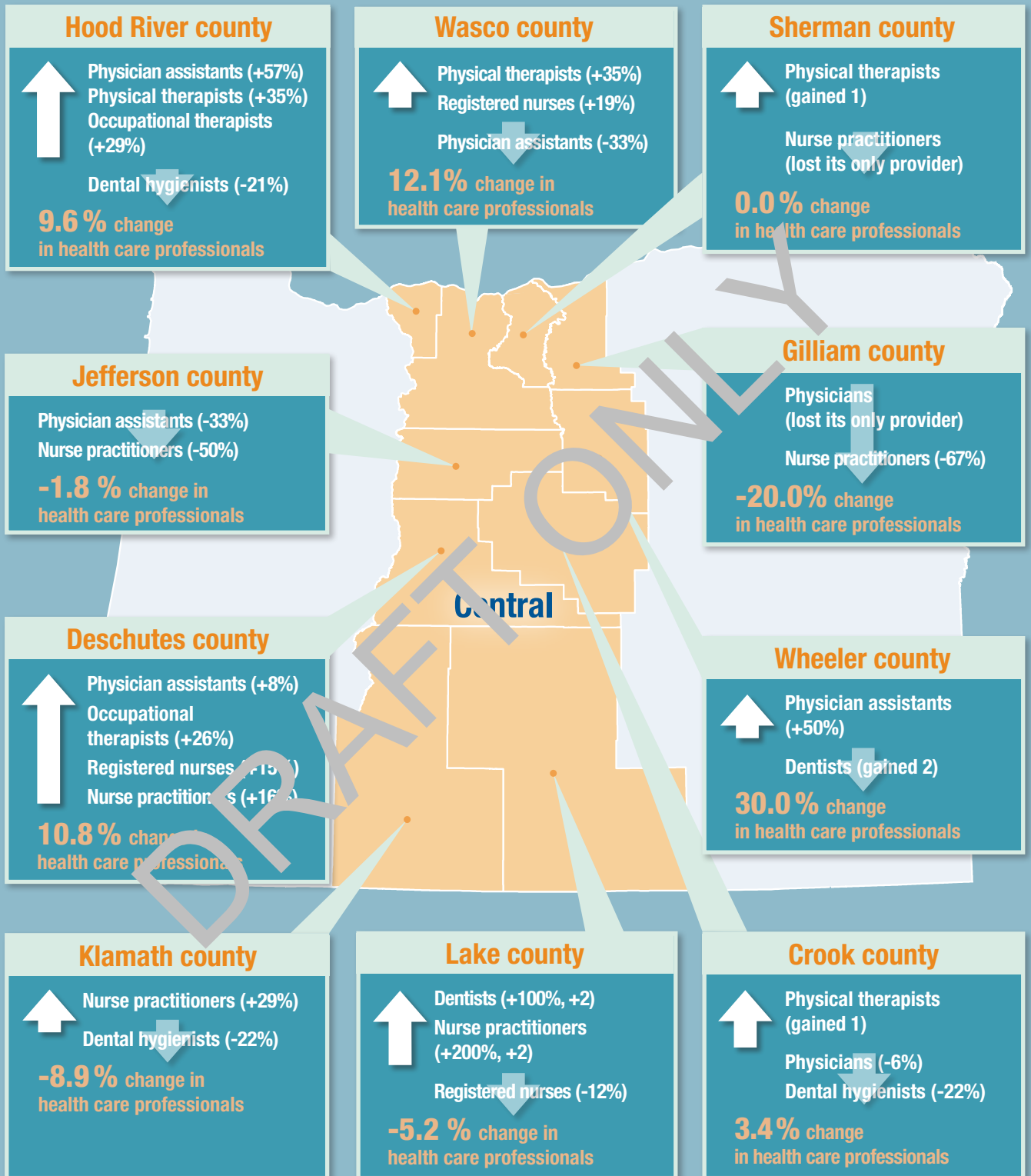
TABLE 3. CENTRAL REGION CHANGES IN HEALTH CARE PROFESSIONALS 2010-2014

Profession	Percentage change
Occupational therapists	+21%
Physical therapists	+18%
Nurse practitioners	+11%
Registered nurses	+10%
Physician assistants	+6%
Dentists	+4%
Dental hygienists	-10%

TABLE 4. CENTRAL REGION PHYSICIANS: CHANGES BY COUNTY 2010-2014

County	Percentage change
Jefferson County	+19%
Hood River County	+7%
Wasco County	+6%
Deschutes county	+1%
Gilliam county	-100%
Sherman county	-100%
Lake county	-50%
Klamath county	-12%
Crook county	-6%

HIGHLIGHTED CHANGES IN HEALTH CARE PROFESSIONALS IN THE CENTRAL REGION 2010-2014



Eastern region (Baker, Grant, Harney, Malheur, Morrow, Umatilla, Union, Wallowa counties)

Eastern Oregon has the lowest reported percentage distribution of Oregon's health care professionals with 4% of the listed licensees working in this region. The majority of the region's health care providers work in Umatilla (39%) and Malheur (20%) counties. Grant, Harney and Morrow counties each have less than 4% of the region's health care professionals.

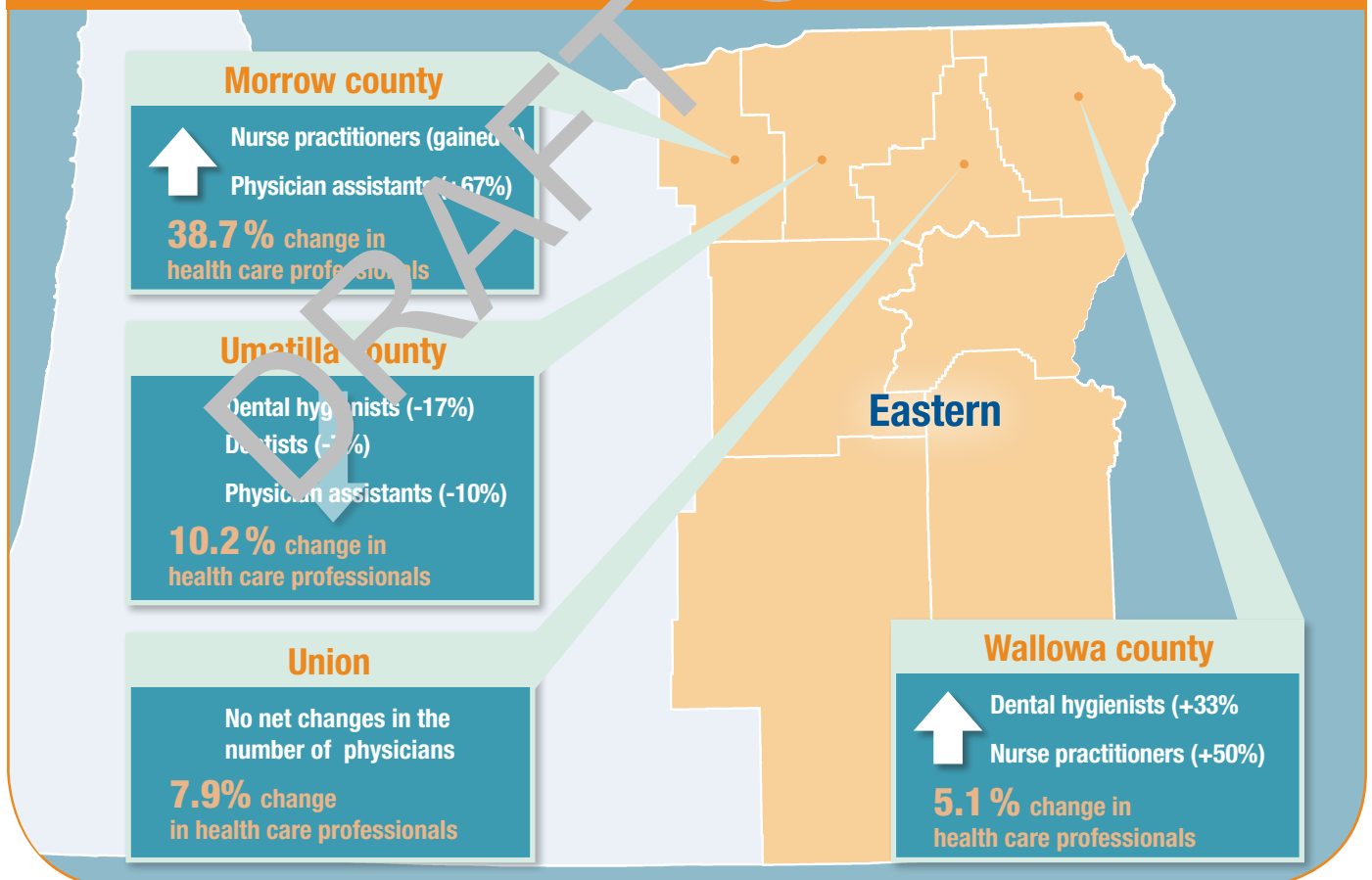
Except for dentists and dental hygienists, the number of providers reporting a practice address in this region has increased since 2010.

All counties but Union county experienced increases in the number of physicians from 2010 to 2014. All counties except Wallowa county experienced decreases in the number of dental hygienists since 2010.

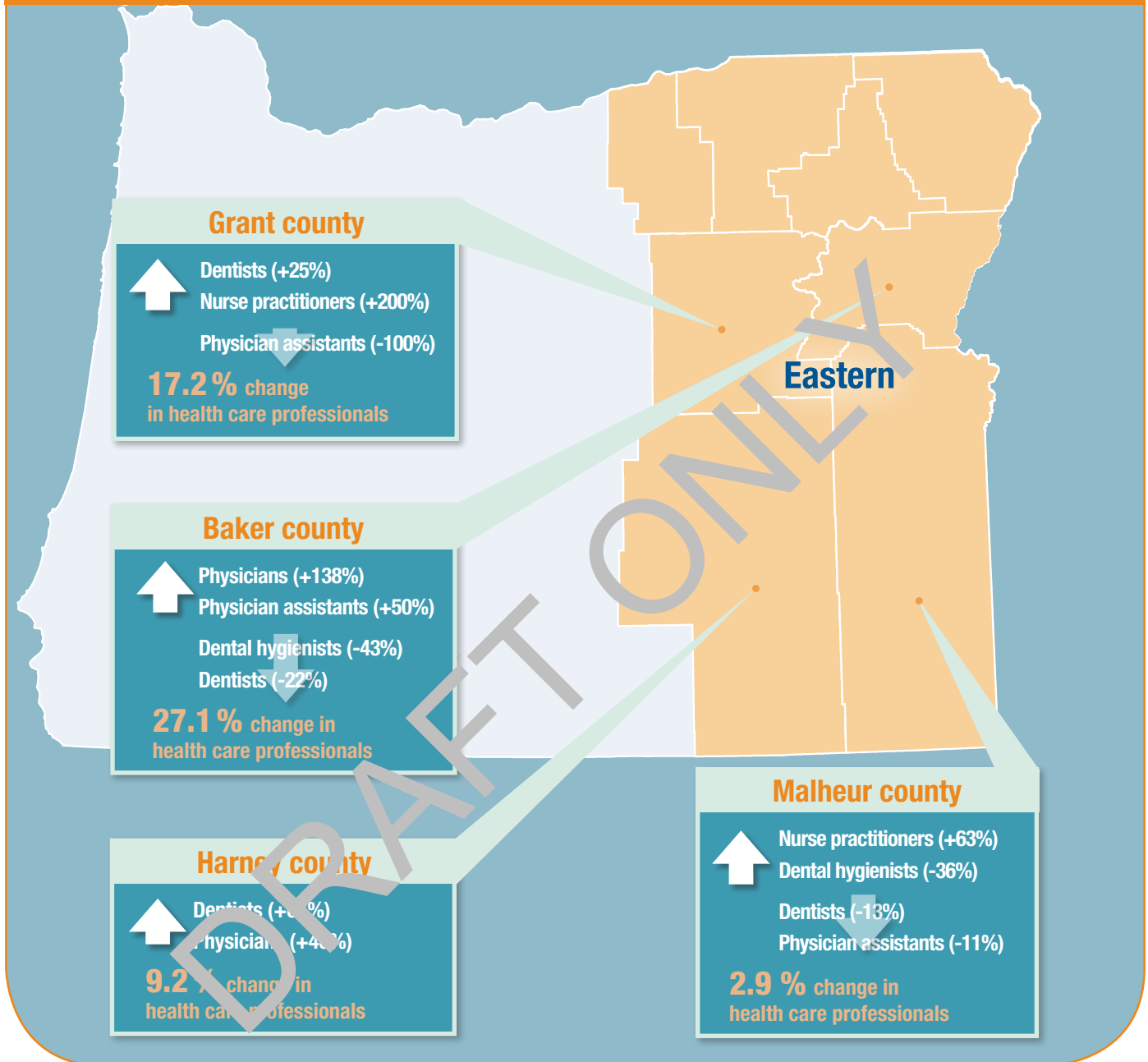
**TABLE 5. EASTERN REGION
CHANGES IN HEALTH CARE PROFESSIONALS 2010-2014**

Profession	Percentage change
CRNA/CNS	(+79%)
Physical therapists	(+48%)
Physicians	(+26%)
Nurse practitioners	(+24%)
Occupational therapists	(+24%)
Dental hygienists	(-17%)
Dentists	(-5%)

HIGHLIGHTED CHANGES IN HEALTH CARE PROFESSIONALS IN THE EASTERN REGION 2010-2014 (PART 1)



HIGHLIGHTED CHANGES IN HEALTH CARE PROFESSIONALS IN THE EASTERN REGION 2010-2014 (PART 2)



Summary

Statewide, the licensing data analyzed in this section reveal a steady growth in health care professionals from 2010 to 2014, although two professions (dental hygienists and pharmacists) experienced an overall decrease. Many of Oregon's rural counties continue to have low numbers of health care professionals

but the data show some needed increases in eastern Oregon and elsewhere. Despite decreases in some individual occupations, this third data collection period indicates a growth trend for health care professionals statewide, as Oregon continues to recover from the recent economic downturn.

Demographics

As Oregon's population is growing, aging, and increasing in diversity, demographic data on Oregon's licensed health care professionals offers important information to assess the supply of providers needed to improve individual and population health. Data on age, race, gender and languages spoken can help to identify potential shortages, inform educational priorities and target recruitment and retention efforts. These data can also assist professionals and policy makers to develop solutions to reduce health disparities. This section includes demographic highlights; more descriptive data about each profession can be found in the occupational profiles of this report.

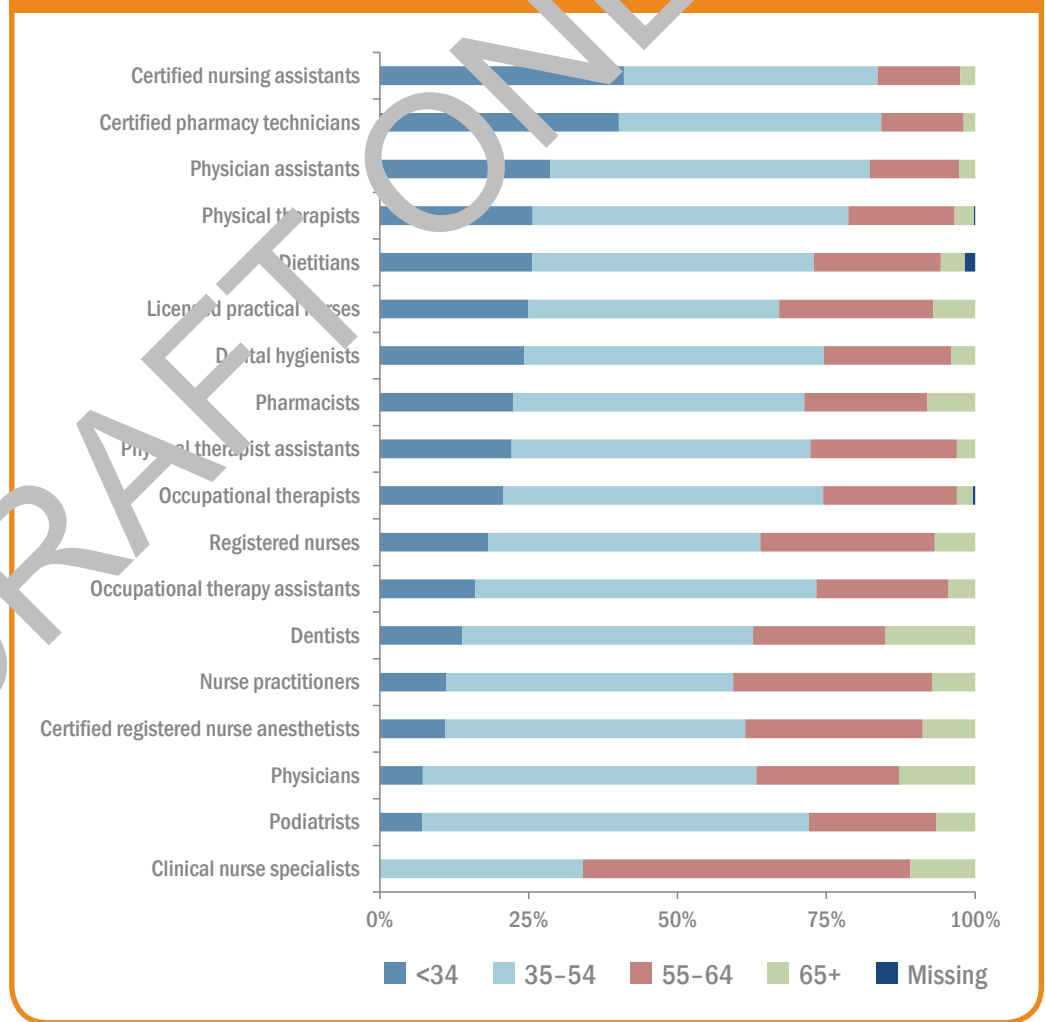
Age

Just as Oregon's overall population is growing older,⁸ so are Oregon's health care providers. This trend particularly impacts those professions with a large number of baby boomers. One-third of the health care professions included in this report have a large number of providers older than 55 years of age. This group includes licensed practical nurses, registered nurses, physicians, dentists, certified registered nurse anesthetists, nurse practitioners and clinical nurse specialists. The data

also show a significant percentage of dentists (15%), physicians (13%), and clinical nurse specialists (11%) are 65 years of age or older, indicating that working past traditional retirement age is not uncommon in these professions.

As in 2010 and 2012, certified nursing assistants and certified pharmacy technicians continue to have a younger workforce, with more than 40% of licensees younger than 35. This is likely attributable to the fact that these occupations offer short-term training programs to obtain licensure or entry to practice.

FIGURE 3. AGE OF HEALTH CARE PROFESSIONALS 2014



⁸ Various between census data tables with Oregon population estimates by age group from Portland State University Population Research Center (www.pdx.edu/prc/population-estimates-0).

Race and ethnicity

Research findings suggest that greater diversity of health care professionals may help improve access to care and promote better interactions between patients and providers.⁹ Although collection of race and ethnicity data has improved over time, the percentage of missing information and providers who declined to provide their race or ethnicity ranged from 0 to 29% in 2013–14, depending on the health profession (29% of podiatrists did not report ethnicity). Like the population of Oregon,¹⁰ the majority of the licensed health professionals profiled in this report identified their race as White. Among professionals who do not identify as White, Asian is the most common race reported. Certified nursing assistants were the most diverse group with 22% indicating a race other than White. Nineteen percent of Oregon’s pharmacists identified a race other than White, with 15% reporting

TABLE 6. RACE OF HEALTH CARE PROFESSIONALS 2014

Profession	White	Black or African American	American Indian/Alaska Native	Asian	Native Hawaiian or Pacific Islander	Other	Two or more races	Refused/declined to answer	Missing
Medicine									
Physicians	70.0%	0.8%	0.1%	9.1%	0.2%	2.7%	3.4%	2.3%	11.4%*
Physician assistants	75.8%	0.3%	0.3%	2.1%	0.3%	2.5%	3.7%	1.6%	13.5%*
Podiatrists	72.1%	0.0%	0.0%	7.8%	0.0%	1.9%	3.9%	1.9%	11.7%*
Dentistry									
Dentists	76.9%	0.4%	0.4%	10.3%	0.4%	0.4%	1.5%	8.3%	1.4%
Dental hygienists	86.4%	0.4%	0.6%	4.6%	0.1%	0.4%	1.4%	4.6%	1.3%
Nursing									
Nurse practitioners	87.6%	0.4%	0.2%	3.0%	0.3%	0.8%	2.1%	3.8%	1.8%
Certified registered nurse anesthetists	82.9%	0.4%	0.0%	4.0%	0.0%	0.7%	1.1%	11.0%	0.7%
Clinical nurse specialists	90.7%	0.8%	0.8%	1.6%	0.0%	0.0%	0.8%	4.7%	0.8%
Registered nurses	85.8%	0.7%	0.7%	3.3%	0.2%	1.2%	2.0%	5.7%	0.5%
Licensed practical nurses	80.0%	3.0%	1.2%	4.3%	0.4%	2.1%	3.2%	4.6%	1.1%
Certified nursing assistants	69.7%	5.5%	1.4%	5.2%	0.9%	5.5%	3.2%	5.7%	2.8%
Pharmacy									
Pharmacists	72.7%	0.8%	0.5%	14.9%	0.3%	0.6%	1.8%	7.7%	0.6%
Certified pharmacy technicians	77.7%	1.1%	1.0%	6.5%	1.1%	1.6%	1.9%	6.7%	2.3%
Physical Therapy									
Physical therapists	87.3%	0.1%	0.2%	5.0%	0.2%	0.6%	1.4%	4.7%	0.5%
Physical therapist assistants	88.6%	1.3%	0.4%	1.9%	0.3%	0.1%	1.9%	4.9%	0.4%
Occupational Therapy									
Occupational therapists	87.1%	0.2%	0.0%	4.1%	0.2%	0.8%	1.7%	5.7%	0.3%
Occupational therapy assistants	92.4%	0.9%	0.4%	1.3%	0.0%	0.0%	0.9%	3.6%	0.4%
Dietetics									
Dietitians	89.6%	0.0%	0.9%	4.1%	0.0%	0.6%	1.1%	3.4%	0.4%

* Missing race for large portion of licensees

⁹ U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions. (October 2006.) The Rationale for Diversity in the Health Professions: A Review of the Evidence. Retrieved from: <http://bhpr.hrsa.gov/healthworkforce/reports/diversityreviewevidence.pdf>

¹⁰ 2008-2012 ACS Oregon population estimates by race, by county. Retrieved from: http://factfinder.census.gov/faces/tables/services/jsf/pages/productview.xhtml?pid=ACS_12_5YR_B02001&prodType=table

their race as Asian. Other than White, the most frequently reported race by Oregon's physicians is Asian (9%).

When the racial distribution of Oregon's health care workforce is compared to the general population, several professions are underrepresented. This means the proportion of a given race within a particular profession is smaller than the population as a whole. In 16 of the 18 professions analyzed, Black/African American providers are underrepresented when compared to the general population. American Indian/Alaska Native providers are underrepresented in 11 of the 18 professions, making up less than 1% of providers in those professions.

Twelve percent of Oregonians report their ethnicity as Hispanic/Latino¹¹ but the proportion of Hispanic/Latino licensees in most professions ranged from 1 to 6%. Of the 18 professions, certified nursing assistants most closely mirrored Oregon's population at 11% Hispanic/Latino.¹²

TABLE 7. ETHNICITY OF HEALTH CARE PROFESSIONALS 2014

Profession	Hispanic or Latino	Not Hispanic or Latino	Declined to answer	Missing
MEDICINE				
Physicians	2.9%	71.6%	6.0%	19.5%*
Physician assistants	2.9%	76.7%	4.2%	16.2%*
Podiatrists	1.3%	68.8%	5.8%	24.0%*
DENTISTRY				
Dentists	2.5%	83.8%	13.8%	0.0%
Dental hygienists	7.4%	2.4%	90.2%	0.0%
NURSING				
Nurse practitioners	3.1%	89.1%	7.2%	0.6%
Certified registered nurse anesthetists	1.8%	80.9%	17.3%	0.0%
Clinical nurse specialists	1.6%	59.1%	9.3%	0.0%
Registered nurses	2.3%	86.1%	11.4%	0.0%
Licensed practical nurses	1.1%	83.6%	11.1%	0.2%
Certified nursing assistants	10.7%	77.3%	11.9%	0.0%
PHARMACY				
Pharmacists	1.7%	87.4%	10.9%	0.0%
Certified pharmacy technicians	6.1%	83.7%	10.2%	0.0%
PHYSICAL THERAPY				
Physical therapists	1.9%	89.5%	8.6%	0.0%
Physical therapist assistants	1.7%	87.6%	10.6%	0.0%
OCCUPATIONAL THERAPY				
Occupational therapists	1.3%	90.9%	7.9%	0.0%
Occupational therapy assistants	2.2%	91.6%	6.2%	0.0%
DIETETICS				
Dietitians	1.5%	94.7%	3.8%	0.0%

* Missing ethnicity for large portion of licensees

¹¹ 2008-2012 ACS Oregon population estimates by ethnicity, by county. Retrieved from http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_12_5YR_B03003&prodType=table

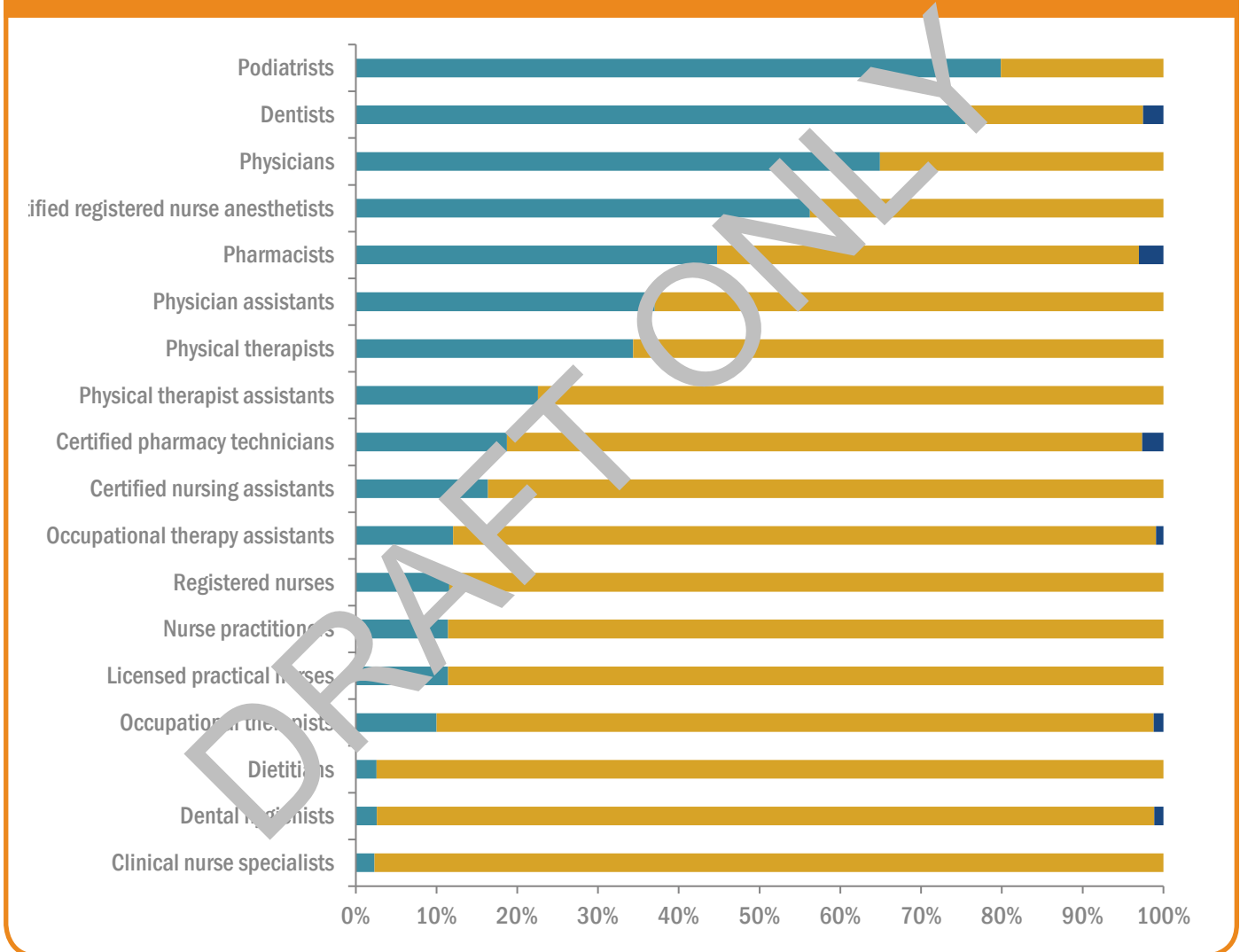
¹² Due to changes in the way in which race and ethnicity data were collected from 2010 to 2014, it is difficult to assess changes over time.

Gender

Unlike Oregon's population, where women (51%) and men (49%) are nearly equally represented, women make up the majority (about 75%) of the workforce profiled in this report. Clinical nurse specialists have the highest percentage of women at 98%, followed by dental hygienists and dietitians

at 96%. Podiatrists have the highest percentage of men at 80%, followed by dentists at 76%. Of all the groups analyzed, pharmacists were the only profession with a nearly equal number of men and women.

FIGURE 4. GENDER OF HEALTH CARE PROFESSIONALS 2014



The distribution of gender in the profiled professions has not changed notably from 2010 to 2014; however, several occupations have experienced small shifts in the ratio of men to women. For example, more women are working as physician assistants (6% increase), and more

men are working as physical therapy assistants (5% increase). These shifts may be the result of several factors, including increased career exploration opportunities, increased recruitment of underrepresented students, or an increase in the number of role models in the given profession.

Languages

When health care providers speak the same language as their patients, it can improve the quality of communication, comfort level and decision-making regarding the patient's health care. In Oregon, the majority of the population (85%) speaks only English at home. Nine percent speak Spanish at home and 6% speak other languages.¹³ This is reflected among the profiled health professionals, where the majority speaks only English. Of those health professionals who identified speaking one or more additional languages, Spanish was the most frequently reported.

Dentists represent the most language-diverse workforce profiled in this report, with 35% speaking languages in addition to English, followed by physicians at 34%. More than one-quarter of physician assistants, pharmacists, nurse practitioners and podiatrists speak one or more languages in addition to English.

From 2010 to 2014, several professions experienced an increase in those speaking languages in addition to English. Most notable are dental hygienists, physicians and physical therapists, which had a 10% increase in those speaking additional languages. Dietitians, dentists, occupational therapists and physical therapy assistants also experienced growth ranging from 7 to 9% in those that speak languages in addition to English.

It is important to note that these data do not rate providers' level of proficiency in any language they reported speaking. Beginning in 2015, new questions will ask providers who report speaking a language other than English to rate their level of fluency and identify whether they hold any kind of certification for medical interpretation.

Summary

Information about the demographic characteristics of the state's health care workforce is helpful as Oregon works to meet the health care needs of a diverse population. While the statewide data are useful, the distribution of health care professionals' age, gender, race, ethnicity and languages spoken other than English varies greatly by region and county. Although this report does not provide demographics by county or region, it includes data tables on age, gender, race, ethnicity and languages by health care profession in the appendices.

¹³ Source: U.S. Census Bureau, 2013 American Community Survey. Retrieved from http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_13_1YR_B16001&prodType

Employment characteristics

While employment in Oregon's health care industry stayed strong during the past few years, a few health occupations experienced fluctuations. The following section describes some key changes in employment patterns including hours worked, work setting and employment status for the health occupations included in this report.¹⁴

Employment status

The large majority of profiled health professionals work for an employer. From 2012 to 2014, most of the profiled occupations showed an increase in the number of licensees who reported working for an employer full time, which is perhaps a sign of a strengthening economy. Conversely, two occupations, dental hygienists and pharmacists, experienced a decrease in the number of those reporting full or part-time work for an employer. For pharmacists, self-employment increased (see more below); for dental hygienists, the number involved in per diem employment, education and other categories increased.

Dentists are significantly more likely than most other professions to work for themselves. Sixty percent of dentists identified as self-employed, compared to 34% who were employed by someone else. Given the common occurrence of private dental practices, this high proportion of self-employed dentists is not surprising. Additionally, 45% of podiatrists reported they were self-employed.

From 2012 to 2014, several occupations saw an increase in the number of licensees who reported they were self-employed, including nurse practitioners, registered nurses, occupational therapists, pharmacists, and physical therapists. Physicians began reporting self-employment for the first time in 2013, and self-employed

physicians represent about 14% (or 1,527) of the total physician workforce. Time will tell if self-employment will be an upward trend for physicians.

How providers spend their time at work

While most of the profiled health professionals work full-time, not all of their time is spent performing direct patient care activities. Health care providers were asked how much time they spend at work on a weekly basis doing the following: providing direct patient care, teaching or training others, doing research, performing management/administration-related activities or doing other tasks. More than 60% of licensees in most occupations reported spending on average over 20 hours per week in direct patient care. Physicians, physician assistants, podiatrists, certified registered nurses anesthetists, certified nurse assistants and dentists reported the most hours dedicated to direct patient care.

Practice setting

The practice settings for Oregon's health care professionals have changed little since 2010. The only exception is a shift of occupational therapists and occupational therapy assistants away from community and school-based health centers. As in previous years, physicians, physician assistants and physical therapists still primarily work in clinics or hospitals; occupational therapists, occupational therapy assistants and physical therapy assistants primarily work in skilled nursing facilities; and most dentists and registered dental hygienists work in solo practices (i.e., only one dentist in the practice). Practice settings vary considerably by profession; future analyses will aggregate these data into larger categories to explore trends in employment in inpatient, outpatient and community-level settings.

¹⁴ Employment comparison data was not available for dietitians and podiatrists.

TABLE 8. HOW MANY HEALTH CARE PROVIDERS REPORTED SPENDING TIME IN PATIENT CARE?

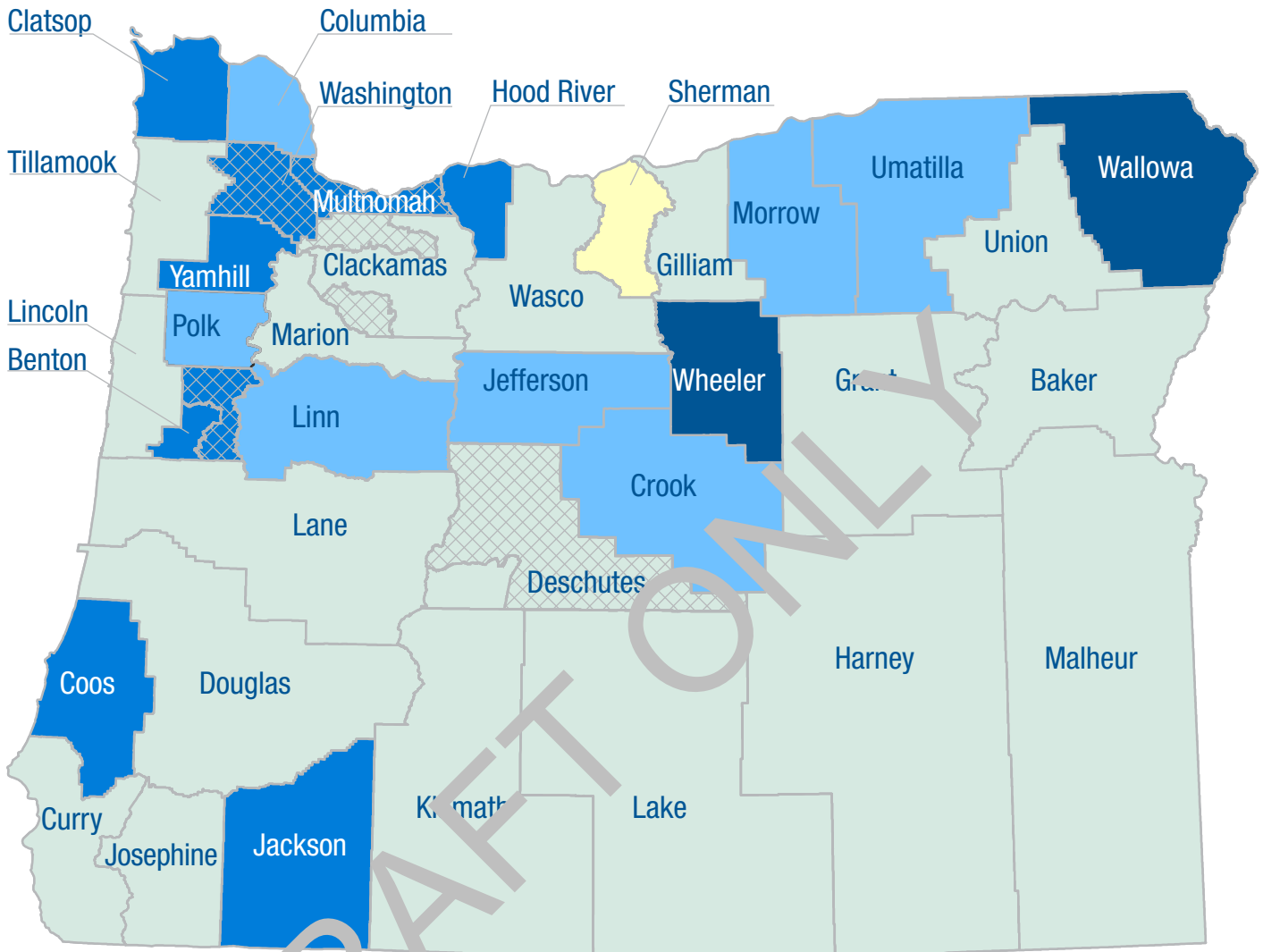
Profession	none	1-10 hours	11-20 hours	21-30 hours	31-40 hours	41-50 hours	51+ hours
MEDICINE							
Physicians	6.8%	7.1%	9.6%	15.8%	32.1%	17.0%	11.6%
Physician assistants	2.0%	4.5%	8.0%	18.8%	50.9%	12.3%	3.5%
Podiatrists	1.8%	5.3%	11.2%	17.2%	40.2%	15.4%	8.9%
DENTISTRY							
Dentists	3.5%	6.8%	11.8%	33.8%	41.1%	2.5%	0.5%
Dental hygienists	3.2%	13.4%	23.3%	33.4%	20.4%	0.1%	0.2%
NURSING							
Nurse practitioners	3.9%	7.8%	14.7%	25.2%	39.9%	6.8%	1.8%
Certified registered nurse anesthetists	1.0%	5.1%	8.1%	10.1%	43.9%	23.2%	8.6%
Clinical nurse specialists	43.4%	31.6%	9.2%	6.6%	9.2%	0.0%	0.0%
Registered nurses	14.9%	13.8%	14.0%	14.0%	34.2%	1.0%	0.9%
Licensed practical nurses	6.2%	13.3%	13.3%	22.2%	36.9%	2.4%	0.8%
Certified nursing assistants	1.7%	7.3%	13.2%	18.3%	54.6%	1.8%	3.1%
PHARMACY							
Pharmacists	6.2%	10.9%	10.9%	18.6%	46.9%	3.1%	1.1%
Certified pharmacy technicians	5.6%	8.7%	11.0%	17.9%	54.7%	1.2%	1.0%
PHYSICAL THERAPY							
Physical therapists	4.5%	8.5%	15.7%	23.6%	43.7%	3.4%	0.9%
Physical therapist assistants	3.0%	9.1%	15.1%	30.8%	41.3%	0.4%	0.4%
OCCUPATIONAL THERAPY							
Occupational therapists	1.7%	14.0%	24.8%	27.3%	28.5%	0.7%	0.2%
Occupational therapy assistants	3.2%	10.4%	13.2%	34.3%	39.0%	0.0%	0.0%
DIETETICS							
Dietitians	18.2%	16.3%	24.1%	23.8%	16.7%	0.7%	0.2%

Summary

Full-time employment is on the rise for most of the profiled professions, perhaps due to the strengthening economy or increased demand for providers since ACA implementation. Trends in self-employment/independent practice are harder to identify because of questionnaire changes over time, but several groups including nurse practitioners, registered nurses, pharmacists, and physical and occupational therapists reported increased self-employment. Providers’ reports of how they

spend their time demonstrate that individuals in these professions are engaged in other professional activities in addition to direct patient care.

MAP 1: POPULATION-TO-PRIMARY CARE PROVIDER* RATIOS, 2014



Number of people per primary care provider

Higher capacity



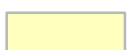
Under 500 people per primary care provider (2 counties)



501–1,000 people per primary care provider (26 counties)



1,001–1,500 people per primary care provider (7 counties)



Above 1,500 people per primary care provider (1 county)



Area not in HPSA

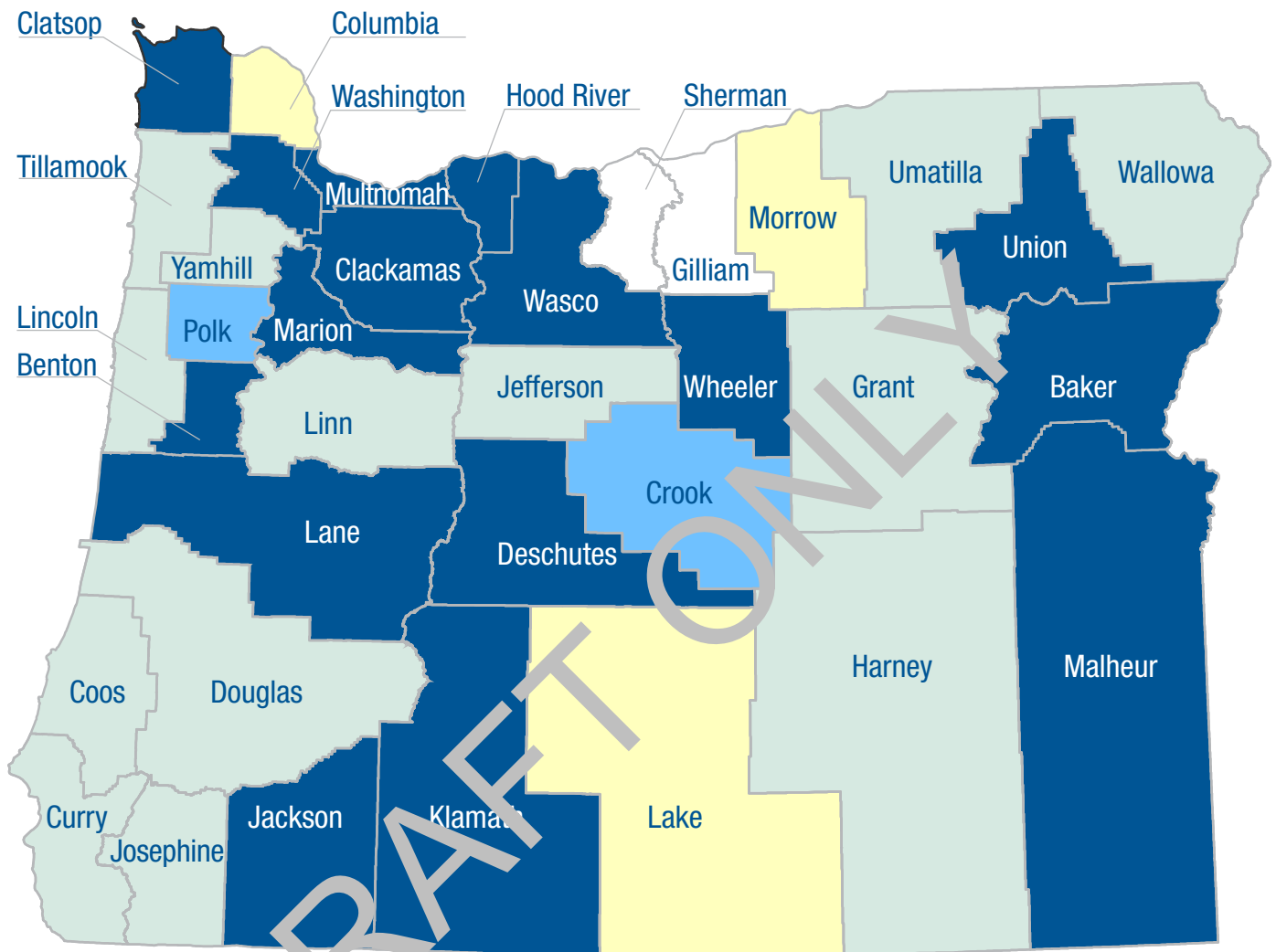
Lower capacity

* These providers include physicians and physician assistants with specialties in family medicine/practice, general practice, (general) internal medicine, pediatrics, adolescent medicine, and geriatric medicine, and nurse practitioners who reported currently having a position in primary care.

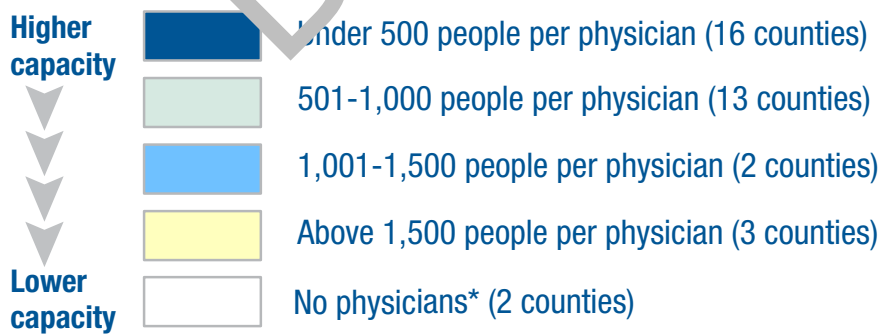
Oregon population-to-primary care provider ratios

Statewide: 101:1
Mean ratio: 197:1
Median ratio: 145:1

MAP 2: POPULATION-TO-PHYSICIAN RATIOS, 2014



Number of people per physician

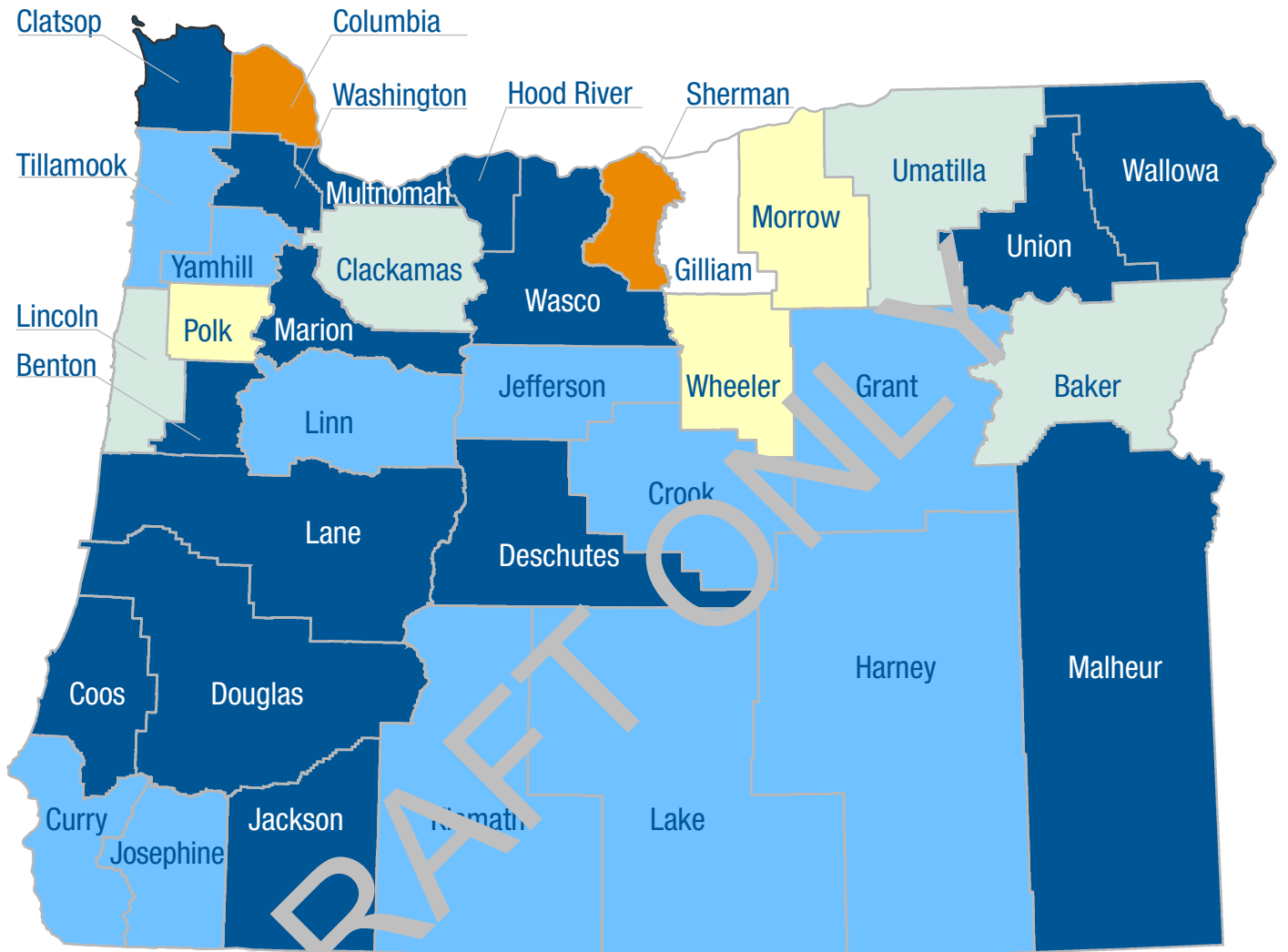


Oregon population-to-physician ratios

Statewide: 353:1
Mean ratio: 647:1
Median ratio: 511:1

* Ratios cannot be calculated due to no physicians in these counties in 2014.

MAP 3: POPULATION-TO-REGISTERED NURSE RATIOS, 2014



Number of people per registered nurse

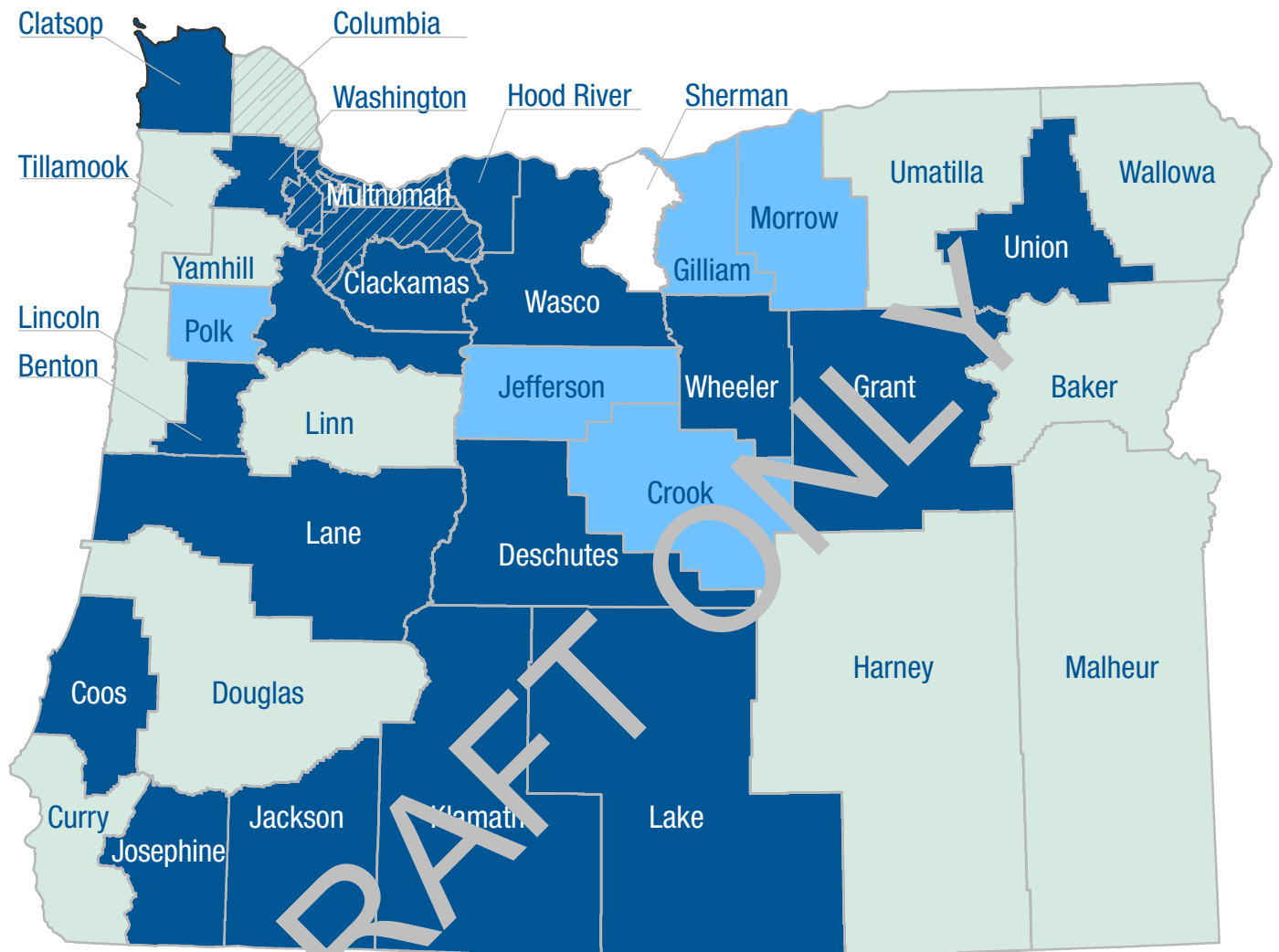


Oregon population-to-registered nurse ratios

Statewide: 101:1
Mean ratio: 197:1
Median ratio: 145:1

* Ratio cannot be calculated due to no registered nurses in this county in 2014.

MAP 4: POPULATION-TO-DENTIST (including dental hygienists) RATIOS, 2014



Number of people per dentist (including dental hygienists)

Higher capacity

- Under 1,000 people per dentist (including dental hygienists) (18 counties)
- 1,001-1,500 people per dentist (including dental hygienists) (12 counties)
- Above 1,500 people per dentist (including dental hygienists) (5 counties)
- No dentists or dental hygienists* (1 county)
- Area not in Dental Health HPSA

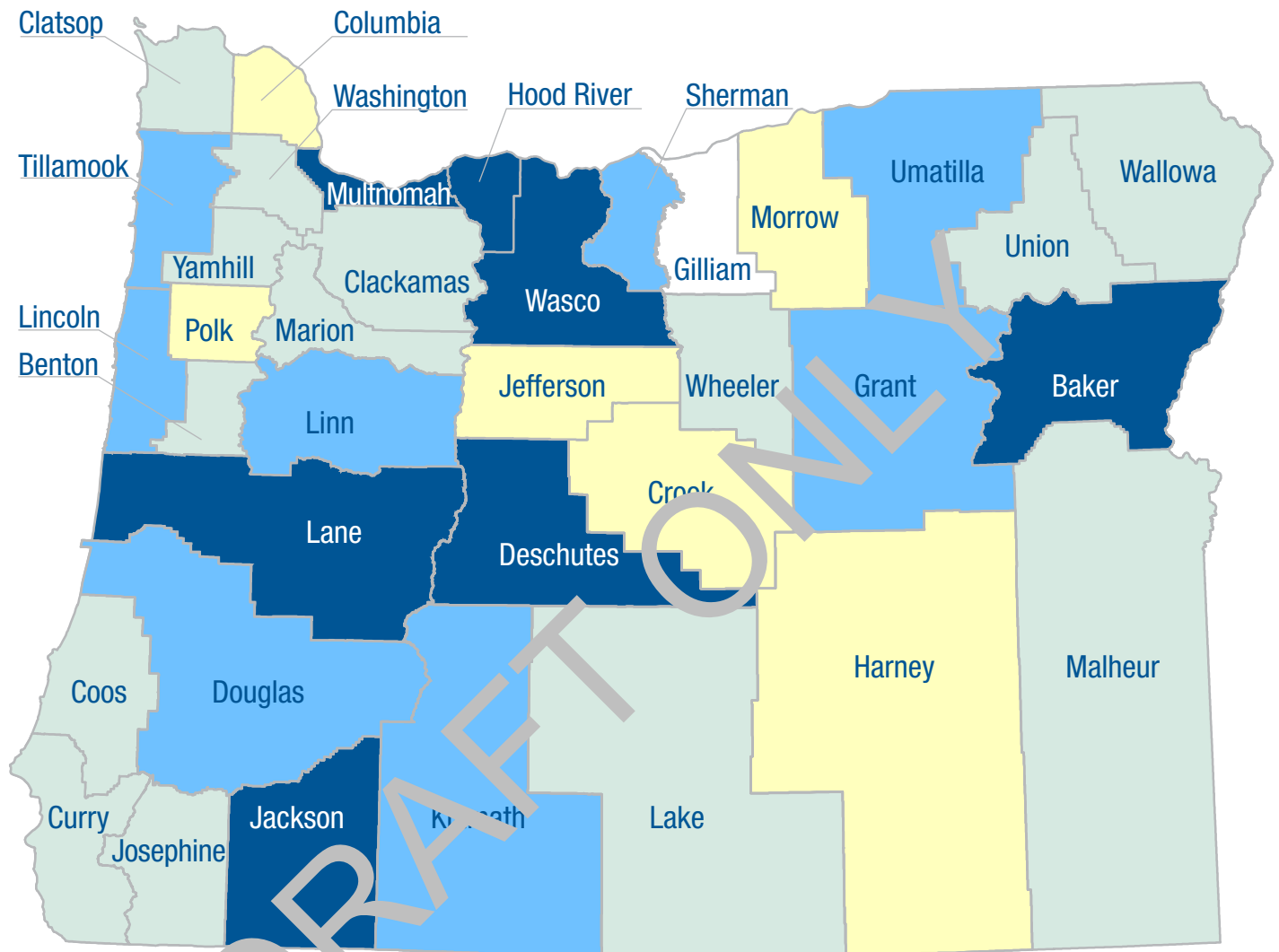
Lower capacity

**Oregon
population-to-dentists
(including dental
hygienists)**

**Statewide: 831:1
Mean ratio: 1,364:1
Median ratio: 998:1**

* Ratio cannot be calculated due to no dentists or dental hygienists in this county in 2014.

MAP 5: POPULATION-TO-PHYSICAL THERAPIST (including assistants) RATIOS, 2014

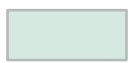


Number of people per physical therapist (including assistants)

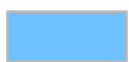
Higher capacity



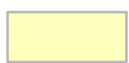
Under 1,000 people per physical therapist (including assistants) (7 counties)



1,001-1,500 people per physical therapist (including assistants) (14 counties)



1,501-2,000 people per physical therapist (including assistants) (8 counties)



Above 2,000 people per physical therapist (including assistants) (6 counties)



No physical therapists or assistants* (1 county)

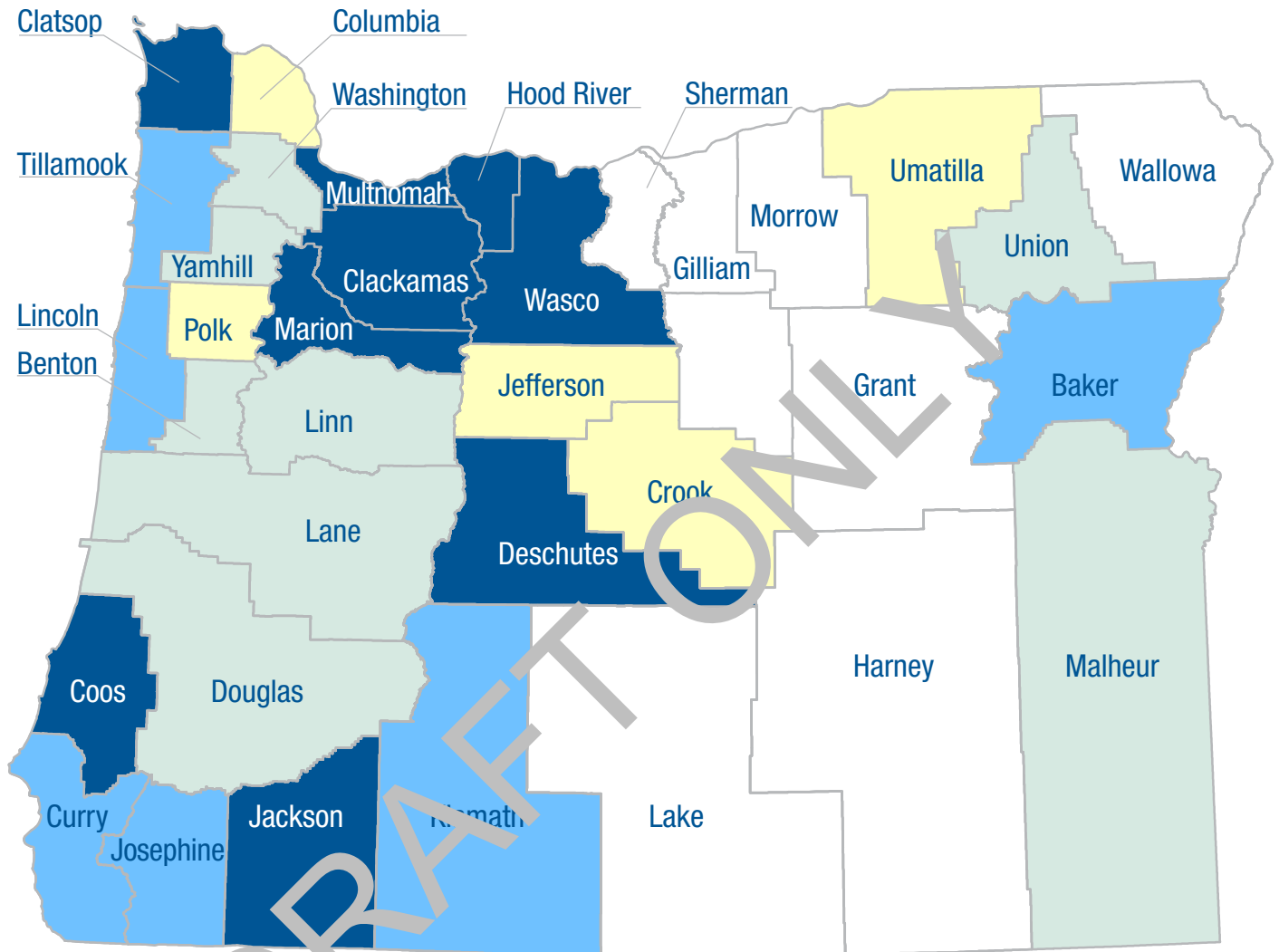
Lower capacity

Oregon population-to-physical therapists (including assistants)

Statewide: 1,130:1
Mean ratio: 1,779:1
Median ratio: 1,323:1

* Ratio cannot be calculated due to no physical therapists or assistants in this county in 2014.

MAP 6: POPULATION-TO-OCCUPATIONAL THERAPIST (including assistants) RATIOS, 2014

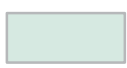


Number of people per occupational therapist (including assistants)

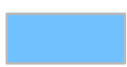
Higher capacity



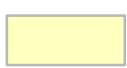
Under 3,000 people per occupational therapist (including assistants) (9 counties)



3,001-5,000 people per occupational therapist (including assistants) (8 counties)



5,0001-7,000 people per occupational therapist (including assistants) (6 counties)



Above 7,000 people per occupational therapist (including assistants) (5 counties)



No occupational therapists or assistants* (8 counties)

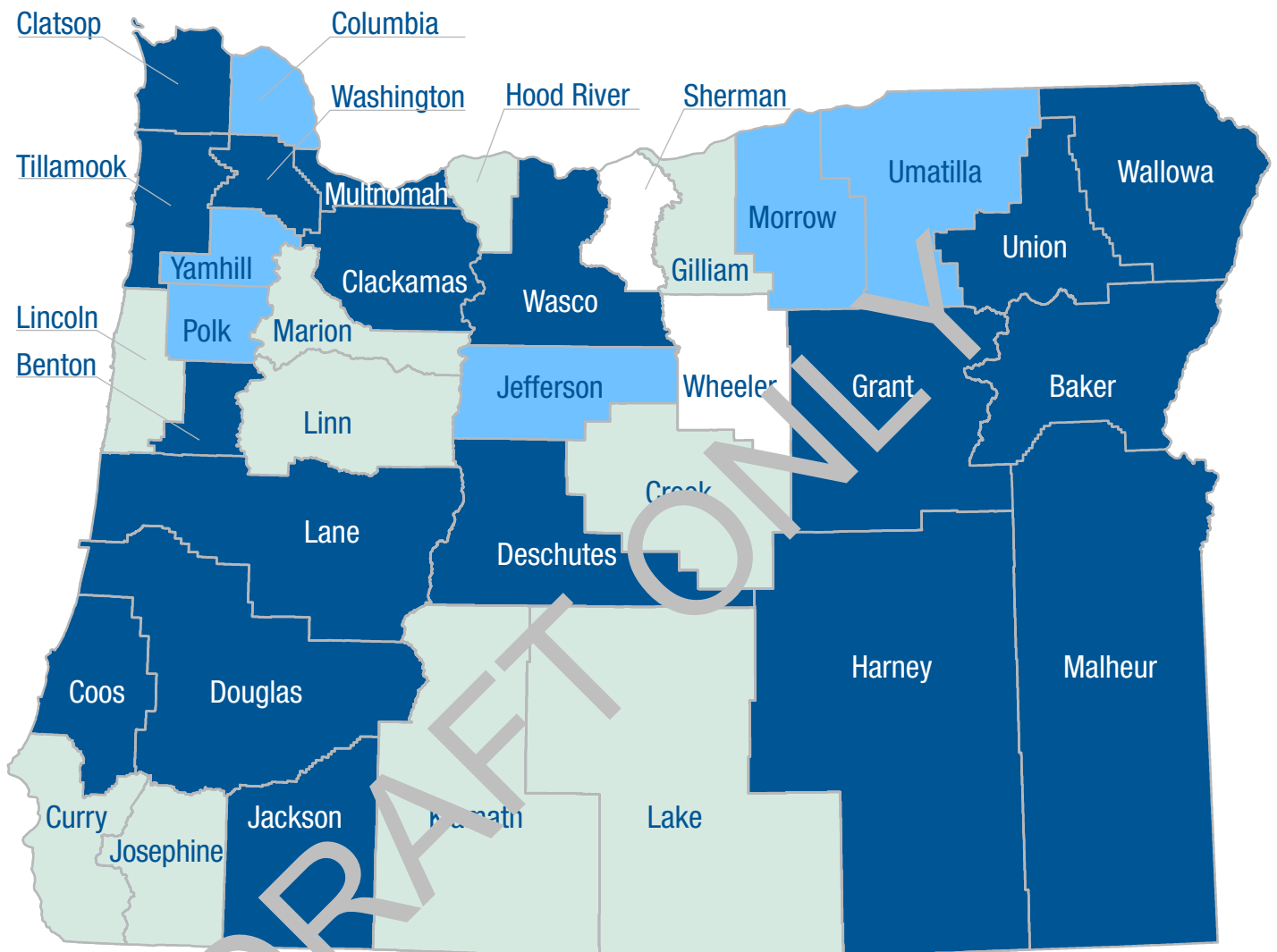
Lower capacity

Oregon population-to-occupational therapists (including assistants) ratios

Statewide: 1,130:1
Mean ratio: 1,779:1
Median ratio: 1,323:1

* Ratios cannot be calculated due to no occupational therapists or assistants in these counties, 2014.

MAP 7: POPULATION-TO-PHARMACIST RATIOS, 2014



Number of people per pharmacist

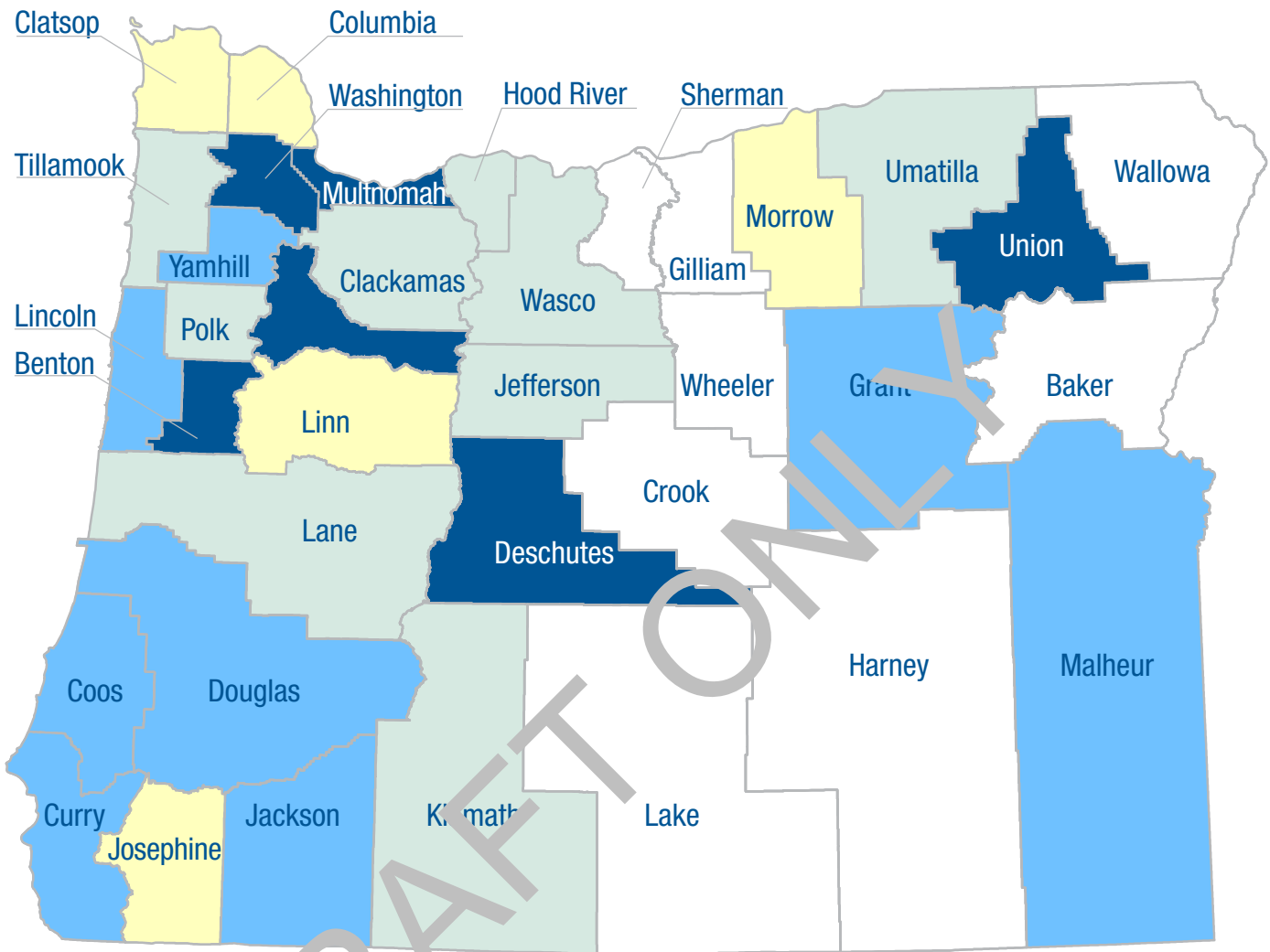


Oregon population-to-pharmacists ratios

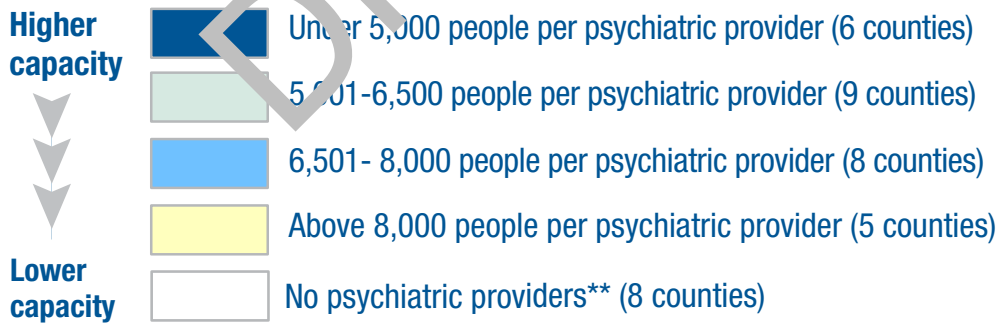
Statewide: 1,289:1
Mean ratio: 1,658:1
Median ratio: 1,463:1

* Ratios cannot be calculated due to no pharmacists in these counties, 2014.

MAP 8: POPULATION-TO-PSYCHIATRIC PROVIDER* RATIOS, 2014



Number of people per psychiatric provider



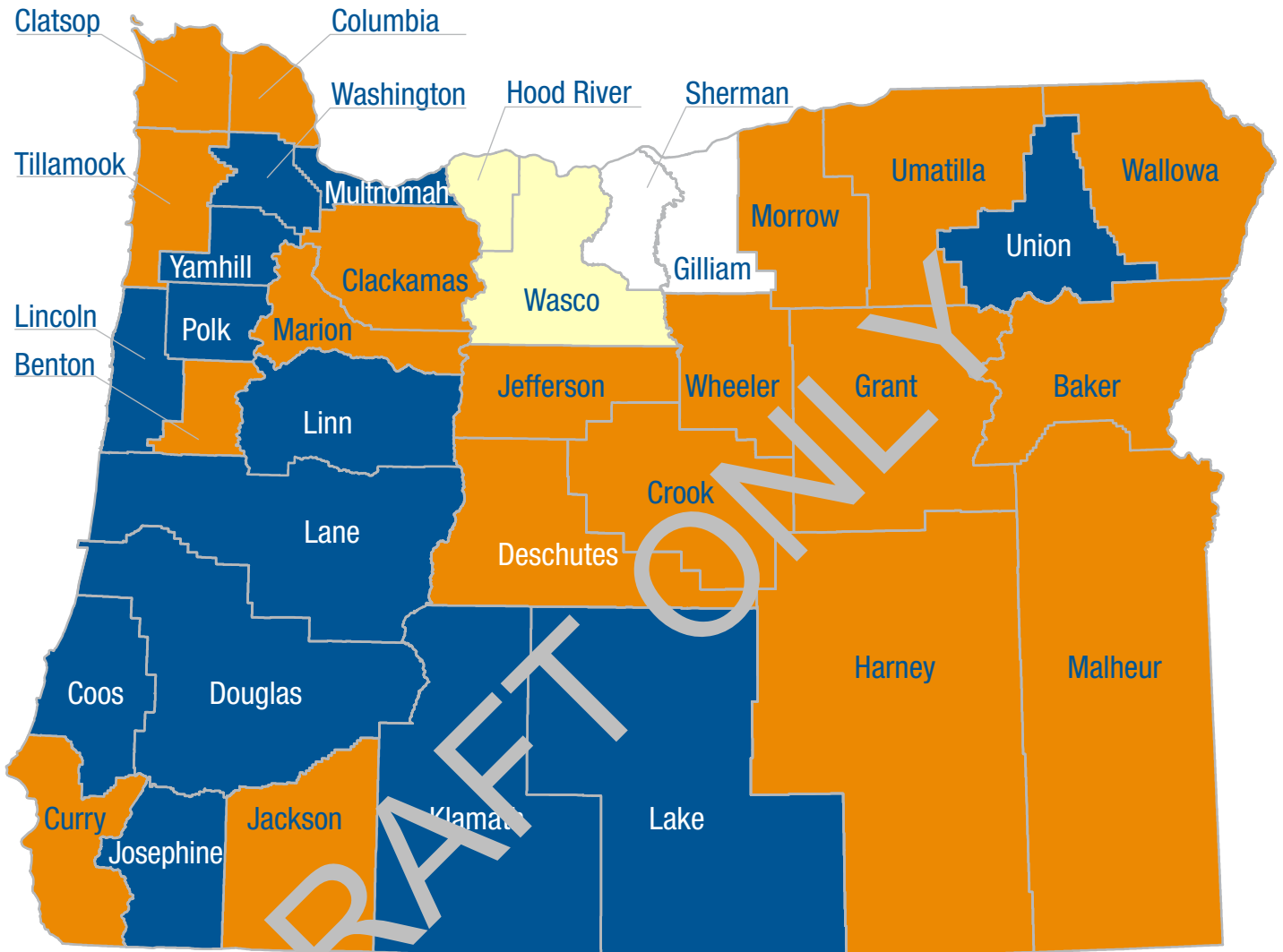
Oregon population-to-psychiatric providers ratios

Statewide: 3,927:1
Mean ratio: 7,783:1
Median ratio: 6,437:1

* Psychiatric providers are physicians who identified practice specialties in psychiatry, child and/or adolescent psychiatry, forensic psychiatry, addiction psychiatry, geriatric psychiatry, psychoanalysis, and psychosomatic medicine, and nurse practitioners who reported a specialty of psychiatry/mental health.

**Ratios cannot be calculated due to no psychiatric providers in these counties in 2014.

MAP 9: CHANGE IN POPULATION-TO-PHYSICIAN RATIO 2010-2014

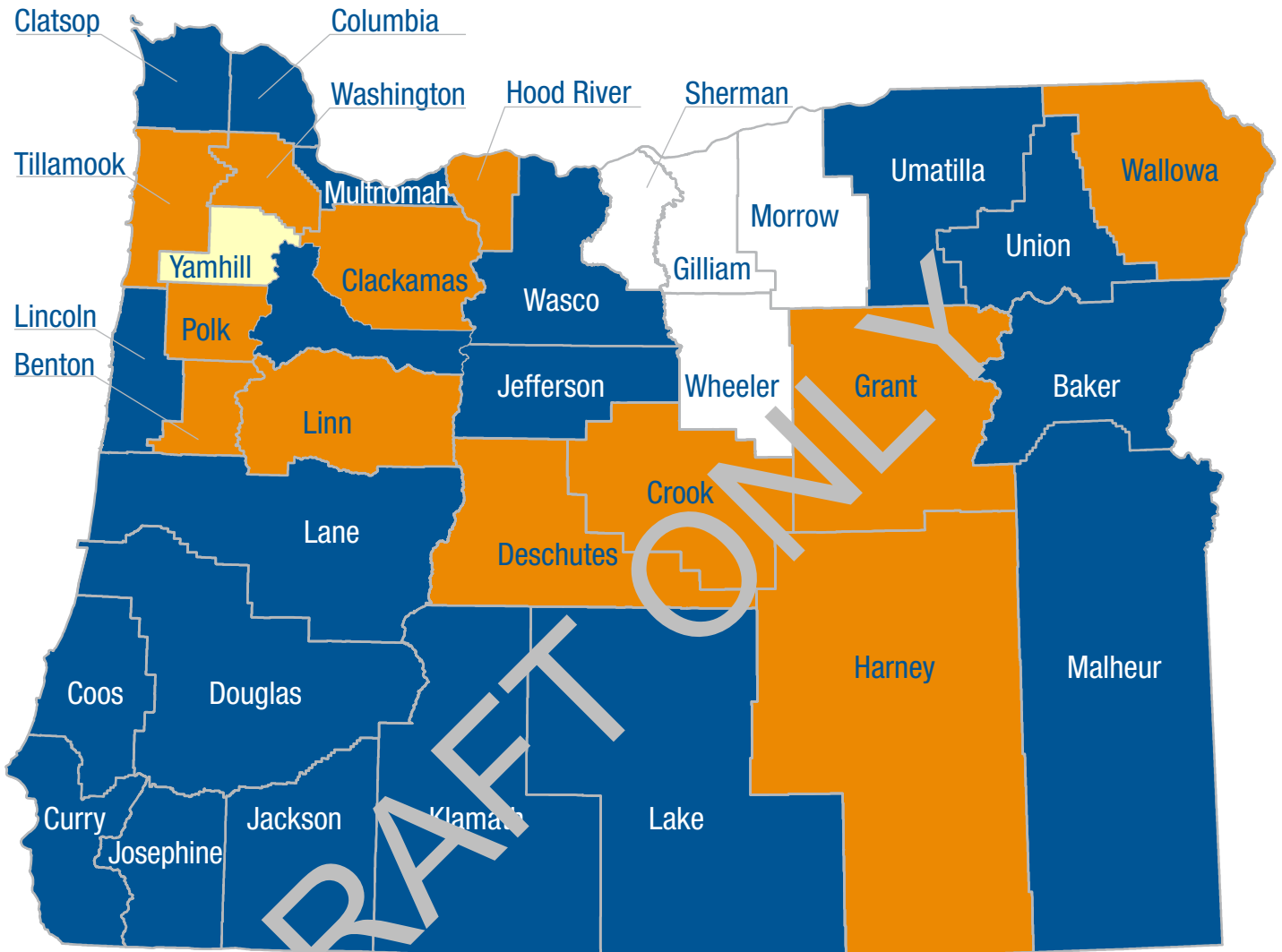


Change in number of people per physician

- Increased capacity (19 counties)
- No change in capacity (2 counties)
- Decreased capacity (13 counties)
- No physicians* (2 counties)

* Change in ratios cannot be calculated due to no physicians in either or both years.

MAP 10: CHANGE IN POPULATION-TO-DENTIST RATIO 2010-2014

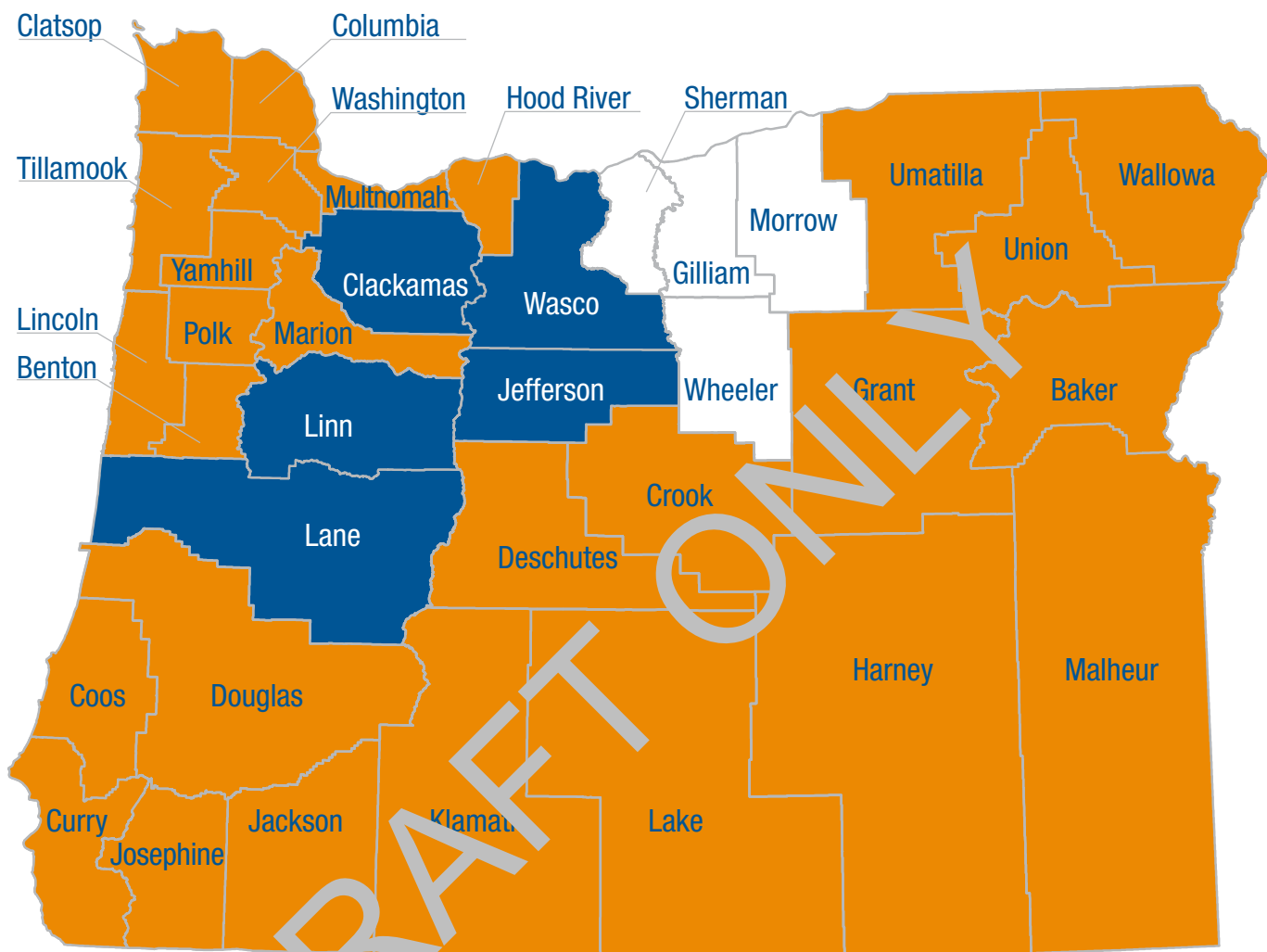


Change in number of people per dentist

- Increased capacity (13 counties)
- No change in capacity (1 county)
- Decreased capacity (18 counties)
- No dentists* (4 counties)

* Change in ratios cannot be calculated due to no dentists in either or both years.

MAP 11: CHANGE IN POPULATION-TO-NURSE PRACTITIONER RATIO 2010-2014



Change in number of people per nurse practitioner

- Increased capacity (27 counties)
- Decreased capacity (5 counties)
- No nurse practitioners* (4 counties)

* Change in ratios cannot be calculated due to no nurse practitioners in either or both years.