

>> Examining the Health Care Workforce Needs for Communities and Patients in Oregon



Oregon
Health
Authority

HEALTH POLICY AND ANALYTICS DIVISION

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Examining the Health Care Workforce Needs for Communities and Patients in Oregon

Background on needs assessment

In 2017, the Oregon Legislature enacted House Bill 3261 that, among other directives, requires the Oregon Health Policy Board to conduct regular assessments of the health care workforce needs of the state. Specifically, the legislation requires the assessment to consider the needs that result from increased health insurance coverage in Oregon, workforce needs to address health disparities among medically underserved populations in Oregon, and the specific workforce needs of rural communities across Oregon. The needs assessment required by the bill is also designed to inform state investments to improve the diversity and capacity of Oregon's health care workforce through the Health Care Provider Incentive Fund.

The legislation requires an initial needs assessment report to be submitted to the Legislature by Feb. 1, 2018. After this initial report, and beginning in 2019, the needs assessment will be created every two years, in advance of session of the Oregon Legislature that takes place in odd-numbered years. Because the timeframe for the initial needs assessment is much shorter than for future reports, this report includes a discussion of future goals and analysis that should be undertaken for the 2019 and future year reports.

Charge from HB 3261

1. **The Oregon Health Policy Board, in consultation with the Oregon Health and Science University and the Office of Rural Health, shall conduct an assessment of the health care workforce needs in this state, including but not limited to the health care workforce needed to address:**
 - a. **The continuing expansion in commercial and publicly funded health care coverage;**
 - b. **Health disparities among medically underserved populations; and**
 - c. **The need for health care providers in rural communities.**
2. **The board shall report to the Legislative Assembly no later than February 1 in each odd-numbered year on the health care workforce needs in this state and proposals for addressing those needs with programs funded by the Health Care Provider Incentive Fund established under ORS 676.450.**

What this is and isn't – an overview

The requirement in HB 3261 for a workforce needs assessment is designed in part to inform state policy efforts to help identify and address gaps in Oregon's health care workforce and the needs of communities lacking health care resources. In particular, the legislative charge envisions this report as a key resource to inform the operation of the Health Care Provider Incentive Fund also included in HB 3261.

This initial report, however, is not intended to serve as *the* definitive recommendation or declaration as to the number of health care providers required in each Oregon community and/or the type of health care providers that each community should have. Instead, this report provides data and insight to highlight workforce needs in communities across Oregon in order to examine provider types where needs are most significant, and provide general guidance for decision-making related to distributing health care provider incentives.

While producing concrete and declarative recommendations for Oregon’s health care workforce in specific communities is a laudable goal, there are several barriers to producing such a report. For instance:

- Clear, consensus recommendations for how many health care providers (and the types of providers) a community needs based on their population, demographics or health status are limited if not nonexistent.
- The evolution of team-based health care delivery, the increasing proliferation of tele-health services and the ability of different types of practitioners to serve patients complicate creating target ratios.
- Population needs vary considerably, even within a county. As a result, creating thoughtful and quantifiable target population-to-provider ratios that account for unique community characteristics would be challenging and potentially very time consuming.

Assessing health care workforce needs — three lenses

The challenges in assessing need

To be certain, defining the needs of the health care system is inherently challenging because different parts of the health care system tend to define their needs in different ways. For instance, the need for a specific service could be defined at either the individual/patient level, the community level, or the health care industry level. As a result, it is important to examine Oregon’s health care workforce needs through multiple lenses. At the same time, the workforce needs as viewed from the lens of a hospital or clinic at an organizational level may differ from the needs as viewed from a community or patient lens. These differences should also be acknowledged and accepted to enable policymakers and state officials to best use the information gained from each measurement of need.

A further challenge to the establishment of clear, concrete measurements of the number and type of health providers needs by communities or the state as a whole is the fact that workforce gaps are sometimes better understood at the conceptual level than at the empirical level. This is because there is not a consensus for a target population-to-provider ratio for all communities or provider types. Federal standards do exist, such as one full-time physician for every 3,500 people in a given area.

However, even this standard does not fully account for travel time to the nearest health care provider for the population of a given area, specific health care needs of that community, or the population characteristics that affect need for health care services (such as age or socio-economic factors). Other standards also exist, such as the Kaiser Family Foundation’s “gold standard” of a 1,500-to-1 population-to-provider ratio.

Furthermore, an inequitable distribution of health care providers across Oregon means that some communities lack enough practitioners even though statewide (or even countywide) totals do not indicate provider shortages no matter which provider-to-population standard is used. Policy solutions that rely solely on efforts to redistribute the current supply of health care resources will not be viable because they could simply create new shortages in the name of solving current

ones. Instead, strategies should seek to grow overall health care workforce capacity in order to ultimately support areas with identified shortages. In addition, increasing community capacity to address current workforce needs is also important. Both of these strategies can be undertaken at the same time as efforts to improve the overall efficiency of provider distribution for the future.

This document examines Oregon's workforce needs through three lenses that provide both distinct and overlapping views of the health care system. Specifically, these lenses look at:

- Health care workforce needs of the health care industry and the economic demand for health care practitioners and workers
- Patients' access to care and the types of health care services that should be available in communities of different sizes
- Health care provider capacity of communities relative to their population and demographics.

Separating the analysis along these three lenses allows for the consideration of the findings gained from each as well as the strengths and weaknesses of each lens separately. In the end, all the views provide useful information for policymakers seeking to increase the capacity of the Oregon health care workforce to meet the health care needs of Oregon's population and highlight the reality that viewing the state's workforce needs through just one lens will provide an incomplete picture.

Lens one: industry/economic demand for health care workforce

Assessing Oregon's health care workforce needs should entail an examination of the perceived needs of employers in the health care industry and their short- and longer-term objectives to hire and retain health care practitioners to serve both current and anticipated future demand from patients.

One tool that can be used is a biennial analysis and report produced by the Oregon Employment Department that examines occupations in need around Oregon and uses relative demand for workers and potential wages to craft a prioritization for job training efforts. This prioritization is not an exact measure of where workforce needs are the greatest from the perspective of health care employers, nor is it a statistical model of the number of providers needed to meet a specific access-to-care threshold. However, it does provide a useful look at the occupations that are both in high demand by employers and that provide high wages to those who fill them.

As part of this report, 30 high-wage and high-demand occupations are grouped as top priorities for the state. Not surprisingly, occupations in the health care field are prominent on the list due to several separate categories of health care providers being identified. While there is significant overlap in some of the practitioner types, providers identified specifically include:

- Physical therapists, physicians and surgeons, family practitioners, internists, obstetricians and gynecologists, physician assistants, registered nurses, nurse practitioners, anesthesiologists and pediatricians.

Additional occupational categories identified as prioritized health care occupations (statewide) include:

- Mental health counselors, physical therapist assistants, mental health and substance abuse social workers, occupational therapists, dentists, medical and clinical lab technologists and pharmacists.

The Oregon Employment Department’s (OED’s) overall occupation prioritizations are based on several factors: projected job openings over the coming decade, projected openings relative to the size of the occupational category, median wage for the occupational category, employer demand for occupation in a recent year (statewide measure), and the supply of workers from education and training programs relative to employer demand for the occupation (statewide measure). This prioritization emphasizes high-demand and high-wage occupational categories. However, examining local need for occupational categories *separately* from the wages paid to those occupations is also an important stand-alone measure of industry demand.

To this end, we examine Oregon Employment Department data on projected job openings for occupational categories at the county/local level. The table below lists the health care occupations that OED measured in the highest two thresholds of projected job openings in each community.

<u>County/region</u>	<u>Occupations in highest tier of projected job openings, 2014–2024</u>	<u>Occupations in second highest tier of projected job openings, 2014–2024</u>
Clackamas	Registered nurse, home health aide, medical assistant, medical secretary	Physical therapist, nursing assistant, dispensing optician, pharmacist, dental assistant, massage therapist, pharmacy technician, other physician and surgeon*
East Cascades (Crook, Deschutes, Gilliam, Hood River, Jefferson, Klamath, Lake, Sherman, Wasco, Wheeler)	Registered nurse, nursing assistant, medical assistant, medical secretary	Physical therapist, medical and health services manager, dental hygienist, pharmacist, home health aide, dental assistant, child, family and school social worker, pharmacy technician, other physician and surgeon*
Eastern Oregon (Baker, Grant, Harney, Malheur, Morrow, Umatilla, Union, Wallowa)	Registered nurse, nursing assistant, medical secretary	Physical therapist, medical assistant, dental assistant, mental health counselor, pharmacy technician
Lane	Registered nurse, nursing assistant, medical assistant, medical secretary	Physical therapist, medical and health services manager, dental hygienist, home health aide, dental assistant, clinical counseling and school psychologist, mental health and substance abuse social worker, other physician and surgeon*
Mid Valley (Linn, Marion, Polk, Yamhill)	Registered nurse, nursing assistant, medical assistant, medical secretary, home health aide	Physical therapist, medical and health services manager, dental hygienist, dental assistant, mental health and substance abuse social worker, child family and school social worker, pharmacy technician, licensed practical and vocational nurse, other physician and surgeon*

Northwest Oregon (Benton, Clatsop, Columbia, Lincoln, Tillamook)	Registered nurse, nursing assistant, medical secretary, home health aide	Physical therapist, medical and health services manager, medical assistant, dental assistant, EMT/paramedic, other physician and surgeon*
Portland Metro (Multnomah, Washington)	Registered nurse, nursing assistant, medical assistant, medical secretary, other physician and surgeon*	Home health aide, dental assistant, medical and health services manager
Rogue Valley (Jackson, Josephine)	Registered nurse, nursing assistant, medical assistant, medical secretary, home health aide, other physician and surgeon*	Physical therapist, medical and health services manager, dental hygienist, pharmacist, dental assistant, licensed practical/vocational nurse, pharmacy technician, phlebotomist
Southwestern Oregon (Coos, Curry, Douglas)	Registered nurse, nursing assistant, medical assistant, medical secretary	Medical and health services manager, dental assistant, home health aide, mental health counselor, child family and school social worker, licensed practical/vocational nurse, pharmacy technician, phlebotomist, EMT/paramedic, other physician and surgeon*

* Occupational categories within the Oregon Employment Department do not match with provider categories from the legislatively authorized Workforce Data Reporting Program in OHA. For instance, the “other physicians and surgeons” category includes osteopathic physicians.

Limitations to the use of industry and economic demand for health care workers

While industry-focused data can be useful to show expected future demand for the health care workforce, there are limitations to the data’s value for policymakers. For instance, some communities with high industry demand for practitioners could be high in some areas that already have very robust practitioner supply and where residents generally have substantial access to a wide variety of health care services. Furthermore, industry demand for practitioners can at times be driven by financial incentives and may not always indicate increased system capacity to serve patients who are not currently able to receive services. Finally, industry demand may not account for whether new practitioners or services will be widely available to a community’s residents or whether traditionally underserved populations will benefit from new practitioners. However, the industry demand is one critical piece of a larger view of the capacity of Oregon’s health care workforce and can help provide insight into where policy efforts should focus in the coming years.

Lens two: Measuring workforce needs by examining patients’ access to care and the array of health care services that should be available in communities of various types

Patients’ access to necessary health care services is another important way to measure whether the state’s health care workforce is meeting the needs of the state’s residents and, if not, where the gaps are most pronounced. While access to services can depend on many factors including a patient’s specific health insurance coverage, measuring the existence and proximity of specific services provides a helpful insight to measure of access.

One initiative, “Creating a Blueprint for Health in Rural Oregon,” undertaken in 2015–2016, provides a powerful method of identifying need for Oregon communities. This project surveyed community members, researchers and other stakeholders on the type and level of services deemed *minimally* necessary for various types of Oregon communities based on their hospital configuration. The configurations identified were communities without a hospital, communities with a small/critical access hospital and communities with a multi-specialty/regional hospital. This effort acknowledges that not all communities can expect the same service levels. However, it also acknowledges that defining some minimal standard for communities of various sizes and capacities is possible and advantageous.

This exercise did not take a comprehensive look at *all* health care service categories; nor did it seek to establish what an *ideal* array of services for all Oregon communities. For instance, the project did not examine long-term and residential care needs of communities of various sizes, nor did it examine the availability of specialty services outside the realm of primary care. Still this analysis can prove useful.

Below is a summary of the blueprint’s findings related to service type and the desired ability to access these services in consistency and method, categorized by whether the community has a larger (regional) hospital, a critical access (small) hospital or no hospital:

Summary of minimal access to services standards (full-time, part-time or referral-only) for various service categories, by community type

Service type	Regional hospital	Small hospital	No hospital
Primary care generalist	Full-time	Full-time	Full-time or part-time
Primary care specialist	Full-time	Part-time or full-time	Part-time or referral
Oral health generalist	Full-time	Full-time	Part-time
Oral health specialist (periodontics/surgery)	Full-time	Part-time or referral	Referral
Prenatal care — low risk	Full-time	Part-time	Part-time
Prenatal care — high risk	Full-time	Part-time	Part-time or referral
Hospital deliveries — low risk	Full-time	Full-time	N/A
Behavioral health — outpatient counseling and therapy	Full-time	Full-time	Full-time or part-time
Behavioral health — psychiatric services	Full-time	Part-time	Referral or part-time
Behavioral health — alcohol/drug treatment	Full-time	Full-time	Full-time or part-time

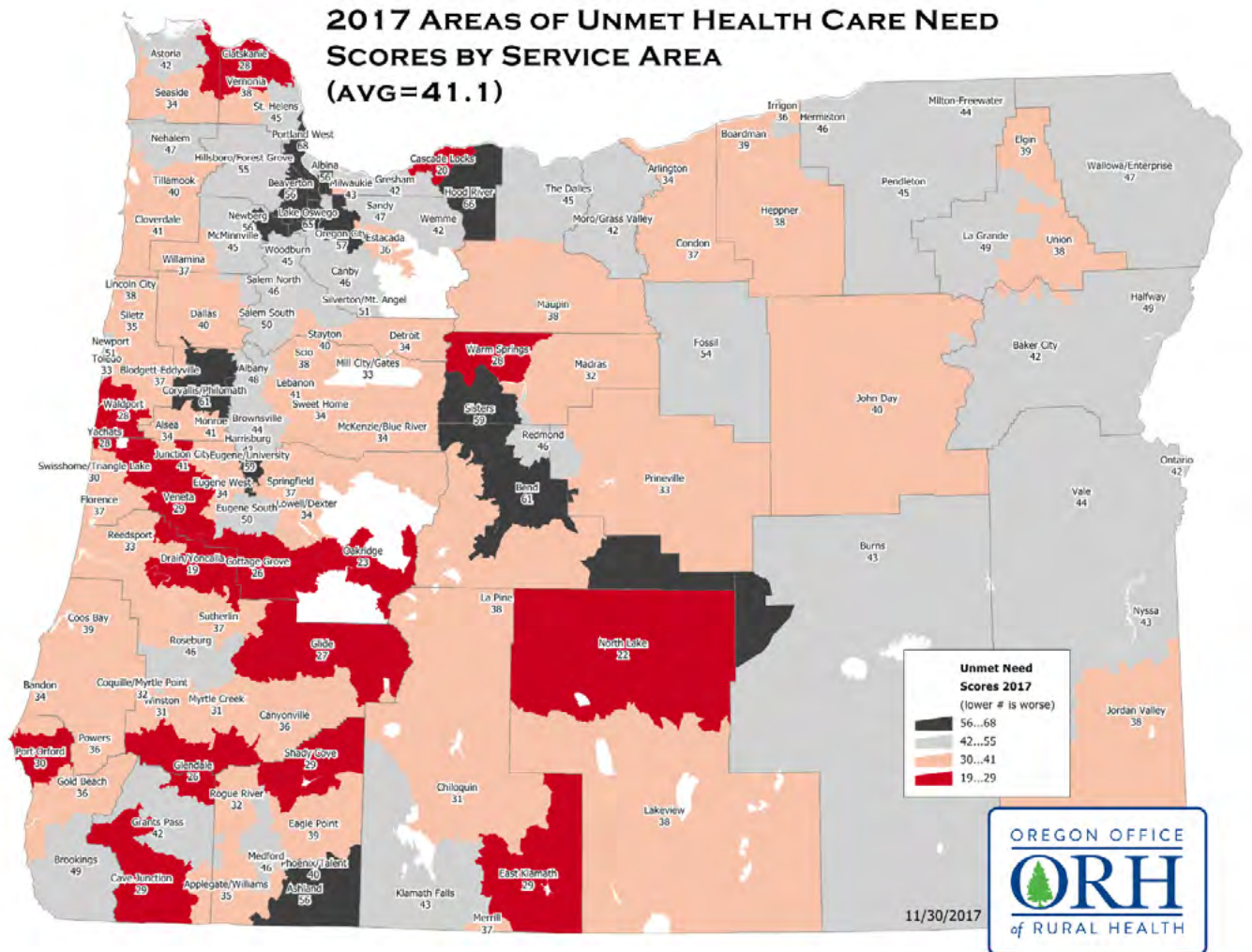
The following table summarizes how communities as distinguished by these three categories fare against a minimal service standard in the areas defined above. Overall, communities with regional hospitals more consistently met the minimal service standards, while communities without hospitals were less likely to meet minimum standards identified during the blueprint process.

The number of communities meeting the minimal standards set forth by the blueprint for each service category, grouped by community type								
Community type and total number	Primary care generalist	Primary care specialist	Oral health generalist	Oral health specialist	Hospital deliveries (low risk)	Behavioral health: outpatient counseling and therapy	Behavioral health: psychiatric services	Behavioral health: alcohol / drug treatment
Regional hospital - 5	5/5	5/5	5/5	2/5	5/5	5/5	5/5	5/5
Small hospital - 31	31/31	26/31	31/31	4/31	24/31	31/31	20/31	31/31
No hospital - 68	56/68	17/68	34/68	N/A	N/A	4/68	16/68	45/68
All rural primary care service areas - 104	92/104	48/104	70/104	6/36	29/36	40/104	56/104	81/104
Note: This analysis does not attempt to measure "referral" capability of non-hospital communities nor their ability to accommodate non-hospital deliveries for residents seeking those services.								

Another report from the Oregon Office of Rural Health, “Areas of Unmet Health Care Need (AUHCN) in Oregon,” is also useful to illuminate workforce gaps related to patients’ access to care. This annual report examines several measures of access to primary care services for physical, oral and behavioral health needs. The report combines nine different measures to produce an overall score, which can be used to group communities into areas of relative access and thus need. Furthermore, the report examines communities at the primary care service area level, which is a sub-county distinction that can be an especially useful way to examine counties with urbanized and rural communities.

Across the state, the AUHCN report calculated overall scores that ranged from 19 (which represented the most unmet need) to 68 (the lowest level of unmet need). The average score for the state in 2017 is 41.1. The average score among rural and frontier communities is much lower, at 38.3 while urban counties’ average score is 52.

Figure 1: Unmet need score by primary care service area (courtesy of the Office of Rural Health)



In addition to the overall scores, specific measures can also indicate needs in communities across Oregon. For instance, measures of preventable hospitalizations, emergency department visits for either dental or mental health reasons, and the measure of adequacy of prenatal care can all be viewed as indicators (though not as declarative findings) of the local health care system’s adequacy to meet the ongoing health care needs of the communities they serve.

For instance, communities with higher than average levels of the following measures may have an inadequate primary care system: preventable hospitalizations (as measured by ambulatory care sensitive condition discharge rates); births with inadequate prenatal care or emergency department visits as a result of either non-traumatic dental reasons, mental health concerns or substance abuse. Communities that fare poorly on all four of these measures may be most in need.

Figure 2: Ambulatory care sensitive condition discharge rates above the state average

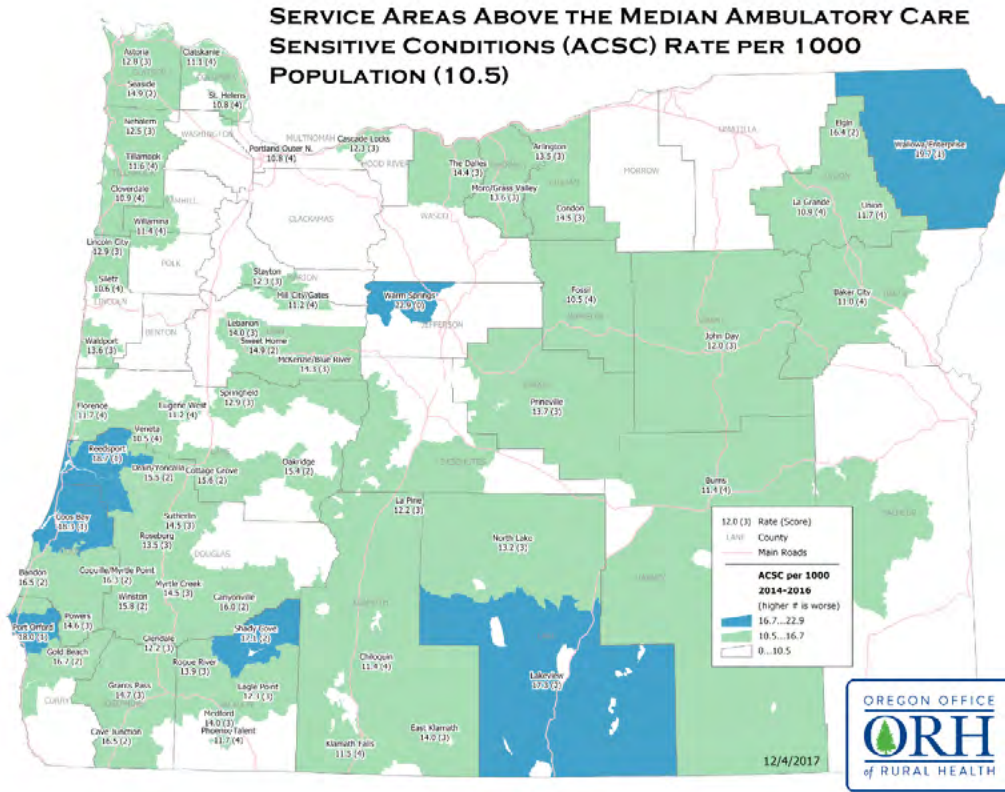


Figure 3: Inadequate prenatal care rate per 1,000 births above state average

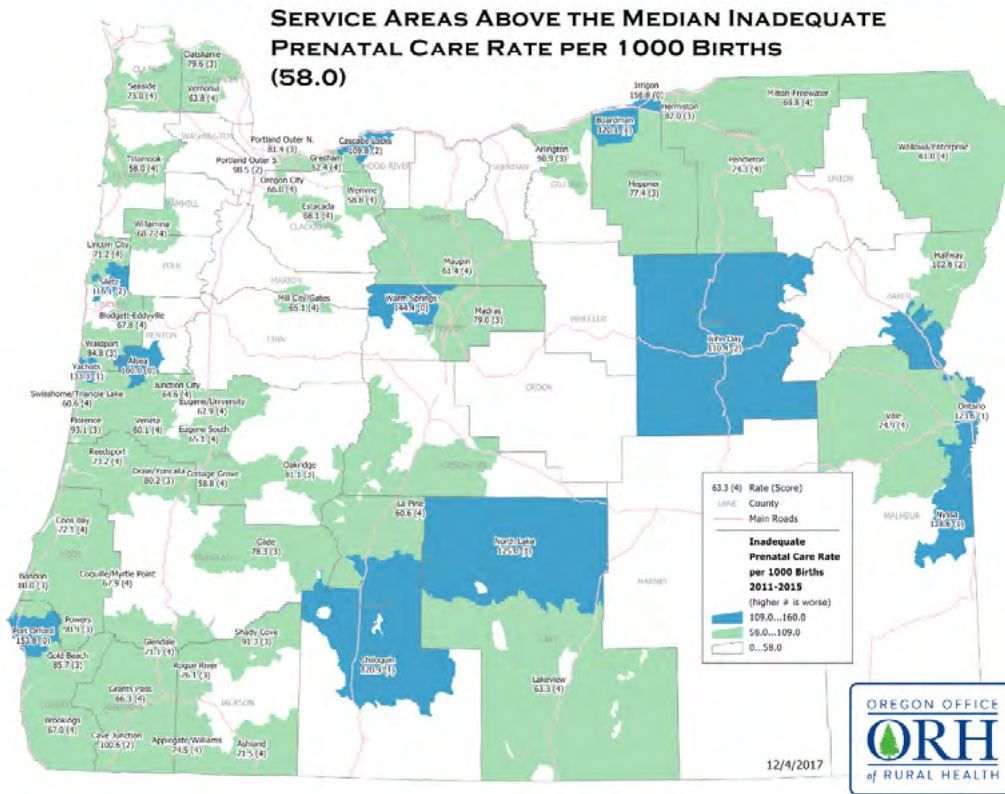


Figure 4: Non-traumatic ED dental visits per 1,000 population above state average

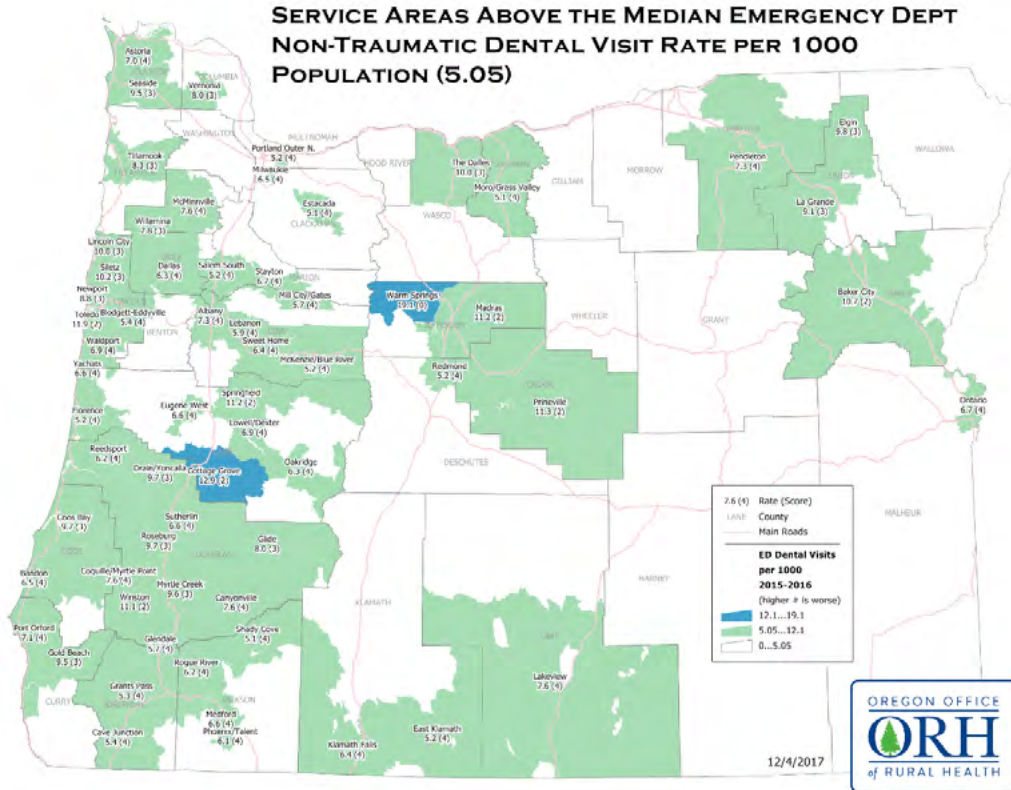
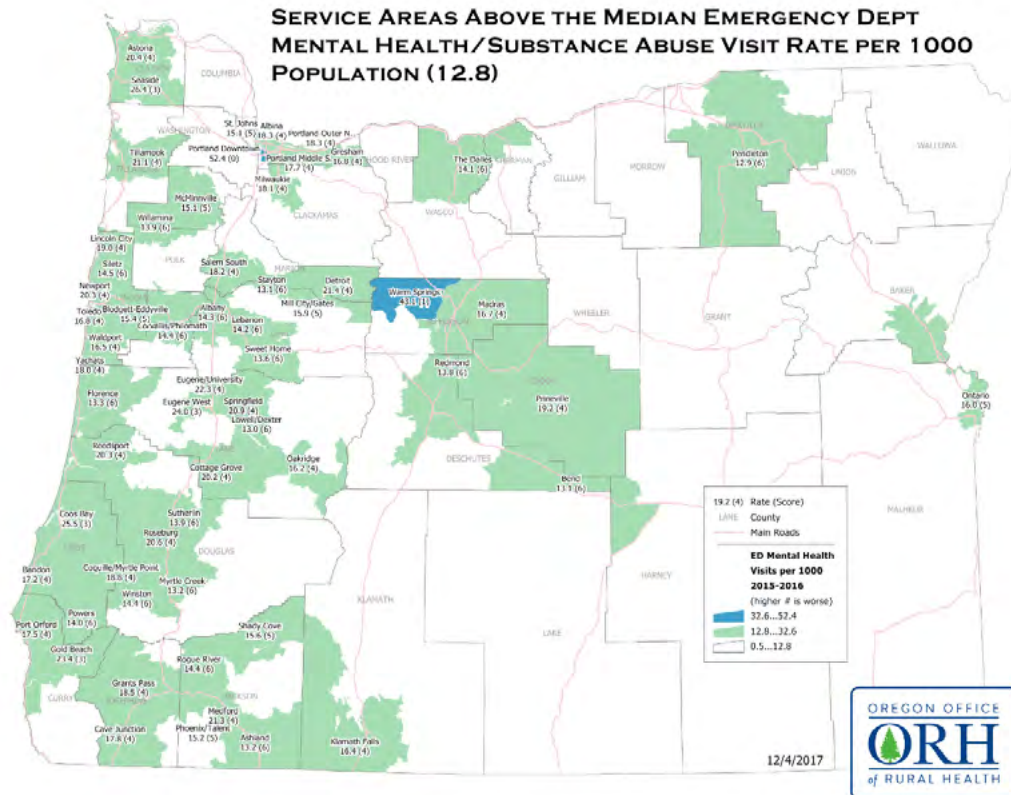


Figure 5: MH/SA ED visits per 1,000 population above statewide average



Limitations to measuring workforce needs by examining patients' access to care and the array of health care services that should be available in communities of various types

As previously mentioned, measuring access to care is difficult because variables beyond the existence of providers affect patients' actual access to health care services. Despite significant gains in insurance coverage in Oregon since the passage of the Affordable Care Act, differences across plans and carriers affect patients' access to specific providers. For example, whether a specific patient's provider is included in that person's insurance plan's network affects whether and how the individual can access care, which can be especially difficult to measure. Transportation barriers, for instance, may affect some Oregonians more than others even within a specific community.

Furthermore, some of the measures above may help indicate workforce gaps but may be exacerbated by other community circumstances that are at least partly out of the control of the health care system. As a result, policymakers and program administrators should take great care to use the data presented above to inform future policy without using them to falsely attribute some issues to the adequacy of the local workforce. Also, many of the measures shown above may persist for some time after workforce capacity is increased above current capacity, and the existence of higher than average rankings may not always be an indicator of poor rankings.

Lens three: Examining workforce capacity at the county level

The Oregon Health Authority collects data from health care licensing boards when practitioners renew their licenses, which enables the state to compile and analyze the number of health care practitioners of different types practicing in different communities. County-level practitioner totals compared to county population can show relative areas of need across the state, though they may not be the definitive measure of whether a given community needs additional providers.

Provider-to-population ratio is one measure to compare the relative provider capacity of counties across Oregon. It highlights the counties whose provider totals rank them well behind the top counties in the state (or the state average) and, as a result, can help inform efforts to increase the supply of practitioners across Oregon. At the same time, the report makes no recommendation on the target ratios that Oregon's counties should strive for, and acknowledges that holding every county in Oregon to the same target would neither be feasible nor appropriate.

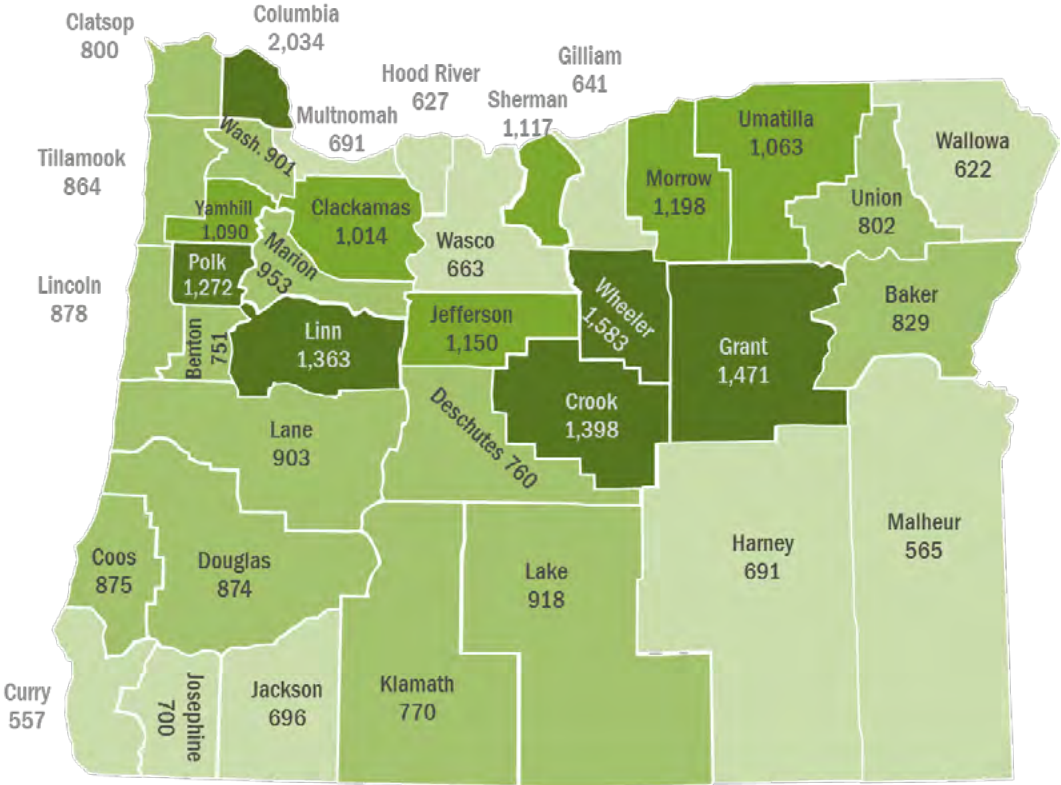
For instance, the populations of Harney and Grant counties are nearly the same, yet Harney County is more than twice the size of Grant County. This could mean that, with a similar number of practitioners in the two counties, Oregonians in Harney County may face greater challenges accessing health care services. Similarly, Umatilla County and Polk County are each home to approximately 80,000 residents, yet Umatilla County's population is spread across more than four times the land area as Polk County's area. Again, the differing sizes of the counties highlight the limitations of creating identical practitioner targets for counties of the same population.

Despite the limitations, examining workforce needs by examining population-to-practitioner ratios can still be useful. Doing so highlights several counties that lag behind the statewide average, and the fact that several of these areas are also very large geographically adds further evidence to the needs in those areas. In the future, additional ZIP code level analysis may be available to help illuminate the health care system’s capacity at the sub-county level; however, this more narrow data may not be as reliable as county-level analysis. Similarly, examining the presence of certain medical specialties (such as OB/GYN, pediatrics or gerontology) could also help illustrate health care system capacity, though it also comes with data gaps.

Primary care

Access to primary care services is critical to ensure success of larger health system transformation efforts in Oregon, including the opportunity for better health for Oregonians. At a statewide level, Oregon is home to one primary care provider (physician, physician assistant or nurse practitioner) for every 850 residents. This ratio ranges from fewer than 600 residents per provider in Curry and Malheur counties to more than 1,500 residents per provider in Wheeler and Columbia counties. In total, 20 counties have higher population-to-provider ratios than the statewide ratio, which is driven largely by the fact that 24 of 36 counties have a higher population-to-physician ratio than the statewide ratio. One goal that may be feasible but would require effort could be to raise those areas near the bottom of the list up to the 850 residents-to-provider ratio that the state as a whole currently enjoys.

Figure 6: Population-to-provider ratio (direct patient care primary care practitioners)



Statewide, more than 70 percent of Oregon primary care providers are physicians, while approximately 10 percent are physician assistants and nearly 20 percent are nurse practitioners. Again, this distribution varies significantly:

- In 27 out of Oregon's 36 counties, physicians make up a smaller share of the primary care workforce than the statewide share of 70 percent.
- In 16 counties, nurse practitioners and physician assistants account for more than 40 percent of the primary care workforce.

Nursing providers

Oregon's nurses are vital to the state's health care delivery system and are by far the largest workforce of all occupations. Much like the distribution of other provider types, nursing capacity relative to population varies dramatically from county to county. Statewide, there are approximately 165 residents per registered nurse. At the same time, 29 of Oregon's 36 counties have more residents per nurse than the statewide ratio. The seven counties with a lower ratio of residents per nurse than the statewide ratio are home to about 42 percent of the state's population yet also to 57 percent of the state's nurses. On the other hand, 21 counties whose ratios are at least one-third higher than the statewide ratio are home to just 17 percent of the state's RN workforce despite having 29 percent of the state's population. In seven of these counties, the population-to-registered-nurse ratio is at least double the statewide ratio.

This wide variation is true for other nursing categories as well. Most Oregon counties have population-to-nurse-provider ratios are higher than the statewide ratio.

- Nurse practitioners: 22 of 36 counties have ratios higher than the statewide ratio with six having at least double the statewide ratio.
- Certified nurse anesthetists: 20 of 36 counties have ratios higher than the statewide ratio with 14 having at least double the statewide ratio.
- Clinical nurse specialists: 30 of 36 counties have ratios higher than the statewide ratio with 29 having at least double the statewide ratio.
- Licensed practical nurses: 25 of 36 counties have ratios higher than the statewide ratio with 11 having at least double the statewide ratio.
- Certified nursing assistants: 23 of 36 counties have ratios higher than the statewide ratio with six having at least double the statewide ratio.

Other medical providers

Although the analysis of the previous section of primary care only included physicians and physician assistants, data also show significant variation in provider capacity for podiatrists, medical doctors and doctors of osteopathic medicine, and physician assistants when including non-primary care providers. Across the state there are approximately 428 MDs and DOs (primary and non-primary care) for each Oregon resident. However, only seven of the state's 36 counties boast county-specific ratios this low, while 11 of 36 have ratios that are twice as high as the statewide figure.

Approximately half of all the states' podiatrists are in the tri-county Portland metro area, while 12 of the state's counties have no practicing podiatrists. Just one county lacks any physician

assistants, though 22 of the state's 36 counties have a population-to-PA ratio higher than the statewide ratio of 3,370 residents per PA.

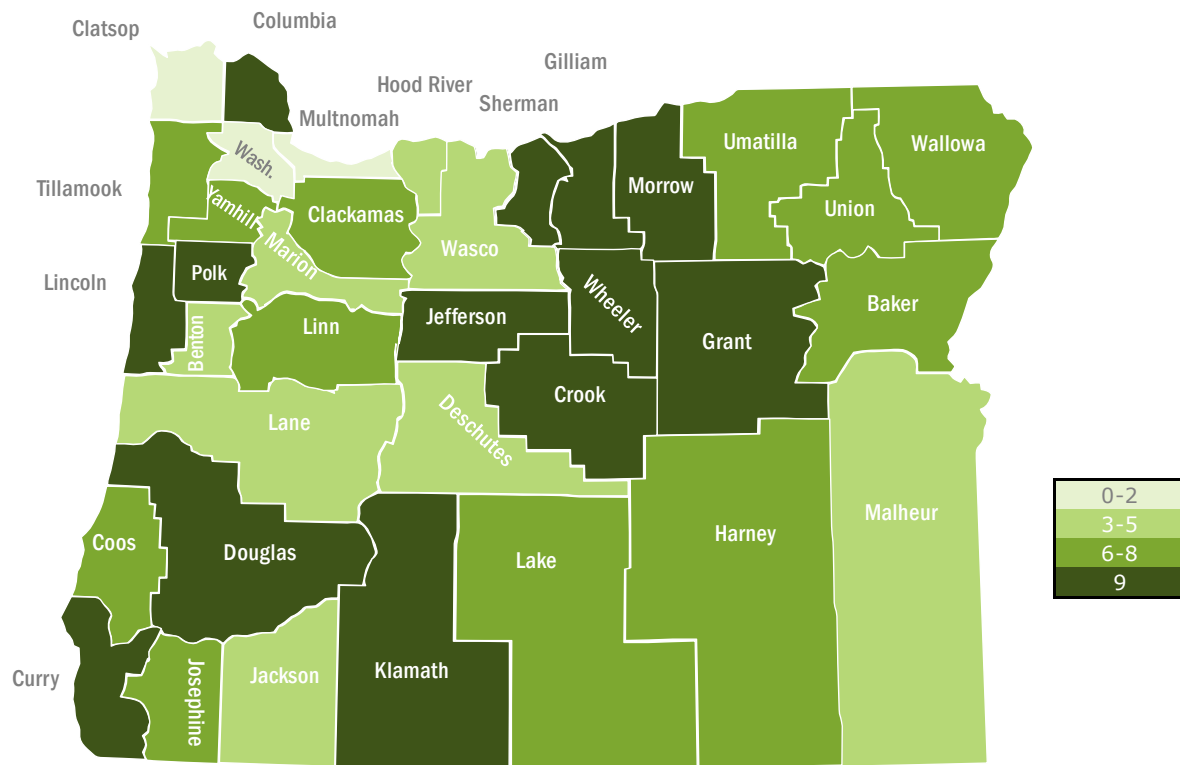
Other provider types

Even more than for primary care providers, the population-to-provider ratios of different provider types vary significantly across the state. In particular, the concentration of some provider types in a small number of counties means that most counties have higher ratios than the statewide ratio:

- Dental providers: 30 of 36 counties have a higher ratio of residents to dentists than the statewide ratio and 28 have a higher ratio for certified hygienists (27 of 36 counties are higher for both).
- Occupational therapy providers: 28 of 36 counties have a higher ratio of residents to occupational therapists than the statewide ratio and 24 have a higher ratio for OT assistants (21 of 36 counties are higher for both).
- Physical therapy providers: 23 of 36 counties have a higher ratio of residents to physical therapists than the statewide ratio and 24 have a higher ratio for PT assistants (18 of 36 counties are higher for both).
- Pharmacy providers: 27 of 36 counties have a higher ratio of residents to pharmacists than the statewide ratio and 29 have a higher ratio for pharmacy technicians (24 of 36 counties are higher for both).
- Dietitians: 29 of 36 counties have a higher ratio of residents to dietitians than the statewide ratio.

Furthermore, 13 of 36 Oregon counties have higher population-to-provider ratios than the statewide ratio in each of the nine provider categories noted above (see Figure 7).

Figure 7: Oregon counties by the number of “other provider type” categories (listed above) with population-to-practitioner ratio above statewide ratio



Specialty providers

Examining the distribution of health care practitioners with various specialties can also illuminate Oregon’s health care provider capacity and show the workforce needs in communities throughout the state. In particular, obstetrics and gynecological providers, pediatricians and pediatric nurse practitioners, and gerontologists are specialists that are widely relied upon for primary care and other treatment services for women, children and elderly Oregonians. At the same time, the fact that these Oregonians are also served by providers other than these specialists can complicate the use of licensing board data to examine the provider capacity.

In many rural communities, for example, physicians, nurse practitioners and physician assistants with family medicine specialties may be serving children and pregnant women with similar services as providers with pediatric or gynecological specialties. As a result, the number of pediatric providers may not always paint an accurate picture of the availability of health care services for children in a particular community. That said, assuming that all family practice providers are providing the same array of services to all of these populations may similarly overstate the availability of some services.

As a result of these data limitations, this report does not include data on the number of gynecological, pediatric or geriatric providers, despite the assertion that the availability of specialized primary care providers may be lacking in some communities. Future iterations of this

report may be able to better capture and examine the availability and distribution of practitioners serving these populations in order to highlight workforce gaps in these areas.

Data sources and opportunities for better data to be available in future versions of the needs assessment

Data reported in the above section come from self-reported data of health care providers at the time of their license renewal. Respondents provide data on their practice, time spent in direct patient care and demographics. Note that new licensees are excluded until they renew their license. Data from the following boards have been collected since 2009:

- Occupational Therapy Licensing Board
- Oregon Board of Dentistry
- Oregon Board of Licensed Dietitians
- Oregon Board of Pharmacy
- Oregon Medical Board
- Oregon Physical Therapist Licensing Board
- Oregon State Board of Nursing

Beginning with the 2016–2017 license renewals, additional licensing boards have been added, as listed below. Data from these health care professions will provide information for future versions of the needs assessment and other OHA reports. The timing for the availability of data varies depending on renewal schedule. Future data will be available for:

- Oregon Board of Chiropractic Examiners
- Oregon Board of Clinical Social Workers
- Oregon Board of Examiners for Speech-Language Pathology and Audiology
- Oregon Board of Licensed Professional Counselors and Therapists
- Oregon Board of Massage Therapists
- Oregon Board of Medical Imaging
- Oregon Board of Naturopathic Medicine
- Oregon Board of Optometry
- Oregon Board of Psychologist Examiners
- Respiratory Therapist and Polysomnographic Technologist Licensing Board

Limitations to measuring workforce needs at the county level using population-to-provider ratios

While the workforce data presented in this section provide valuable information to measure the state’s health care workforce, there are several important limitations that come from measuring the system’s capacity by looking at population-to-provider ratios. Ratios give only a partial view of residents’ access to health care services because they do not examine whether providers participate in specific health insurance plans, the specific services they provide or the number of patients they serve. Services may also be delivered by different provider types and, in the abstract, communities may accommodate gaps in one provider type (such as physician assistants) with higher-than-average numbers of another practitioner type (such as nurse practitioners). As previously discussed, similarly populated counties of vastly different areas may not be equally served by the same number of providers. Furthermore, the specific health care needs of

communities can vary significantly, limiting the use of one-size-fits all ratio recommendations, and making them potentially problematic.

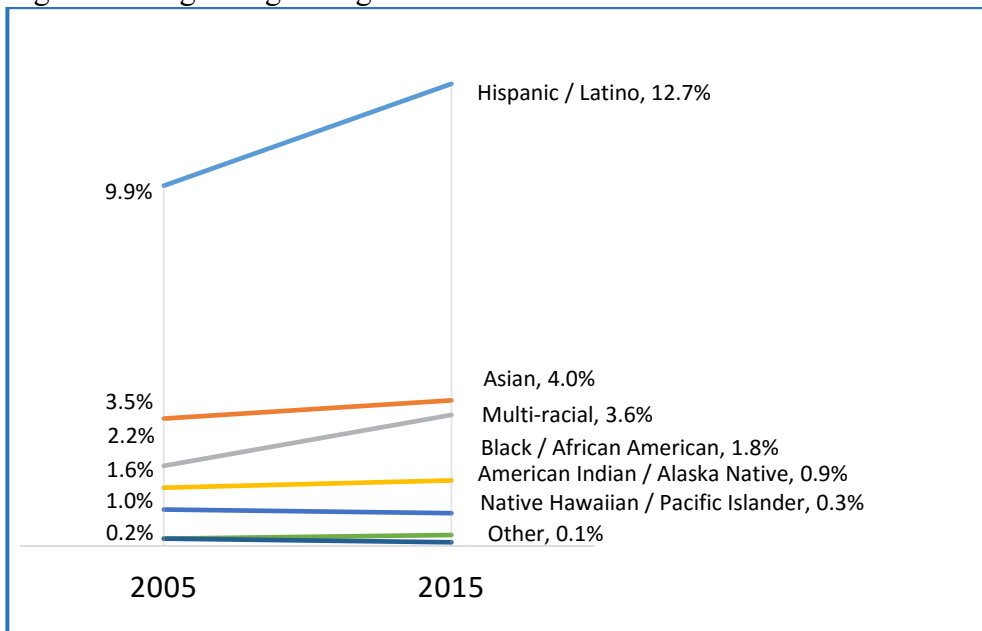
Finally, in large part because of the issues noted above, there are not widely accepted, easy-to-compare targets for what provider ratios communities of different types or sizes should strive to attain. There is no formula for how many additional nurse practitioners can fill the gap in the number of physicians, and developing one would make inappropriate value judgements across practitioner categories. Instead, presenting these ratios provides one of many useful views of what communities may be most in need of additional health care providers and what types of providers are needed in different parts of the state.

Additional considerations:

Addressing the racial, gender and ethnic diversity of Oregon’s health care workforce

Oregon’s population is becoming more diverse. The state’s non-Hispanic White population has declined as a share of the total from more than 81 percent in 2005 as indicated by one-year estimates from the U.S. Census Bureau’s 2005 and 2015 American Community Survey.

Figure 8: Oregon is growing more diverse



Oregon’s health care workforce is not as racially and ethnically diverse as the state’s population. For some occupational categories, the gaps are more pronounced. However, some occupations are actually more diverse, or at least less White, than the state as a whole. This phenomenon can be directly connected to a body of work around the social determinants of health.

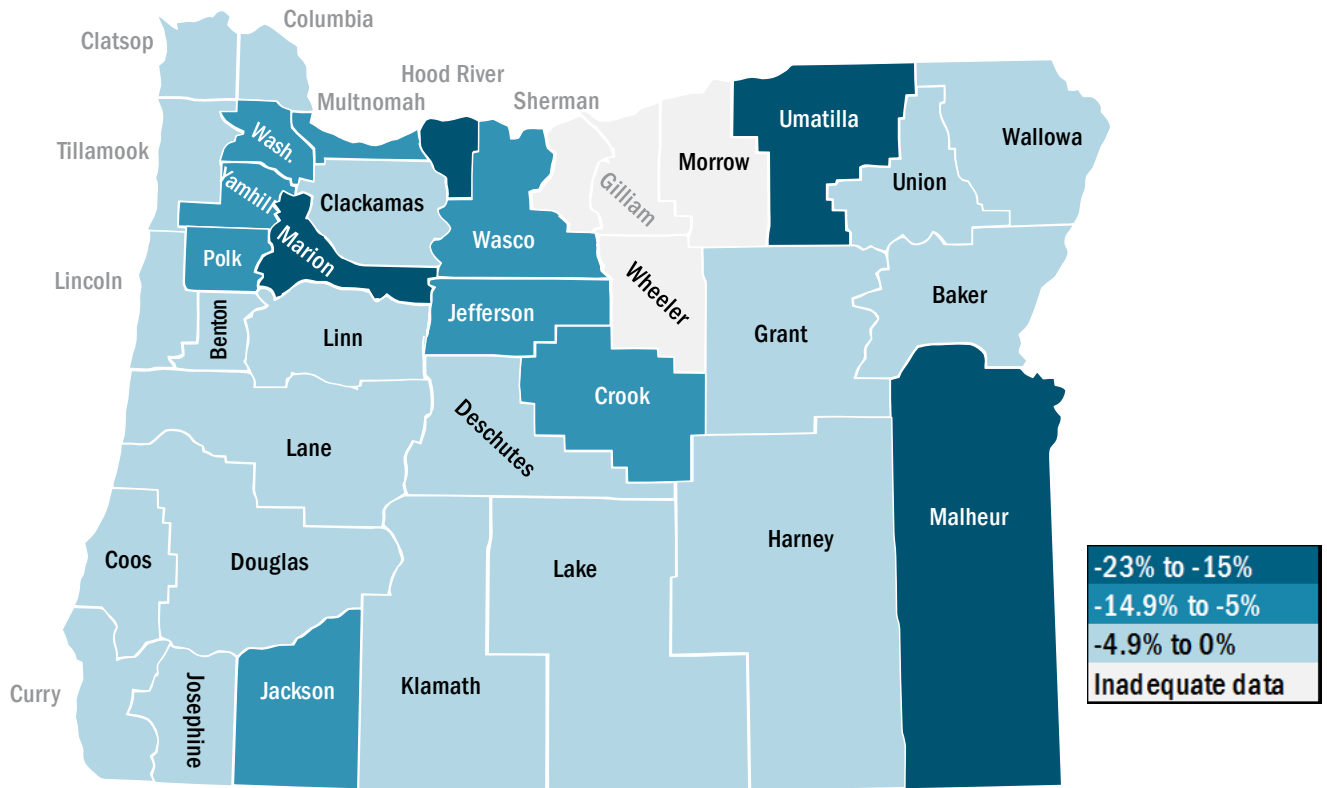
The table below highlights the racial and ethnic distribution of several provider types, as well as the gender breakdown of providers in each category:

Figure 9: Health care workforce demographics by occupation type

	Non-Hispanic								Female	Male
	Hispanic/ Latino	White	Black/ AA	AI/AN	Asian	NH/PI	Other	Multi- racial		
Dentistry										
Dentists	3.0%	80.2%	0.6%	0.2%	12.6%	0.4%	1.3%	1.7%	24.9%	75.1%
Dental hygienists	3.5%	87.5%	0.5%	0.5%	4.6%	0.2%	0.7%	2.4%	97.3%	2.7%
Dietetics										
Dietitians	2.3%	92.2%	0.0%	0.5%	3.9%	0.0%	0.2%	0.9%	97.6%	2.4%
Medicine										
Physicians	3.2%	80.7%	1.2%	0.2%	12.4%	0.3%	1.1%	1.1%	37.1%	62.9%
Podiatrists	2.1%	86.2%	0.7%	0.0%	9.0%	0.7%	0.0%	1.4%	21.0%	79.0%
Physician assistants	3.1%	90.5%	0.7%	0.4%	3.4%	0.4%	0.4%	1.2%	63.8%	36.2%
Nursing										
Nurse practitioners	2.9%	90.4%	0.7%	0.4%	2.9%	0.5%	0.4%	1.9%	88.0%	12.0%
Certified registered nurse anesthetists	4.0%	88.9%	0.3%	0.0%	4.5%	0.0%	0.3%	2.0%	45.8%	54.2%
Clinical nurse specialists	2.1%	93.1%	0.0%	0.0%	2.1%	0.0%	0.0%	2.8%	93.3%	6.7%
Registered nurses	3.3%	88.7%	0.8%	0.6%	3.9%	0.4%	0.4%	1.9%	88.0%	12.0%
Licensed practical nurses	6.6%	80.3%	3.2%	1.2%	4.5%	0.7%	0.5%	3.0%	87.6%	12.4%
Certified nursing assistants	13.3%	69.3%	6.1%	1.2%	5.8%	1.3%	0.6%	2.5%	83.8%	16.2%
Occupational therapy										
Occupational therapists	1.6%	91.1%	0.3%	0.3%	4.1%	0.0%	0.3%	2.2%	90.0%	10.0%
Occupational therapist assistants	3.5%	90.1%	0.4%	0.0%	3.2%	0.0%	1.4%	1.4%	86.8%	13.2%
Pharmacy										
Pharmacists	2.3%	75.6%	0.9%	0.5%	17.3%	0.4%	1.1%	1.8%	55.2%	44.8%
Certified pharmacy technicians	8.0%	78.5%	1.0%	1.0%	7.4%	1.1%	0.3%	2.8%	80.3%	19.7%
Physical therapy										
Physical therapists	2.6%	88.6%	0.2%	0.2%	6.0%	0.3%	0.4%	1.8%	65.9%	34.1%
Physical therapist assistants	1.6%	92.7%	0.5%	0.5%	1.5%	0.5%	0.3%	2.2%	75.7%	24.3%
State Population	12.3%	77.2%	1.8%	0.9%	3.9%	0.4%	0.1%	3.3%	51.0%	49.0%

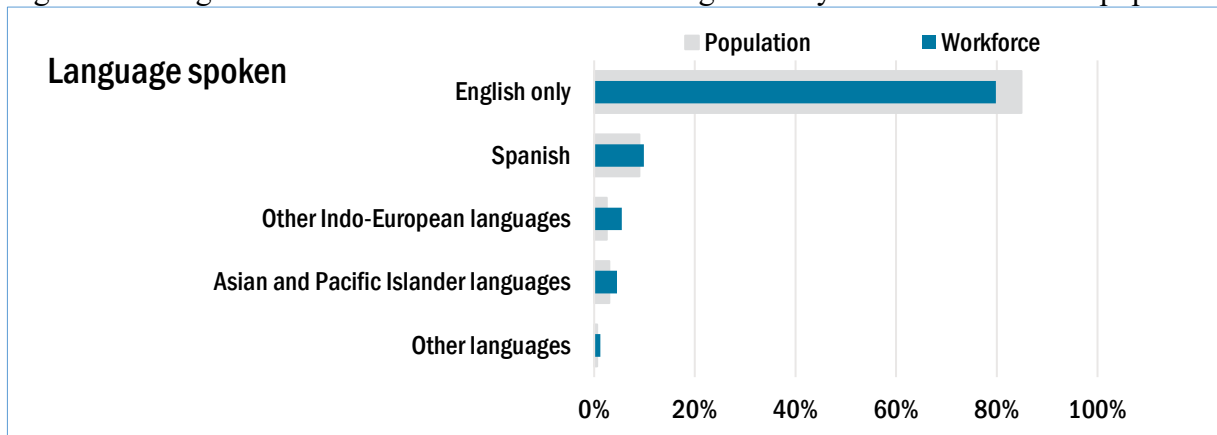
County-level data show a similar pattern as the statewide numbers, but county-level counts of some demographic categories may be too small for accurate analysis. For Oregon’s largest non-White demographic group, however, county-level data can be examined for most Oregon counties. As shown below, Hispanic/Latino providers as a share of the county’s health care workforce is smaller than the Hispanic/Latino share of the population as a whole. The difference in these percentages varies considerably in the state, and is shown in Figure 10.

Figure 10: Gap in Hispanic/Latino health care professionals compared to county population



One somewhat bright spot for Oregon’s health care workforce diversity can be found when examining language capacity of the state’s health care workforce. Gaps certainly exist, but compared to the state’s population as a whole, the health care workforce has more language diversity and a smaller share of the health care workforce speaks only English compared to the population as a whole.

Figure 11: Oregon’s health care workforce is more linguistically diverse than overall population



Although the overall health care workforce is more linguistically diverse than the Oregon population as a whole, this does not mean that the distribution of providers adequately mirrors the distribution of Oregonians speaking these different languages, especially Spanish. Current data limitations prevent high quality county-level analysis of the linguistic diversity of the population and the health care workforce.

Due to the varied distribution of non-English speakers throughout the state, it is possible that the overall health care workforce must be considerably more linguistically diverse than the population as a whole for the workforce to mirror county language-diversity on a consistent basis. As a result, policymakers and administrators should understand that continued improvement is necessary, specifically with increasing cultural competency, ensuring access to interpretive services, and increasing the number of bilingual providers in the state. Future data improvements may also help target language diversity gains in communities with the largest share of residents who speak languages other than English.

Overall, the state's health care provider workforce must make up ground in order to reflect the same levels of diversity as the population as a whole. Oregon has grown more diverse in the last decade and can expect to continue this trend in the coming years. In particular, addressing diversity shortfalls in communities with a larger-than-average share of Hispanic/Latino residents could require new efforts to increase access to the state's health care provider education and training programs. Incentives to future graduates to locate in areas with the greatest needs may also help. Because these gaps are more pronounced for some occupations than for others, efforts to increase the number of practitioners working in underserved areas should consider the racial, ethnic and language makeup of applicants (providers) and sites (clinics, hospitals, etc.) to best serve communities with the greatest needs.

Traditional health workers help connect consumers and health care practitioners

Oregon is one of a handful of states that certifies and registers traditional health workers of various types and allows these providers to be reimbursed for services delivered to Medicaid patients. Specifically, the state has identified community health workers, peer wellness and peer support specialists, personal health navigators, and doulas as providers who can be certified and registered as traditional health workers in Oregon. In order to qualify for Medicaid payment, THWs must operate under the supervision of other licensed health care providers such as physicians, certified nurse practitioners, physician assistants, psychologists, and licensed clinical social workers, therapists or professional counselors.

As of December 2017, there are 2,320 THWs are certified throughout Oregon. Peer support specialists account for approximately 70 percent of the THWs, while community health workers account for nearly a quarter of this workforce. Across the state there are eight personal health navigators, 48 doulas and 67 peer wellness specialists certified through the state's THW program. Ongoing upgrades to the systems housing data on these workers prevent analysis of geographic and demographic data on these workers. That data should be available for future versions of this report, however, which should help identify where THW capacity is strongest in Oregon and where additional resources are most needed.

Behavioral Health Collaborative addressing BH workforce issues

In 2016, the OHA brought together a diverse group of stakeholders to work as part of a Behavioral Health Collaborative (BHC) and develop a set of recommendations to take critical next steps to integrate behavioral health with the state's physical and oral health systems and to ensure that every Oregonian has access to the behavioral health services they need where and when they need them. The recommendations are designed to transform the state's fragmented behavioral health system into one that is integrated and able to provide better health and better care at a lower cost.

A key recommendation of the BHC is to conduct a needs-based analysis of the behavioral health workforce, including both licensed and unlicensed providers. In order to accomplish this task, the OHA is contracting with the Eugene S. Farley Jr. Health Policy Center at the University of Colorado's School of Medicine to complete the assessment.

This behavioral health workforce assessment will be published in mid-2018. It will be a useful resource for future versions of this needs assessment report to the Legislature.

Specifically, the behavioral health workforce assessment seeks to:

- Assess available behavioral health workforce data sources and make recommendations to improve future workforce data collection
- Identify the number, type and settings of providers that are currently providing behavioral health services for Medicaid members
- Quantify the unmet behavioral health needs through a regression analysis
- Stratify identified unmet needs by groupings in order to further understand the current deficits or disparate distribution
- Write a report on findings, including assessment of the behavioral health workforce that serves Medicaid members, the data sources and recommendations to address gaps in the behavioral health workforce
- Provide wage analyses of providers as data allow.

Conclusions and recommendations

There is insufficient primary care capacity across the spectrum.

- Despite real gains made around recruitment and retention in many parts of Oregon, there remain areas that lack primary care providers – including physicians, nurse practitioners and physician assistants – when viewed from any of the three lenses. This report recommends an approach to recruitment and retention where the goal is to increase capacity overall. However, this report recommends those areas with the greatest need, as identified by each lens in the report. This applies to primary medical care, oral health and behavioral health. The service areas in the lowest quartile of unmet need should be prioritized.

Our health care workforce continues to lack needed diversity in many areas.

- As Oregon’s population continues to grow more diverse, Oregon should continue to deploy incentives toward attracting and rewarding providers who speak languages other than English.
- This report recommends deploying resources from the Health Care Provider Incentive Fund to help to develop a workforce that approaches parity with the ethnic diversity of the patient population to be served. Program management and administration should work closely with advocacy groups to identify strategies to build a health care workforce pipeline with more health professionals of color and diversity metrics tracked over time.

Additional dental care capacity is needed in much of the state.

- Gaps in access to dental services were identified in each of the three lenses. However, a “deeper dive” into oral health is needed. Future versions of the needs assessment could focus additional analysis on the dental needs in communities across Oregon and how/whether new provider incentives are likely to be effective and useful for dental providers, using existing and future recruitment and retention models.

Behavioral health workforce needs are a growing focus.

- Like oral health, sharper analysis in this area is needed. To address this segment of the population, targets could be set for use of the loan repayment incentives from the Health Care Provider Incentive Fund to go specifically for behavioral health providers, including those working toward licensure.

Data to determine both workforce supply and demand are improving, but further improvements are needed.

- Oregon is fortunate in the level of data and information available to help policymakers and program administrators evaluate the workforce needs of Oregon’s communities and residents. However, the robust data we have currently still cannot capture a complete and accurate perspective of the capacity of local health care systems to meet the needs of resident, the gaps that exist, and how best to fill those gaps in the short and long run. This is partially due to the limits of existing survey questions from licensing boards to providers and the dearth of historical data from several boards. The addition of new licensing boards participating in the Health Care Workforce Data Reporting Program, along with OHA’s work with the Farley Center should give us better information on behavioral health capacity in future years, particularly around behavioral health. We would like to see the Workforce Committee tackle this issue over the coming year with licensing boards and OHA analytics to ensure we have the data we need to assess the workforce capacity most accurately.

Taking the next steps: Using the needs assessment to inform the operation of new health care provider incentive program and to identify workforce gaps not historically targeted by state or federal incentives

The needs assessment identified in HB 3261 is designed in part to inform the Oregon Health Care Provider Incentive Program, including how funds are allocated across the state and to what provider types receive funds. In order to accomplish this, the needs assessment seeks to illuminate the current gaps in the state's health care workforce from an occupational, geographical and demographic standpoint. In addition, the needs assessment also seeks to provide information necessary to evaluate the effectiveness of past incentive programs and to inform future programmatic changes that could improve their effectiveness.

For instance, the needs assessment should help program administrators and policymakers identify health care workforce gaps in occupations that have not traditionally been eligible for (or targeted by) the state's provider incentives. One key consideration moving forward is whether provider incentives could be targeted in the future at professions not historically eligible for financial incentives in Oregon, or whether separate efforts should be explored to address those gaps.

In some cases, the needs assessment may help identify additional provider types that could be made eligible for the incentives identified in HB 3261, which include loan repayment, loan forgiveness, scholarships and subsidies as well as tax credits. In other cases, future needs assessments could help identify workforce needs in occupations that would be best addressed by new types of incentives, such as support for additional training opportunities for occupation types that do not require advanced degrees.

Historically, funding from Oregon's provider incentive programs have been largely directed to primary care practitioners (including physicians, nurse practitioners and physician assistants) and have been intended to help offset all or a portion of the relatively high costs practitioners face to complete their training. Practitioners have been able to qualify for loan repayment, for instance, in exchange for committing to practice in an underserved area for several years. Future practitioners have received scholarships while still in school. In the short term, we don't expect this situation to change. However, there may be other, more effective opportunities to grow and influence the health care workforce supply in certain areas of the state.

Addressing potential shortages in other occupation categories may require the creation of additional offerings. For instance, job categories that do not require the same type of schooling and debt may be less amenable to loan repayment programs that require recipients to make a multi-year commitment to a community. Short-term stipends, scholarships to training programs or other tools could be more useful for other occupations. Future versions of the needs assessment should look more closely at occupation categories not currently served by incentive programs but for which there are workforce gaps that can be addressed, and could include recommendations as to how incentives should be structured to close the gaps.

Specific areas for additional analysis include:

- Determining whether Oregon’s current education and training programs are producing enough providers and whether additional education and training opportunities are needed to close current and/or future workforce gaps.
- Examining gaps in health care occupations not historically eligible for state or federal incentives and whether new state efforts are warranted.
- Identifying opportunities to engage in new collaboration with communities to better identify local workforce needs and help leverage other funding sources targeted toward local economic development, such as federal Workforce Investment Act (WIA) funds, community “seed money” and foundation dollars.
- This report recommends convening stakeholders as early as March 2018 to help expand the models used in this report and provide a more in-depth analysis of service categories and populations. Additional considerations may be made regarding not only the service providers, but best practices for providers to employ to optimize health outcomes for patients.



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