

Oregon's Health Care Workforce Reporting Program

Analytic Methods

The Health Care Workforce Reporting Program was created in 2009 with the passage of HB 2009, which required the Oregon Health Authority to collaborate with seven health profession licensing boards to collect health care workforce data via their licensing renewal process. In 2015, SB 230 added ten additional health licensing boards to the program.

These data are collected to:

- ◇ Understand Oregon's health care workforce;
 - ◇ Inform public and private educational and workforce investments; and
 - ◇ Provide data to inform policy recommendations for state agencies and the Legislative Assembly regarding Oregon's health care workforce.
-

Methods & Sources

All licensees must be licensed by a state health licensing board and renew their license according to each board's licensing cycle (See Table 1). At the time of license renewal, licensees complete the Health Care Workforce Survey. Data in these dashboards and reports were collected during license renewals in late 2017 through the first month of 2020. The Oregon Medical Board administers the workforce survey using their own data system; all the other health professions' data were collected through a common format workforce survey that licensees must complete as part of their renewal process.

Annual data sets include all providers that are licensed by each board in January of each year. Data collected include provider demographics, education and languages spoken other than English, practice locations, number of hours worked and future practice plans at each location, and specialty information. For selected occupations (medical professions, naturopathic physicians, chiropractic physicians, dentists, nurse practitioners, counselors and therapists, social workers and psychologists) data regarding whether Medicaid is accepted was also collected.

To see an example workforce survey, visit: <https://bit.ly/2wZen26>

Data were analyzed and tabulated with SAS 9.4; graphics were produced in Excel and Tableau. Charts in these reports explore the relative distribution of selected measures for the subset of licensees who completed the Health Care Workforce Survey and reported a primary or secondary work location in Oregon. Missing data is not included, however, data in charts may not sum to 100 due to rounding.

Comparisons across time

Due to the addition of data from three licensing boards, data presented at the statewide level should not be compared with earlier reports. Data from most specific occupations may be compared. However, due to changes in methodology, estimate comparisons between years for occupations licensed by the Oregon Medical Board should be interpreted with caution.

When considering trends over time for occupations that renew on biennial periodic cycles (pharmacy, occupational therapy, physical therapy, and speech-language pathology and audiology occupations), it is important to recognize the impact of their renewal cycles on annual trends. For these boards, most licensees that leave the workforce (i.e. their license becomes inactive) due so at the time of renewal, leading to drops in number of licensees at timepoints following the renewal period.

Table 1. Participating boards, licensed professions, and renewal cycle information

Licensing board & occupation	Renewal period	Renewal cycle	Data included in this report
Board of Chiropractic Examiners			
Chiropractic physicians, Chiropractic assistants	Ongoing	1-yr	Nov 1, 2018 - Jan 13, 2020
Board of Licensed Professional Counselors and Therapists			
Licensed professional counselors and therapists	Ongoing	1-yr	Dec 1, 2018 - Jan 13, 2020
Board of Dentistry¹			
Dentists	Jan - Mar	2-yr	Jan 1, 2018 - Jan 13, 2020
Registered dental hygienists	Jul - Sep	2-yr	Jul 1, 2018 - Jan 13, 2020
Board of Licensed Dietitians			
Licensed dietitians	Ongoing	1-yr	Jul 1, 2018 - Jan 13, 2020
Medical Board²			
Physicians, Podiatrists, Physician assistants	Oct - Dec (odd yrs)	2-yr	Oct 1, 2019 - Mar 31, 2020
Acupuncturists	Apr - Jun (even yrs)	2-yr	Apr 1, 2018 - Jun 30, 2018
Board of Naturopathic Medicine			
Naturopathic physician	Nov - Dec	1-yr	Nov 1, 2019 - Jan 31, 2020
State Board of Nursing³			
Nurse practitioners, Certified registered nurse anesthetists, Registered nurses, Licensed practical nurses, Certified nursing assistants	Ongoing	2-yr	Nov 1, 2017 - Jan 13, 2020
Occupational Therapy Licensing Board			
Occupational therapists, Occupational therapy assistants	Mar - May (even yrs)	2-yr	Jan 1, 2018 - Jan 13, 2020
Board of Pharmacy			
Pharmacists	Apr - Jun (odd yrs)	2-yr	Nov 1, 2017 - Jan 17, 2020
Certified pharmacy technicians	Apr - Jun (even yrs)	2-yr	Nov 1, 2017 - Jan 17, 2020
Physical Therapy Licensing Board			
Physical therapists, Physical therapist assistants	Jan - Mar (Even yrs)	2-yr	Jan 1, 2018 - Jan 13, 2020
Board of Psychology			
Psychologists	Ongoing	2-yr	Dec 1, 2018 - Jan 13, 2020
Respiratory Therapist and Polysomnographic Technologist Licensing Board			
Respiratory therapists, Polysomnographic technologists	Ongoing	1-yr	Jul 1, 2018 - Jan 13, 2020
Board of Licensed Social Workers			
Licensed clinical social workers, Clinical social worker associates, Non-clinical social workers	Ongoing	2-yr	Dec 1, 2017 - Jan 13, 2020
Board of Examiners For Speech-Language Pathology and Audiology			
Audiologists, Speech-language pathologists, Speech-language pathologist assistants	Nov - Dec (Odd yrs)	2-yr	Sep 1, 2018 - Jan 31, 2020
Board of Optometry⁴			
Optometrists	Ongoing	1-yr	Dec 1, 2018 - Jan 13, 2020
State Board of Massage Therapists³			
Licensed massage therapists	Ongoing	2-yr	Nov 1, 2017 - Jan 13, 2020
Board of Medical Imaging¹			
Radiographers, radiation therapists, sonographers	Ongoing	2-yr	Dec 1, 2017 - Jan 13, 2020

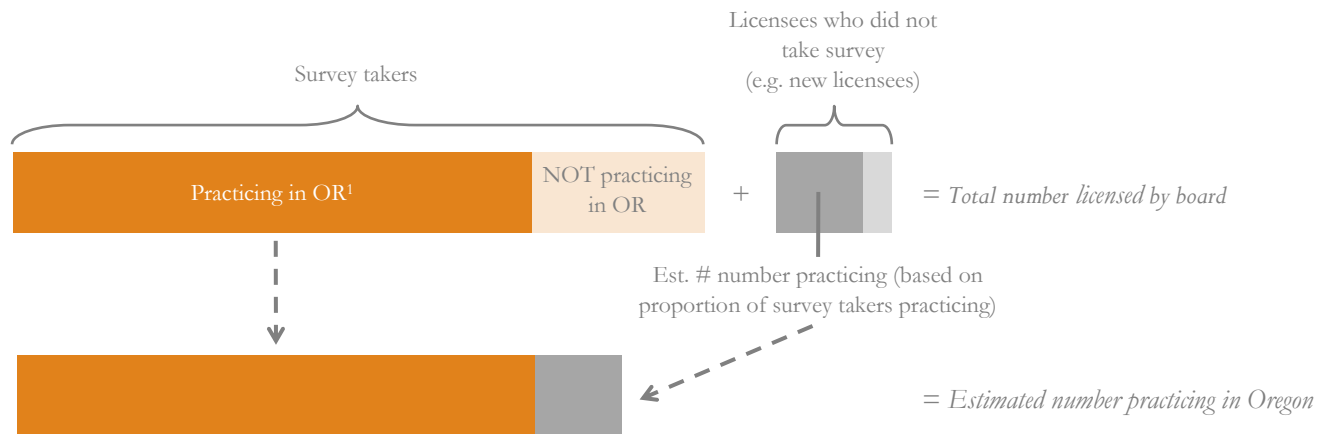
¹Those licensed in even-numbered years renew in even-numbered years and those licensed in odd-numbered years renew in odd-numbered years.

² Workforce data are collected by the Oregon Medical Board with their own application.

³Those born in even-numbered years must renew by their birthday in even-numbered years and those born in odd-numbered years must renew by their birthday in odd-numbered years.

⁴Must renew license by first day of birth month.

Figure 1. Estimation of number practicing schematic



Estimated Number Practicing in Oregon

The number of providers licensed in the state is obtained directly from each of the licensing boards. Not all licensees who hold an active license in Oregon are actively working in the field in Oregon. Further, not all active licensees complete the workforce survey (e.g. new licensees). The estimate of all licensees (new and renewing) working in the state is derived from the percent of survey respondents who are actively practicing in the state.¹ Specifically:

Active practice rate = % survey takers who are active in OR (of those with known work location and practice status)

*Number practicing in OR (Estimated) = Total # licensed in OR * Active practice rate*

This estimation assumes that practice rates for those who do not complete the workforce survey (e.g. new licensees) is the same as those who have completed the survey.

FTE estimation

Not all licensees who work in Oregon work full time and not all licensees spend time in direct patient care. In addition to the estimated number of providers in the state, these reports also look at the total number of FTEs in direct patient care.

At the licensee level, Direct Patient Care FTE is calculated based on total hours worked and on time spent in direct patient care (capped at 80 hours). For dentists only, direct patient care FTE was weighted based on the number of auxiliaries reported (e.g., chairside assistants, hygienists, etc.) and age, according to HRSA Procedures for Shortage Designation.

At the statewide level, the total FTEs in direct patient care are estimated as follows:

*Direct patient care FTE (estimated) = # practicing in OR (estimated) * Average Patient Care FTE for occupation*

Where the average Direct Patient Care FTE for each occupation are calculated from the health care workforce survey data.

¹Practicing in Oregon means licensees who 1) identified their employment status as 'employed in the field', 'self-employed in the field', 'volunteer', or 'other'; and 2) reported a primary practice location in Oregon. Secondary practice locations were not included, and may increase the available number of providers.

Population-to-provider ratio

State maps display the population-to-provider ratio (or conversely, the provider-to-population ratio) based on the estimated number of direct patient care FTEs who are practicing in the county.

$$\text{County patient care FTE (estimated)} = \text{Direct patient care FTE (estimated statewide)} * \% \text{ observed direct patient care FTE in county}$$

Statewide and county population estimates come from the Portland State University Population Research Center (<https://www.pdx.edu/prc/population-reports-estimates>).

Race & ethnicity

Race and ethnicity population data comes from five-year ACS estimates (data collected over 60-month period, 2013–2017). These estimates are not as current as the one-year estimates, but the primary advantage of using multiyear estimates is the data's availability and increased statistical reliability for less populated areas and small population subgroups.

All race/ethnicity categories in the workforce data were coded as mutually exclusive to match the American Community Survey (ACS) race/ethnicity categories and allow comparisons. When a licensee selected Hispanic as his or her ethnicity, the licensee was coded as being Hispanic. If there were other races selected along with Hispanic ethnicity, such as “Black” or “Asian,” the licensee was only counted in the Hispanic category and not in the other categories.

Of the 6,309 licensees coded as Hispanic/Latino, approximately 62.8 percent identified with at least one racial category (White: 53.2%; Multiracial: 4.8%; American Indian/Alaska Native: 2.5%, Black/AA: 1.0%; Asian: 0.7%; Native Hawaiian/Pacific Islander: 0.6%). The remaining 37.2 percent chose “Other” (18.4%), or declined to report a race (18.9%). When a licensee selected a non-Hispanic ethnicity and more than one race, the licensee was coded as “Multiracial” and was not included in the specific race categories. When a licensee selected “Other” as race and no other race was selected, the licensee was coded as “Other.”

Beginning in 2022, more detailed racial and ethnic data will be collected according to REAL-D standards.

Gender

Beginning in 2019, an option to self-describe gender identity was added to the surveys. Due to differing renewal cycles, full reporting in this category will not be available until 2021.

Language

Regarding languages, ACS coded 381 different languages nationwide. Standard tables separate out 39 languages and the four main language groups used here: Spanish, other Indo-European languages (most languages of Europe and the Indic languages of India, as well as Iranian languages), Asian and Pacific Island languages (among them Chinese, Korean, Japanese, Vietnamese, Hmong, Khmer, Lao, Thai, Tagalog and others) and all other languages (such as Uralic languages, languages of Africa, Native American languages, and more). Health professionals reporting speaking more than one language may be counted in more than one language group.

Specialty groups

Specialty groups included in the reports are defined as:

- Primary care professionals are physicians and physician assistants who specialize in family practice, general practice, geriatric medicine, pediatrics, adolescent medicine, internal medicine, or obstetrics and gynecology; nurse practitioners who specialize in family practice, geriatrics, pediatrics, internal medicine, or OB/GYN/women's health; and naturopathic physicians who specialize in family medicine, pediatrics, geriatrics or obstetrics.
- Behavioral health professionals are all psychologists, counselors and therapists, licensed clinical social workers, and clinical social work associates; physicians and physician assistants who specialize in psychiatry (addiction, neurology, child, adolescent, geriatric, or forensic) or psychoanalysis; nurse practitioners who specialize in psychiatry/mental health; and naturopathic physicians who specialize in mental health.
- Oral health professionals are dentists who specialize in oral health, pediatric dentistry or public health; and expanded practice dental hygienists who specialize in oral health, pediatric dentistry or public health and who report holding an expanded practice permit.
- Maternal child health professionals are physicians and physician assistants who specialize in obstetrics and gynecology, neonatology/perinatal or maternal and fetal medicine. Also included are primary care physicians and physician assistants who answer a subsequent question saying they provide maternal child health in their practice (important for rural communities where primary care physicians provide the bulk of maternity care); nurse practitioners who specialize in maternal-child health, OB/GYN/women's health; and naturopathic physicians who specialize in obstetrics.
- Pediatric and geriatric care professionals are subgroups of primary care professionals and include nurse practitioners and naturopathic physicians who specialize in pediatrics or geriatrics respectively, as well as physicians and physicians assistants who report any of the primary care specialties in addition to acknowledging in subsequent questions that they provide pediatric or geriatric services.

Specialty groups are not mutually exclusive, so some professionals are included in more than one.

For questions about this report, contact:

Health Care Workforce Reporting Program
Research and Data
Oregon Health Authority
Wkfc.admin@dhsosha.state.or.us
971-283-8792

For more information, visit:

<https://www.oregon.gov/oha/hpa/analytics/Pages/Health-Care-Workforce-Reporting.aspx>

Sources:

- Population Research Center. Population estimates and reports: certified population estimates, July of each year [Internet]. Portland, OR: Portland State University; 2016-2019 [cited 2020 February 25]. Available from: <https://www.pdx.edu/prc/population-reports-estimates>
- U.S. Census Bureau. American Community Survey Demographic and Housing Estimates: 2016 & 2018: ACS 5-Year Estimates Data Profiles (Table ID DP05, geography of Oregon). Washington, DC: U.S. Census Bureau; 2019 [cited 2020 February 25]. Available from <https://data.census.gov/cedsci/table?q=United%20States&tid=ACSDP1Y2018.DP05/searchresults.xhtml?refresh=t#acsST>

Suggested Citation:

Oregon Health Authority. (2020). *Oregon's health care workforce reporting program: Analytic methods*. Portland, OR: Oregon Health Authority.