

Presentation for the Joint Task Force on Hospital Discharge Challenges March 28th, 2024

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OLDC Senior Research and Data Analyst

 **OLDC** OREGON LONGITUDINAL
DATA COLLABORATIVE



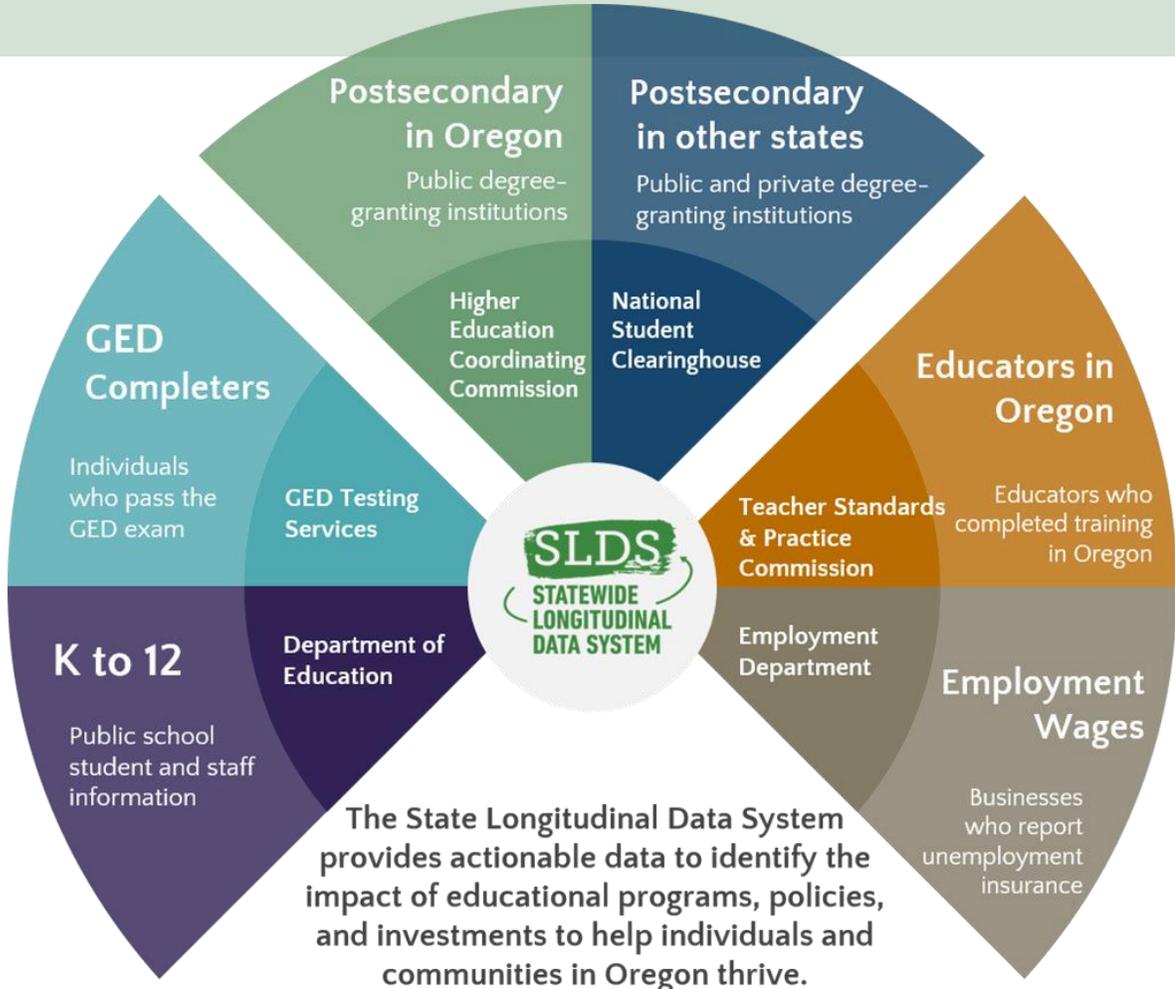
Postsecondary Healthcare Education Shortage in Oregon

Jesse Helligso, Ph.D., M.A.

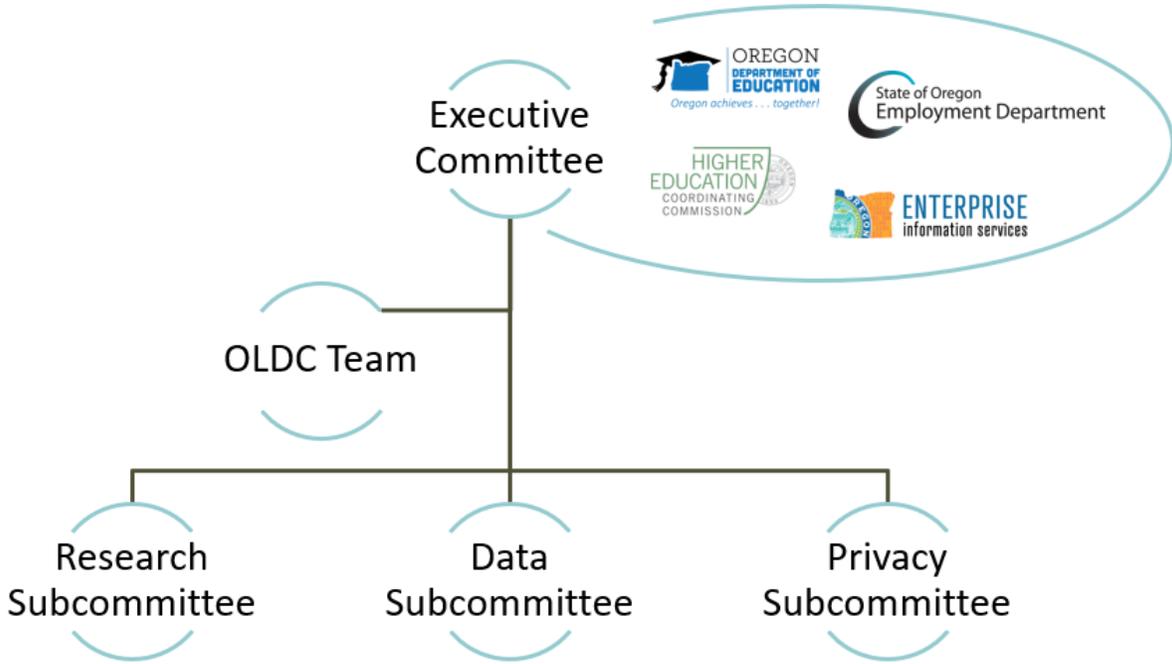
Addressing Oregon's Nursing Shortage Through Expansion of
Postsecondary Opportunities for Students

Publish date tbd

OVERVIEW OF THE **OLDC** OREGON LONGITUDINAL DATA COLLABORATIVE



OLDC Governance Structure



The OLDC is administratively housed within the HECC

STUDY LINKS

Addressing
the nursing
shortage in
Oregon:

removing barriers
in nursing
education

Publish date tbd

SUMMARY

Findings and Recommendations
from the Oregon Healthcare Ed
Shortage Study

<https://www.oregon.gov/highered/research/P>

 OREGON LONGITUDINAL
DATA COLLABORATIVE



Postsecondary Healthcare Education Shortage in Oregon

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Addressing Oregon's Nursing Shortage Through Expansion of
Postsecondary Opportunities for Students

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- Summary of Findings and Recommendations:
https://www.oregon.gov/highered/research/Documents/SL_DS/SUMMARY-Oregon-Healthcare-Education-Shortage-Study-Findings-and-Recommendations.pdf
- Full Report:
https://www.oregon.gov/highered/research/Documents/SL_DS/STUDY-PostsecondaryHealthcareEducationShortageInOregonFinal.pdf

Important Notes for Analysis



We can measure how well Oregon compares to other states and national benchmarks: However, if every state has a shortage we can only say, “ours is worse or better than the shortage in other states.”



US healthcare relies on the free market to set supply and demand for care. Markets *require* scarcity in supply for profits to exist.



The “unmet demand” for healthcare in the United States is not measurable when relying on only US data: Every state may have a shortage of Dentists, or Nurses, or Therapists, etc. International comparative data is necessary to measure “unmet demand”:

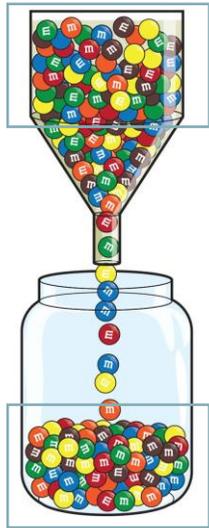
<https://stars.library.ucf.edu/etd/6177/>

STUDY HYPOTHESES

The problem.

Hypothesis 1: There is a shortage of healthcare workers in Oregon.

Hypothesis 2: There is a surplus of qualified student applicants looking to attain a degree in the healthcare field.



The causes.

Hypothesis 3: There is a bottleneck within postsecondary healthcare education limiting the production of healthcare degrees.



The recommendations.

Purpose 1: Discover the causes of the postsecondary education bottleneck that are contributing to the shortage of healthcare workers in Oregon.

Purpose 2: provide actionable recommendations to expand access to programs for prospective students and to reduce the healthcare worker shortage in Oregon.



KEY FINDINGS AND RECOMMENDATIONS

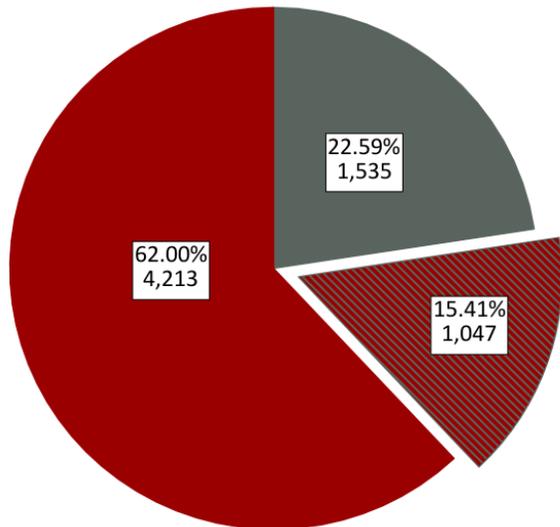
The problem.

Oregon produces the *fewest* nursing graduates per capita in the US from our public institutions.

Oregon has a **surplus of *qualified* student nursing applicants.**

Annual Qualified Nursing Applications

- Qualified Applicants with an Available Seat
- Shortage of Nurses Needed to Meet Annual Demand
- Surplus of Qualified Applications



The causes.

1. Salary disparity. In Oregon, graduate level nursing faculty salaries are not competitive with graduate level nurses working in the healthcare setting. Faculty salaries need an increase of roughly \$6,000 annually to be competitive enough to attract faculty to meet demand. (not salary parity with nurses in the healthcare setting)

Oregon's salary disparity is one of the largest in the nation.

This salary difference causes a statistically significant reduction to program capacity based on the analysis of national data.

Difficult to attract and retain faculty. Over 1/3rd of Oregon's nursing programs have multiyear faculty vacancies.

Two of our 21 programs lost faculty in 2022 and were forced to apply for a reduction in their programs for the Fall.

2. Clinical placement limitations. Each college must compete to place students in clinical placements, which have been further limited during the pandemic.

The recommendations.

§ The Higher Education Coordinating Commission to lead a workgroup of interested parties to reduce this salary disparity.

✳ The Oregon State Board of Nursing to lead a workgroup of interested parties to form a statewide centralized clinical placement system.

STUDY DATA SOURCES

Oregon-specific data

- ✓ Statewide Longitudinal Data System (SLDS)
- ✓ Oregon State Board of Nursing (OSBN)
- ✓ Oregon Employment Department (OED)
- ✓ Oregon Health Authority (OHA)

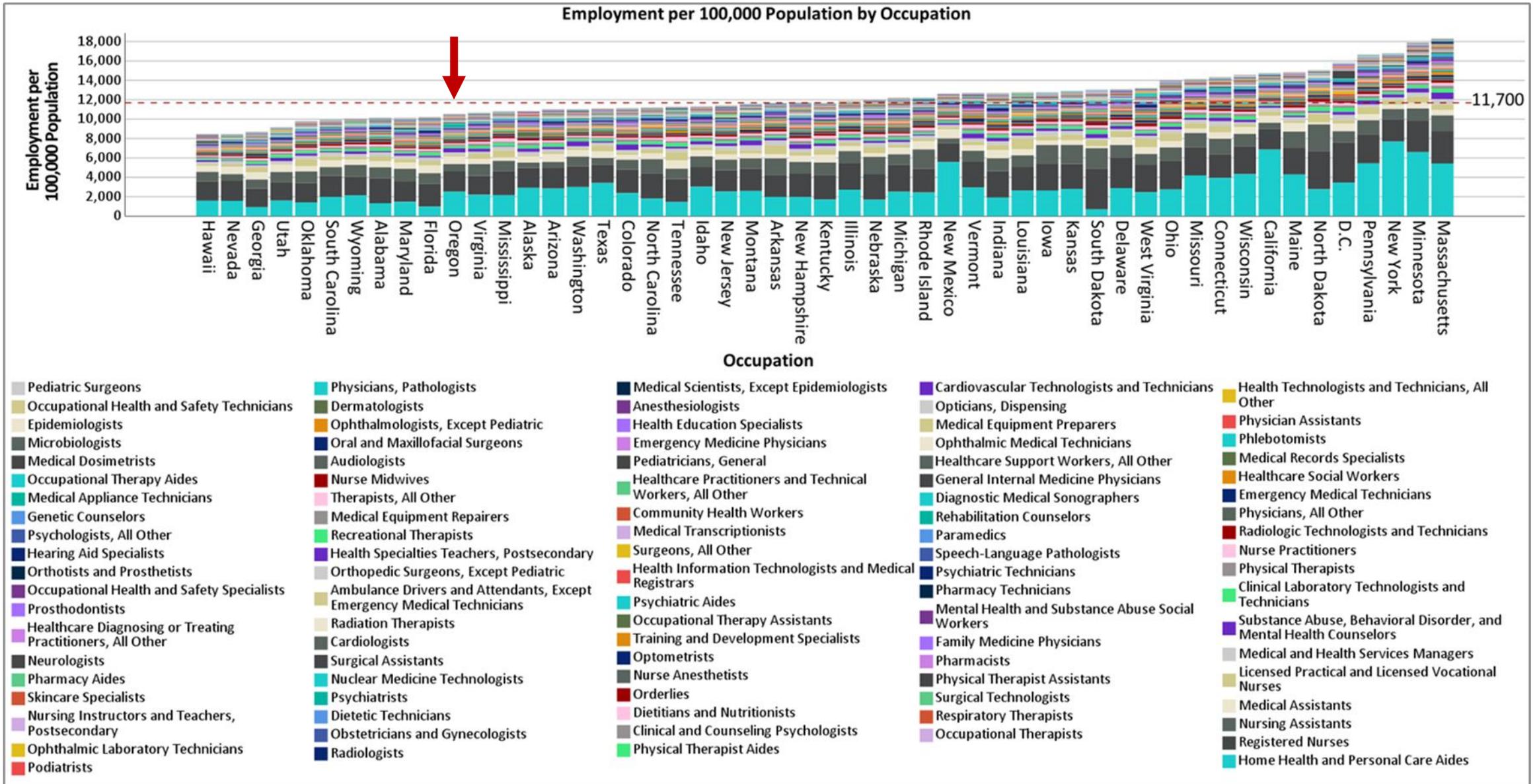
National data

- ✓ Integrated Postsecondary Education Data System (IPEDS)
- ✓ U.S. Bureau of Labor Statistics (BLS)
- ✓ U.S. Bureau of Economic Analysis (BEA)
- ✓ U.S. Census Bureau

NATIONAL TRENDS IN HEALTHCARE EMPLOYMENT AND POSTSECONDARY HEALTHCARE EDUCATION



Total healthcare employment by state (All Healthcare Occupations)



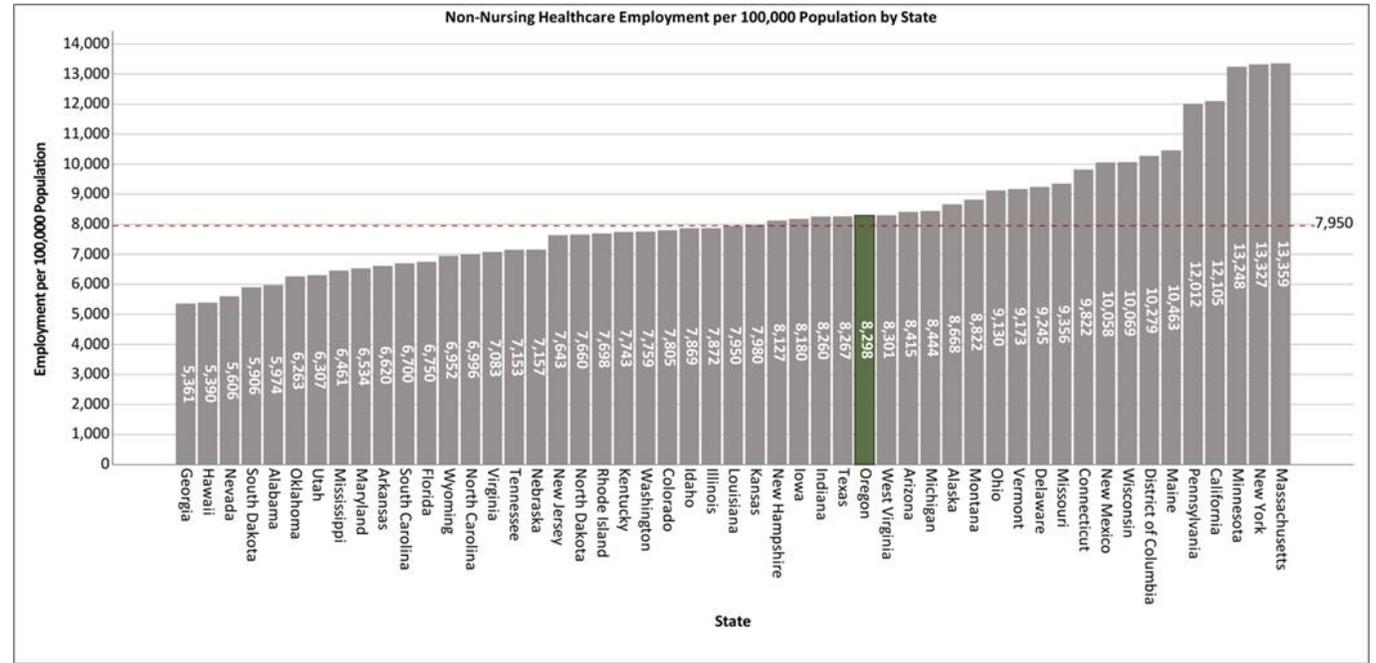
HEALTHCARE EMPLOYMENT PER CAPITA

Data from the Bureau of Labor statistics (2021) was collected for comparison of healthcare employment across states.

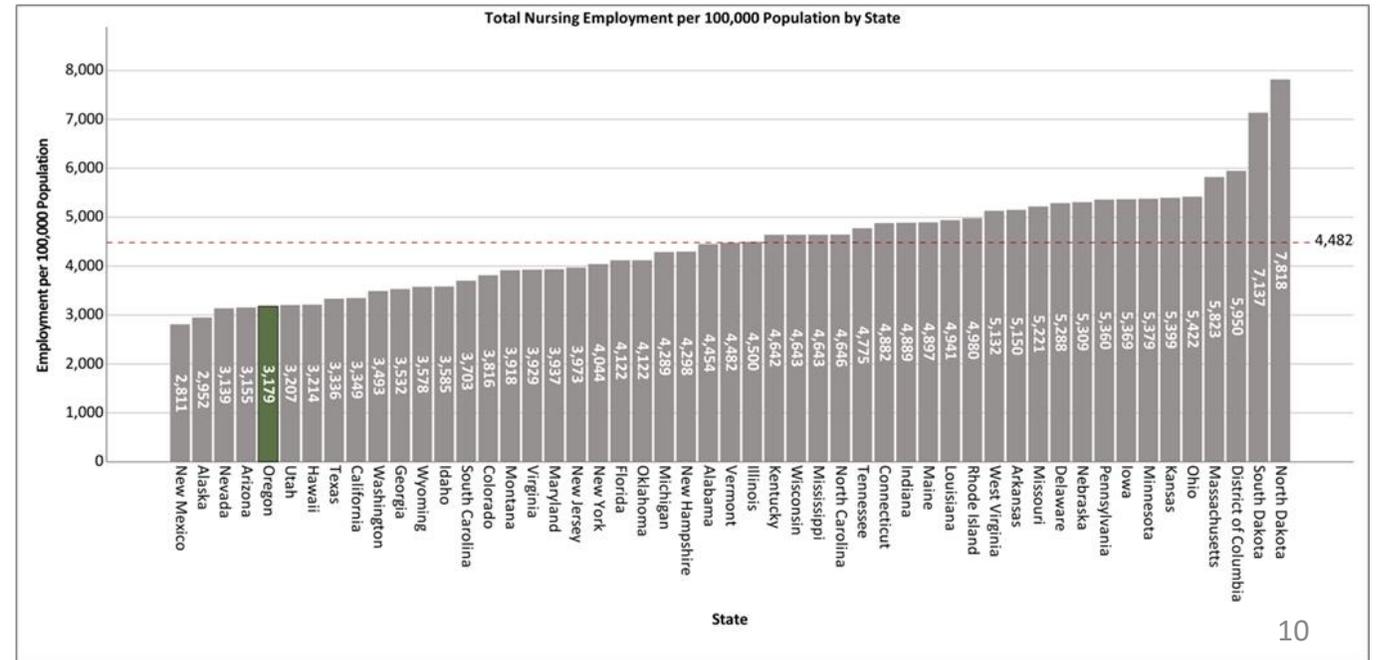
Data from the Integrated Postsecondary Education Data System (2020) was collected for comparison of graduate counts across states, and to supplement data missing from the SLDS from private colleges and universities.

Data from these two datasets was then combined for analysis of graduates per healthcare employment.

Oregon's primary area of deficit in healthcare employment is in the area of nursing.

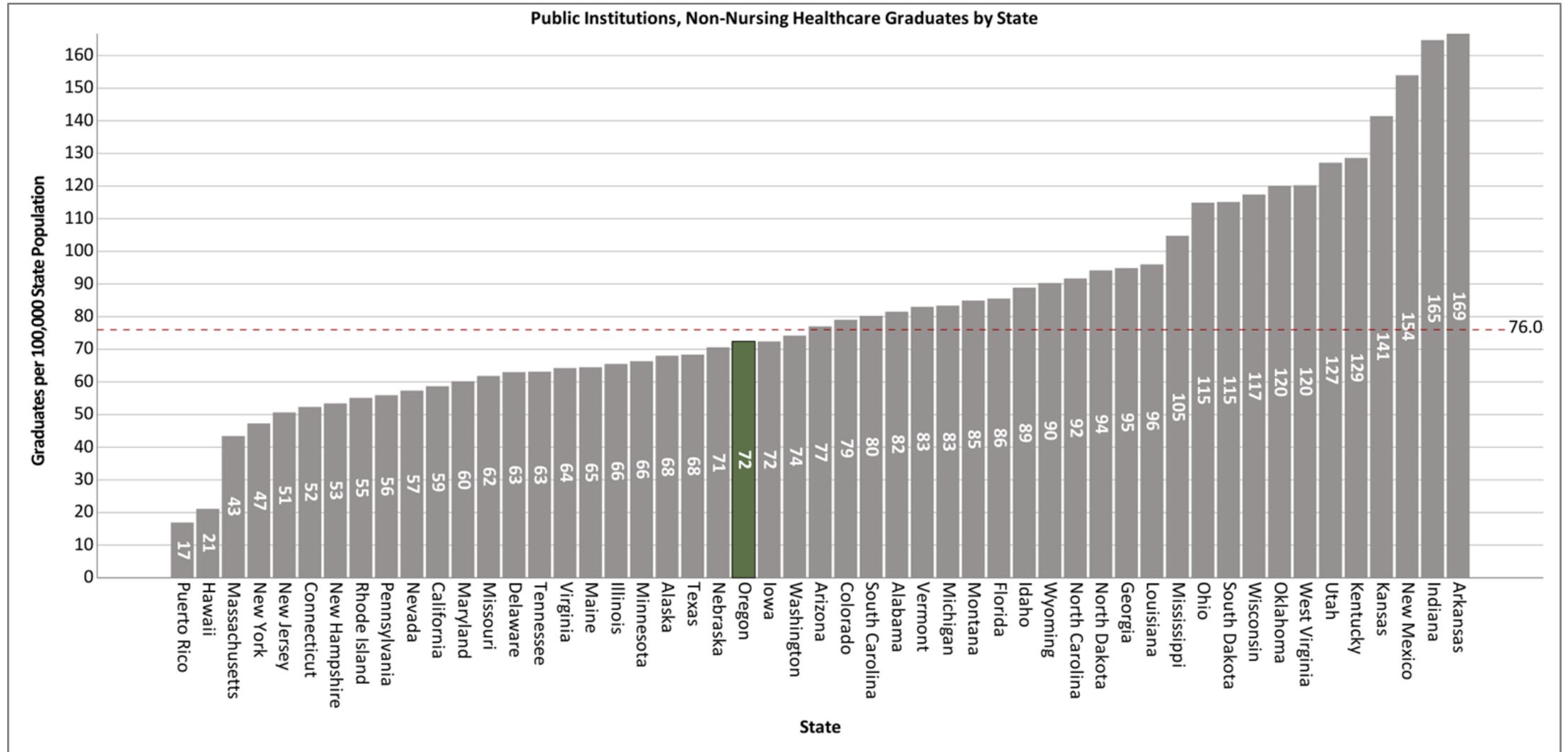


BLS 2021



BLS 2021

Non-Nursing Healthcare Graduates per Capita

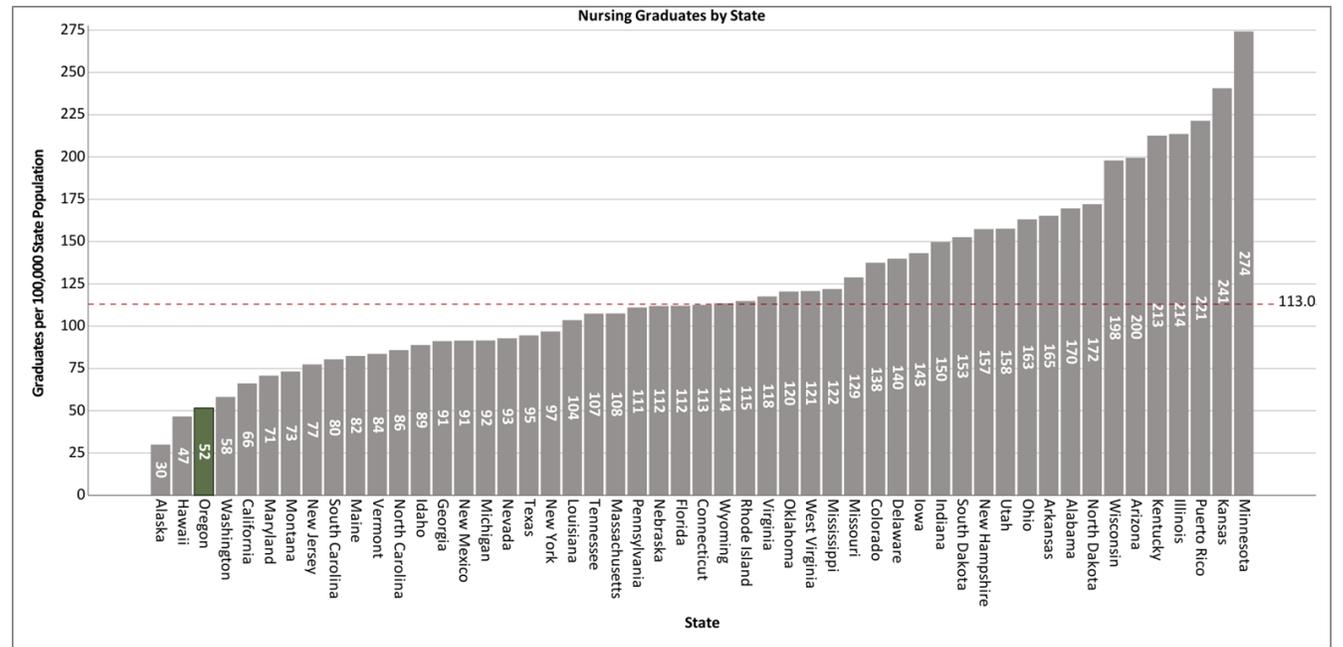


PER CAPITA NURSING GRADUATES

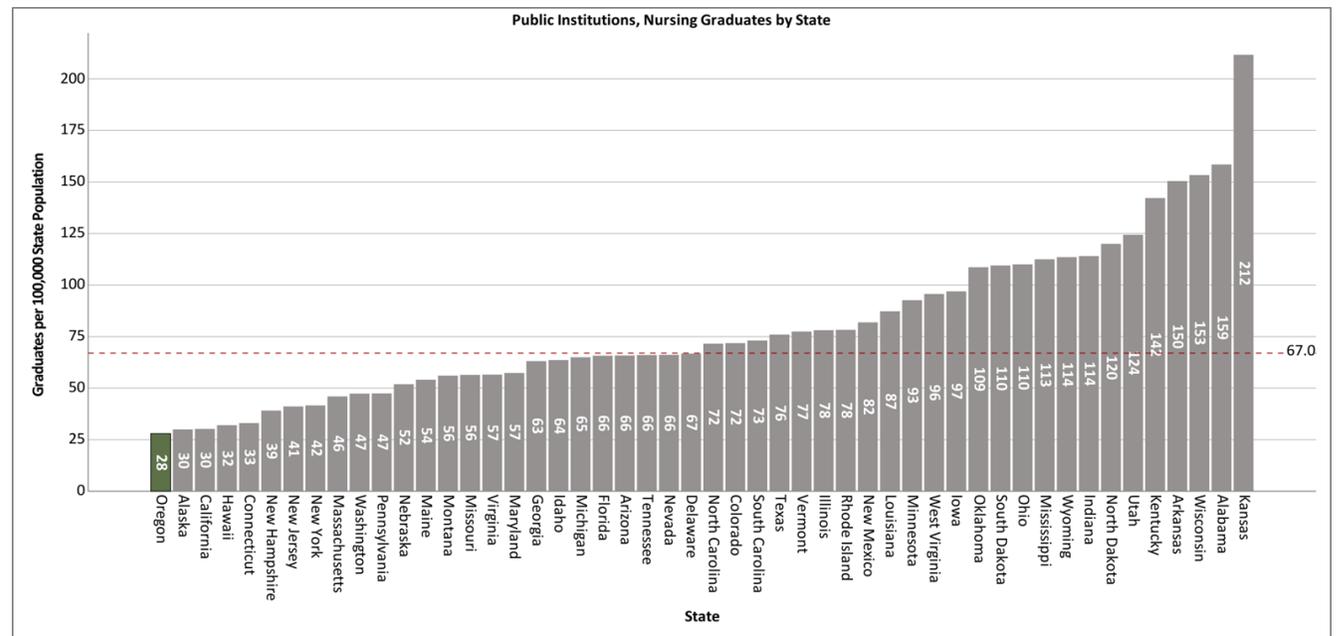
Oregon's primary area of deficit in healthcare graduates per capita is in nursing, compared to national medians.

Oregon produces the 3rd fewest nursing graduates per capita in the United States.

Oregon produces the fewest nursing graduates per capita from public institutions in the United States



IPEDS 2020



IPEDS 2020

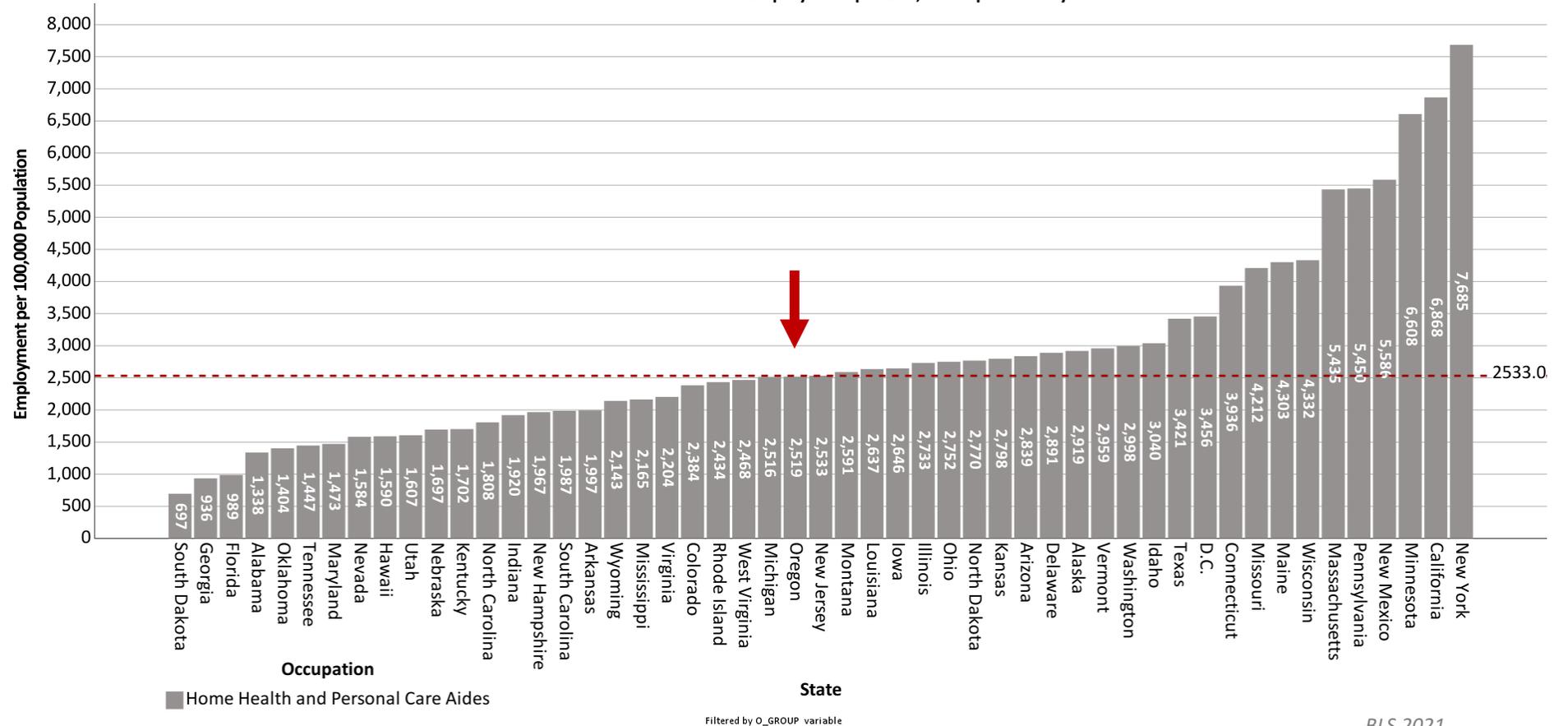
Home Health and Personal Care Aides

Shortage from median = **14** per 100,000 population

Under Oregon Law, most of these are C.N.A.'s and R.N.'s

ORS 443.065
General requirements for home health agencies

Home Health and Personal Care Aides Employment per 100,000 Population by State

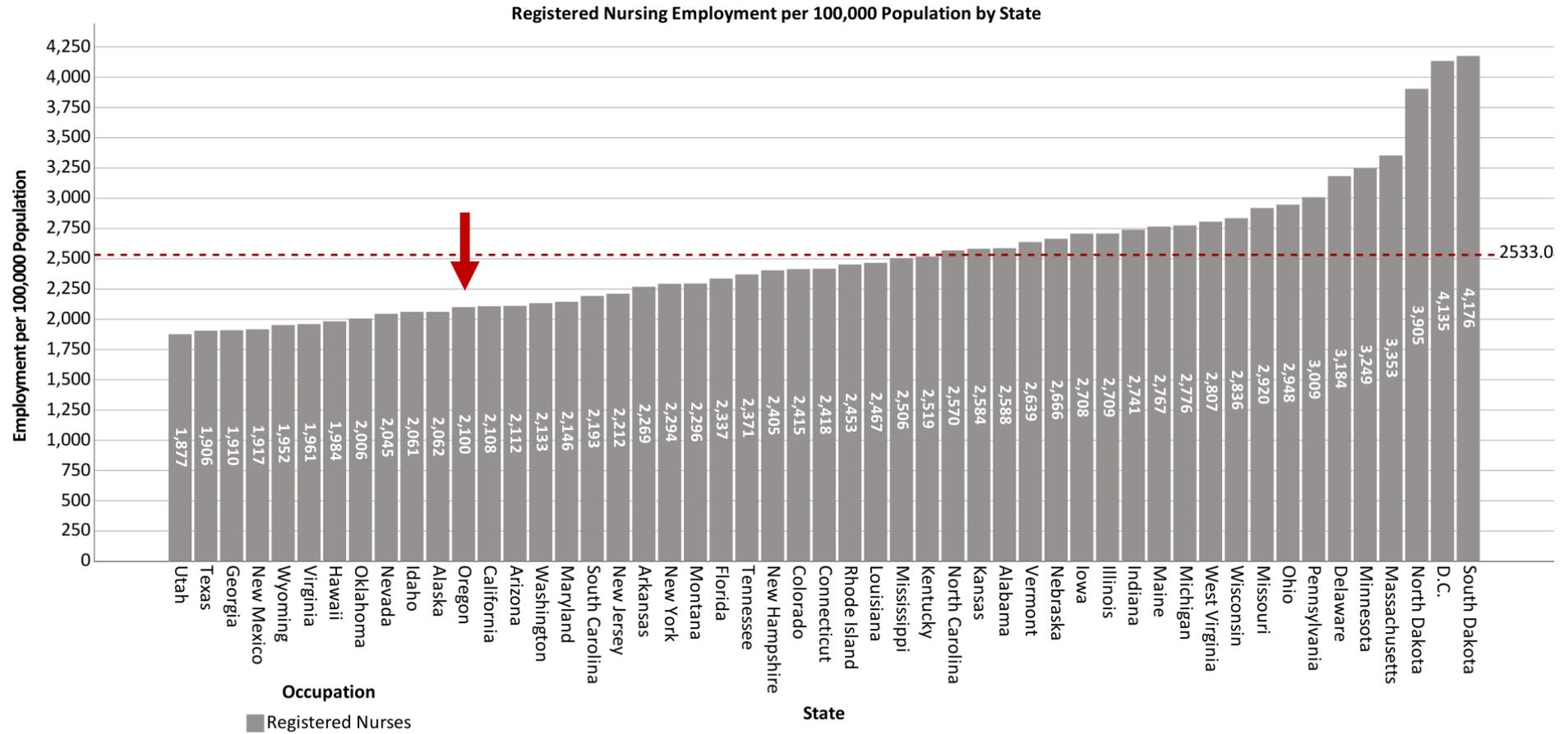


BLS 2021

Registered Nurses

Shortage from median = **433** per 100,000 population

This is a 2-year degree for associate level and 4-year for bachelor's level



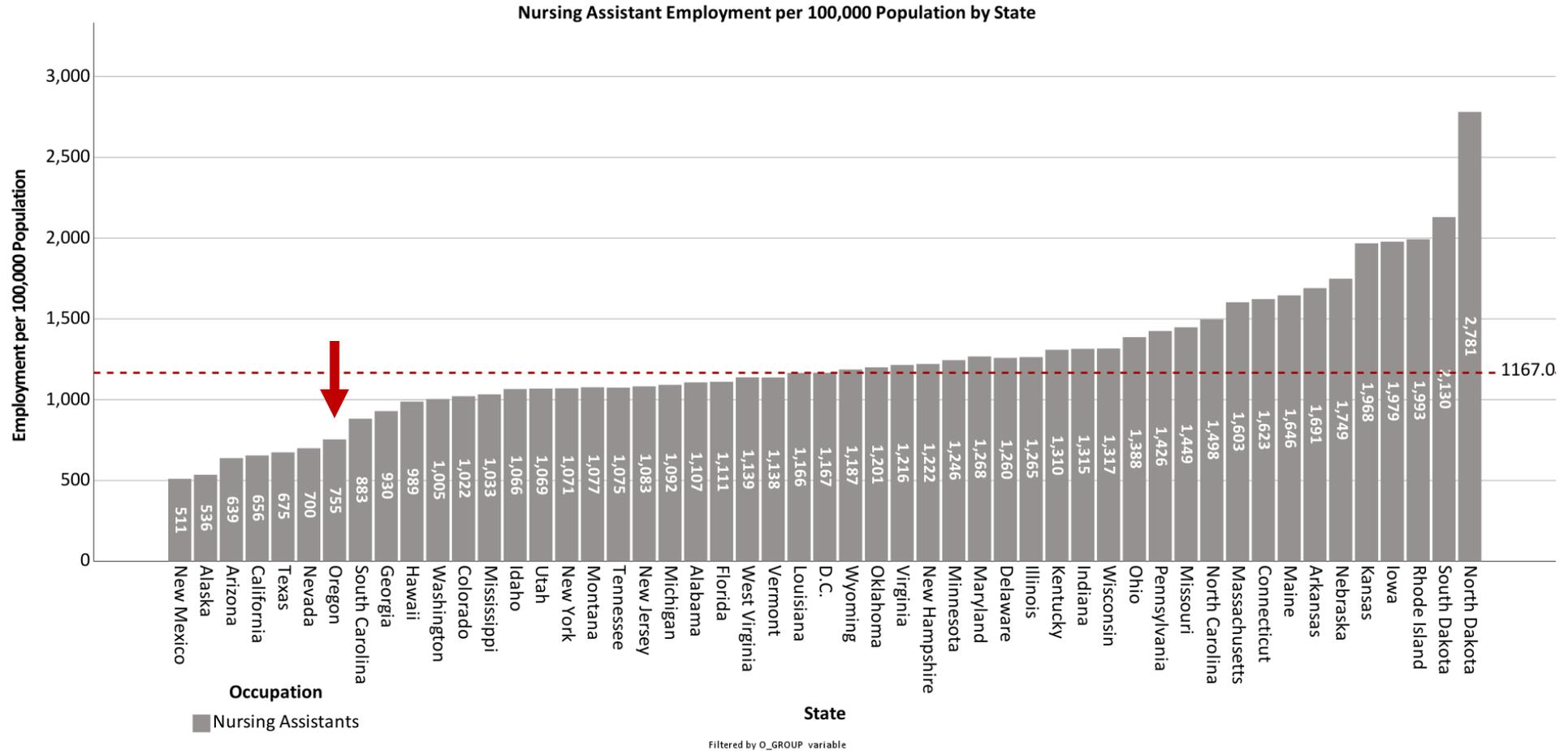
Filtered by O_GROUP variable

BLS 2021

Certified Nursing Assistants

Shortage from median = **412** per 100,000 population

This is a 6 to 8 week certification program for CNA level 1.

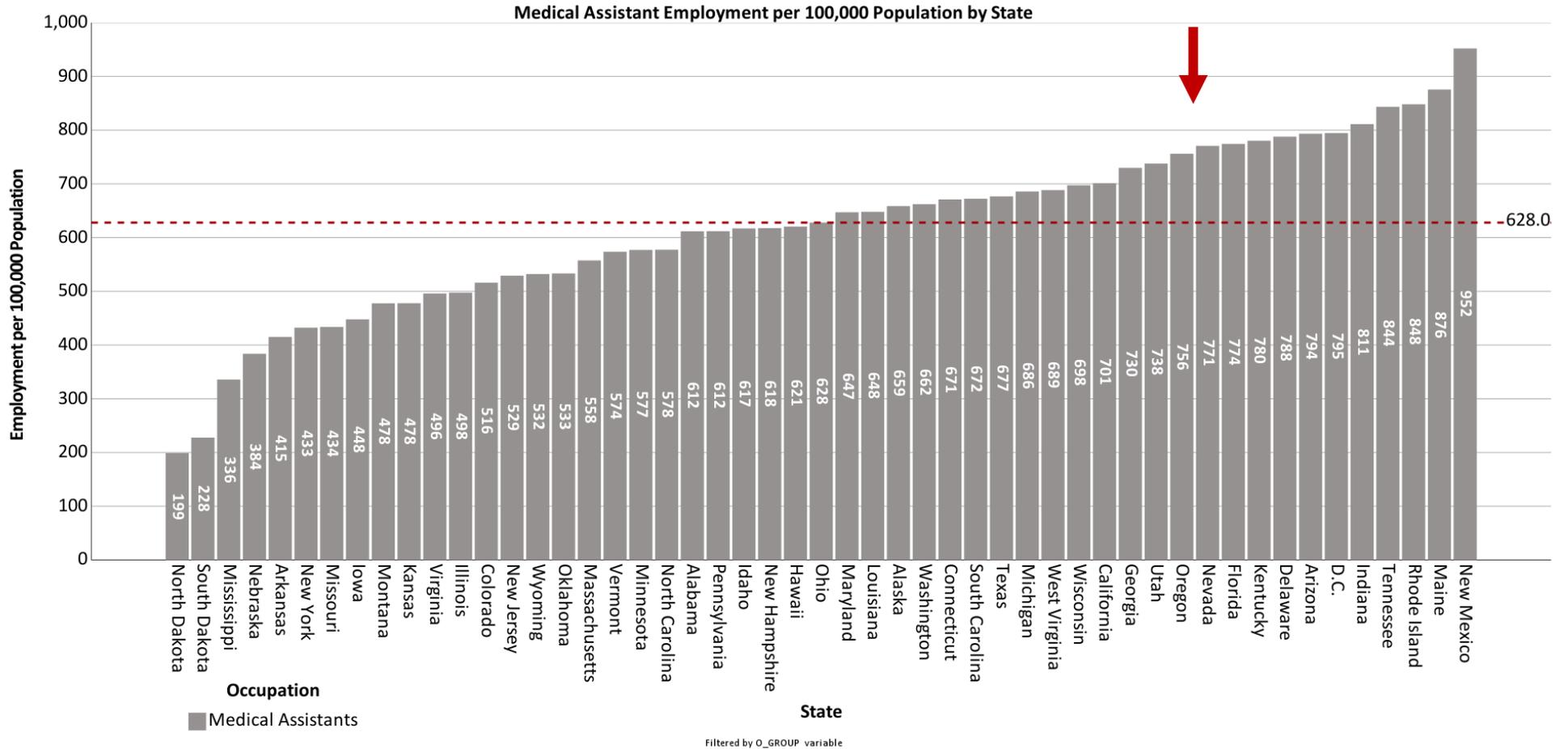


BLS 2021

Medical Assistants

Shortage from median = **0** per 100,000 population

This is a 2-year medical degree

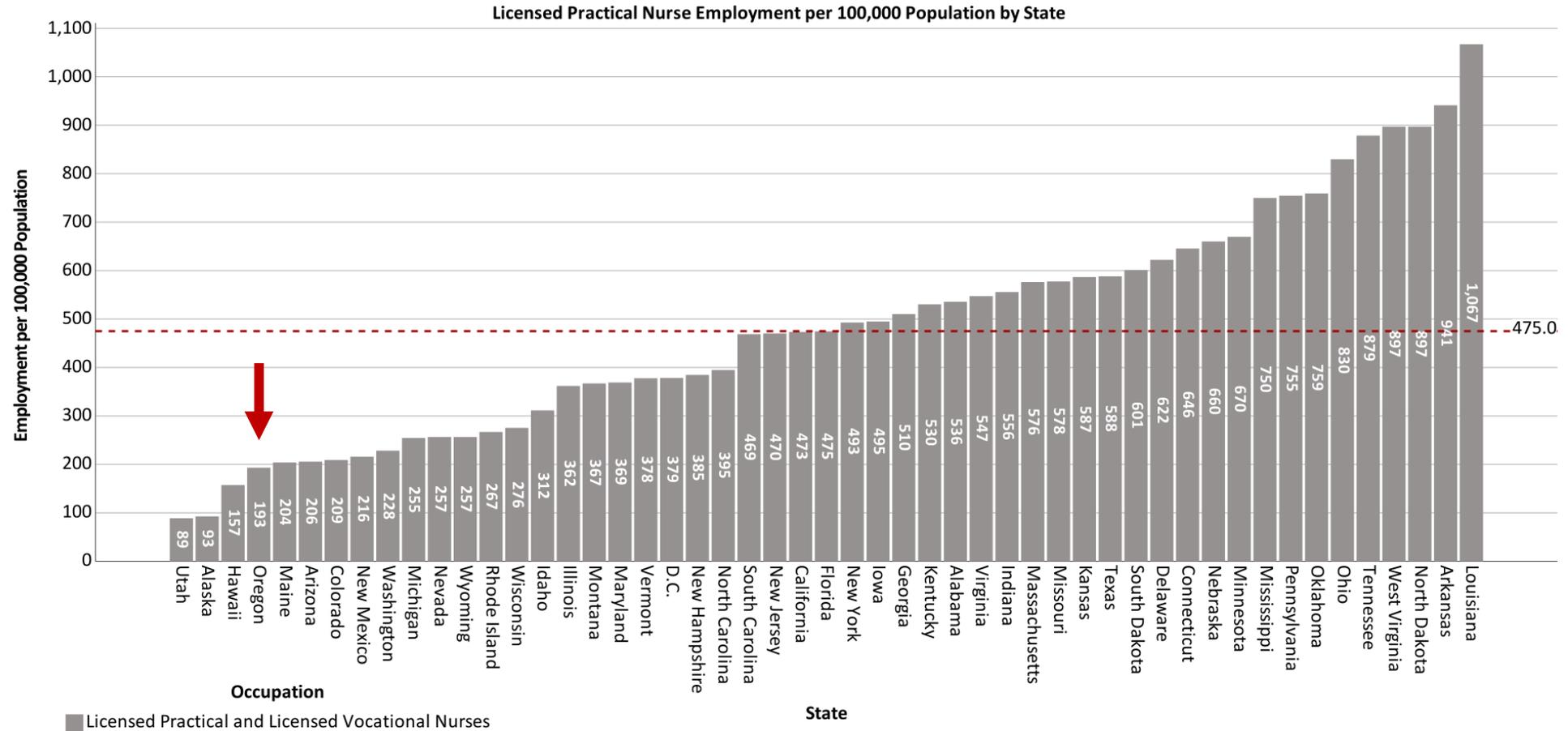


BLS 2021

Licensed Practical Nurses

Shortage from median = **282** per 100,000 population

This is a 1-year nursing license program.

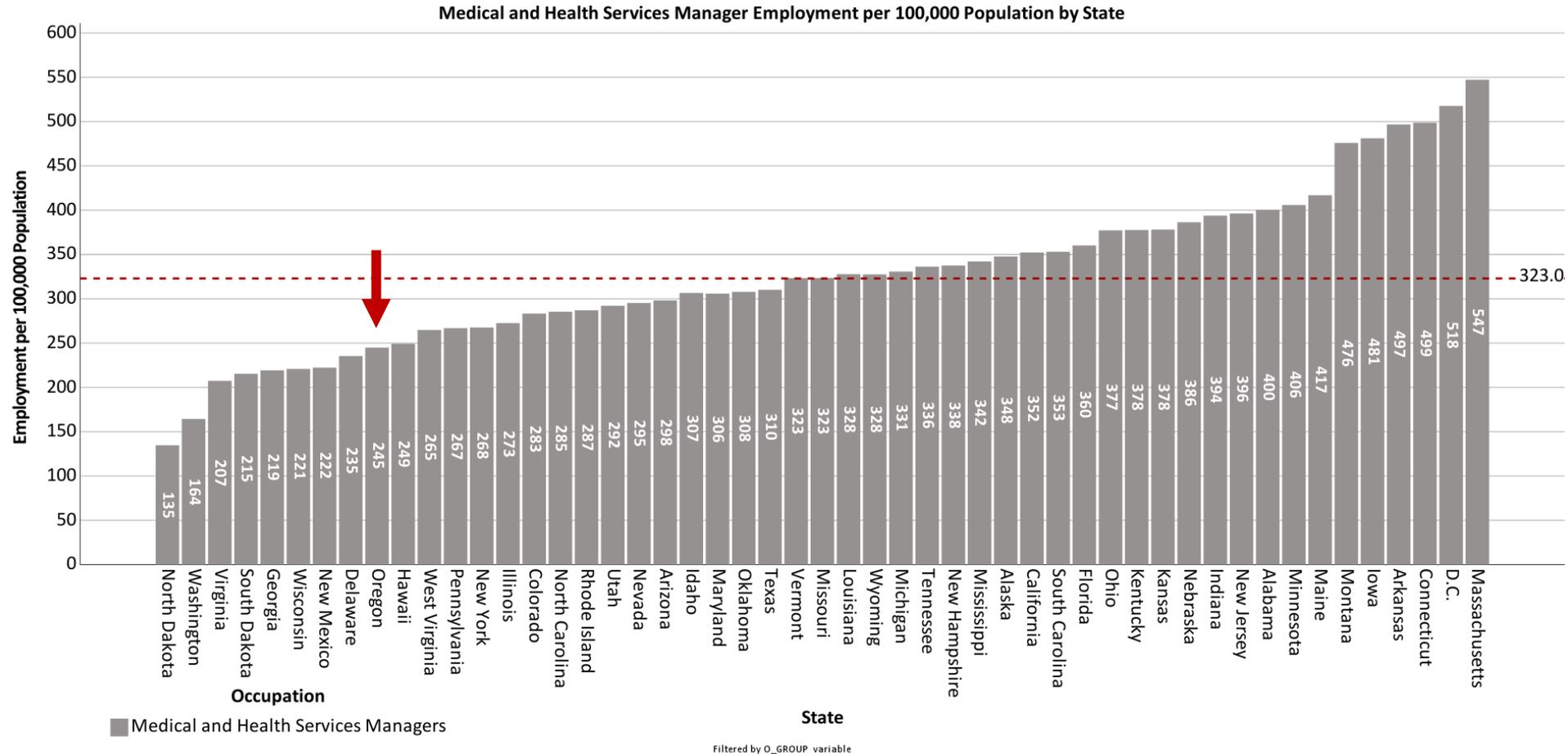


BLS 2021

Medical and Health Services Managers

Shortage from median = **78** per 100,000 population

These are often R.N.'s in supervisory positions. Most employers require a B.S.N. or higher level nursing degree.

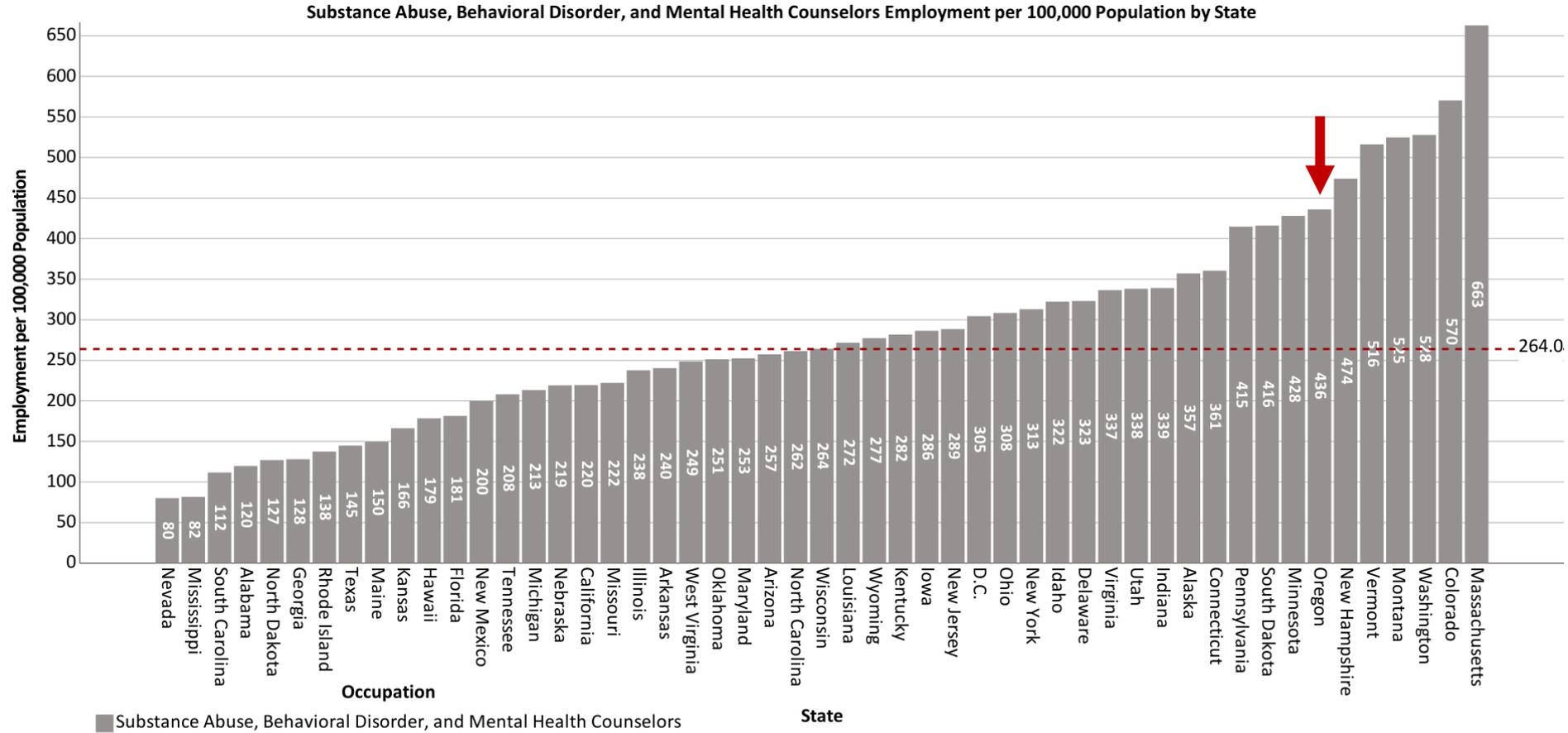


BLS 2021

Substance Abuse, and Mental Health Counselors

Shortage from median = **0** per 100,000 population

These can be Master level nurses, but are more often in the psychology field.

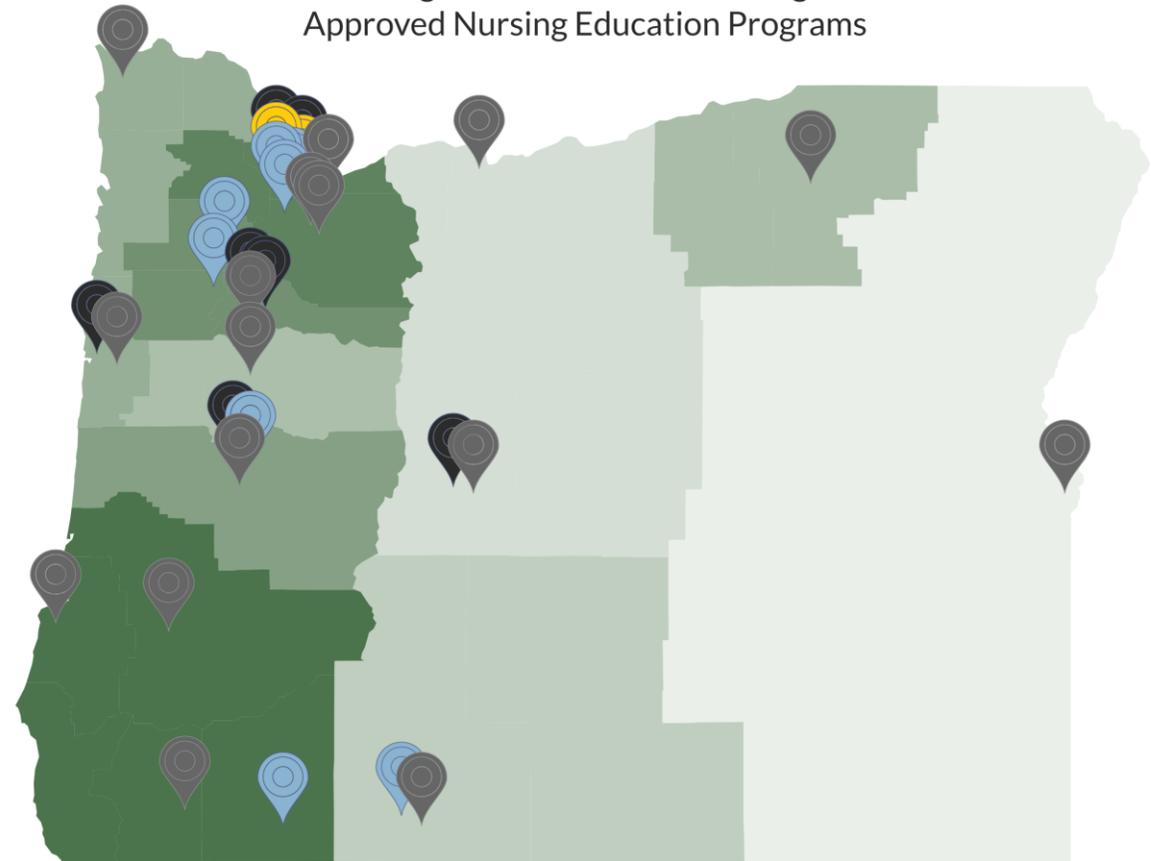


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REGIONAL SUPPLY AND DEMAND FOR REGISTERED NURSES IN OREGON

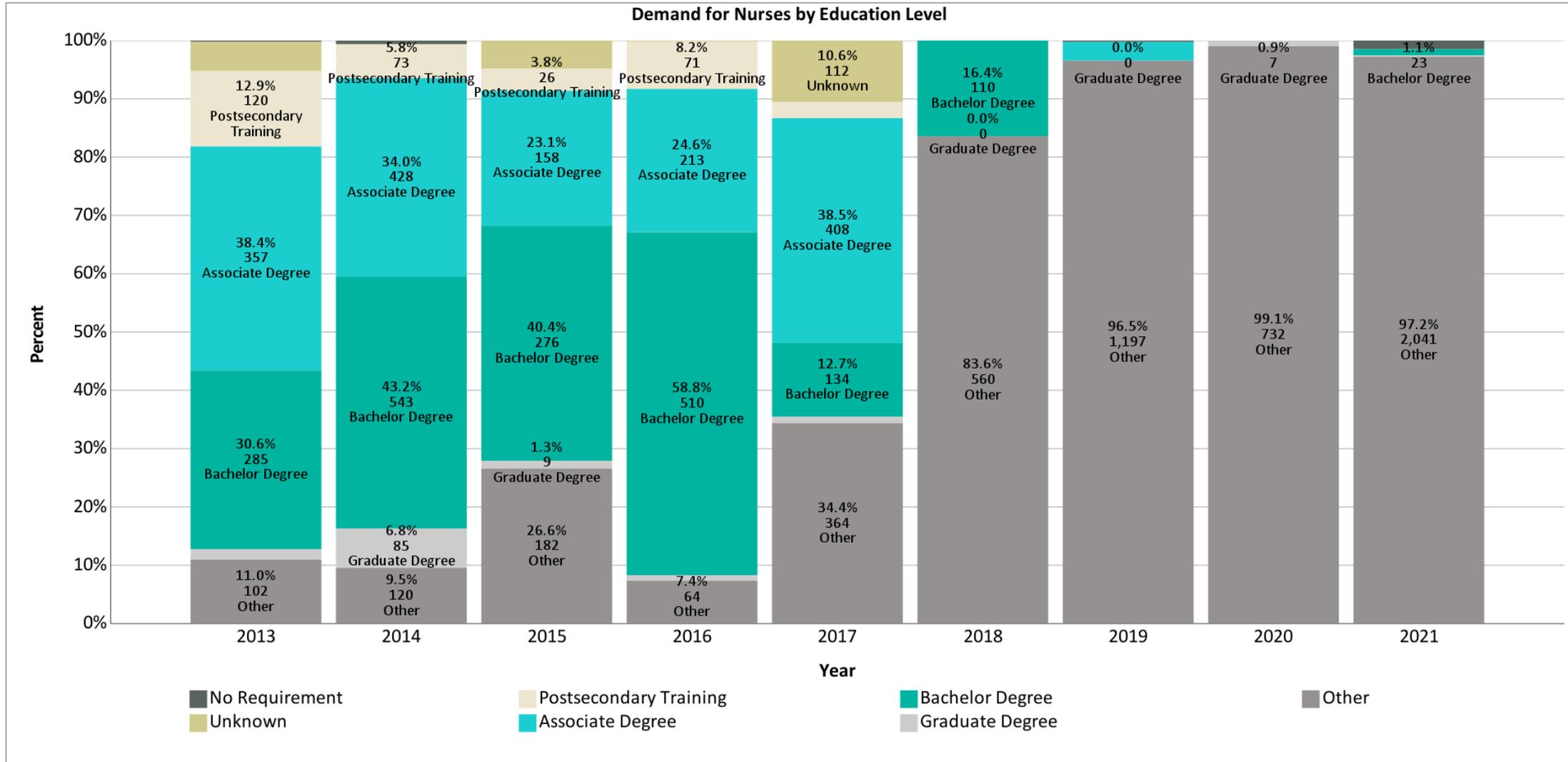


Oregon State Board of Nursing
Approved Nursing Education Programs



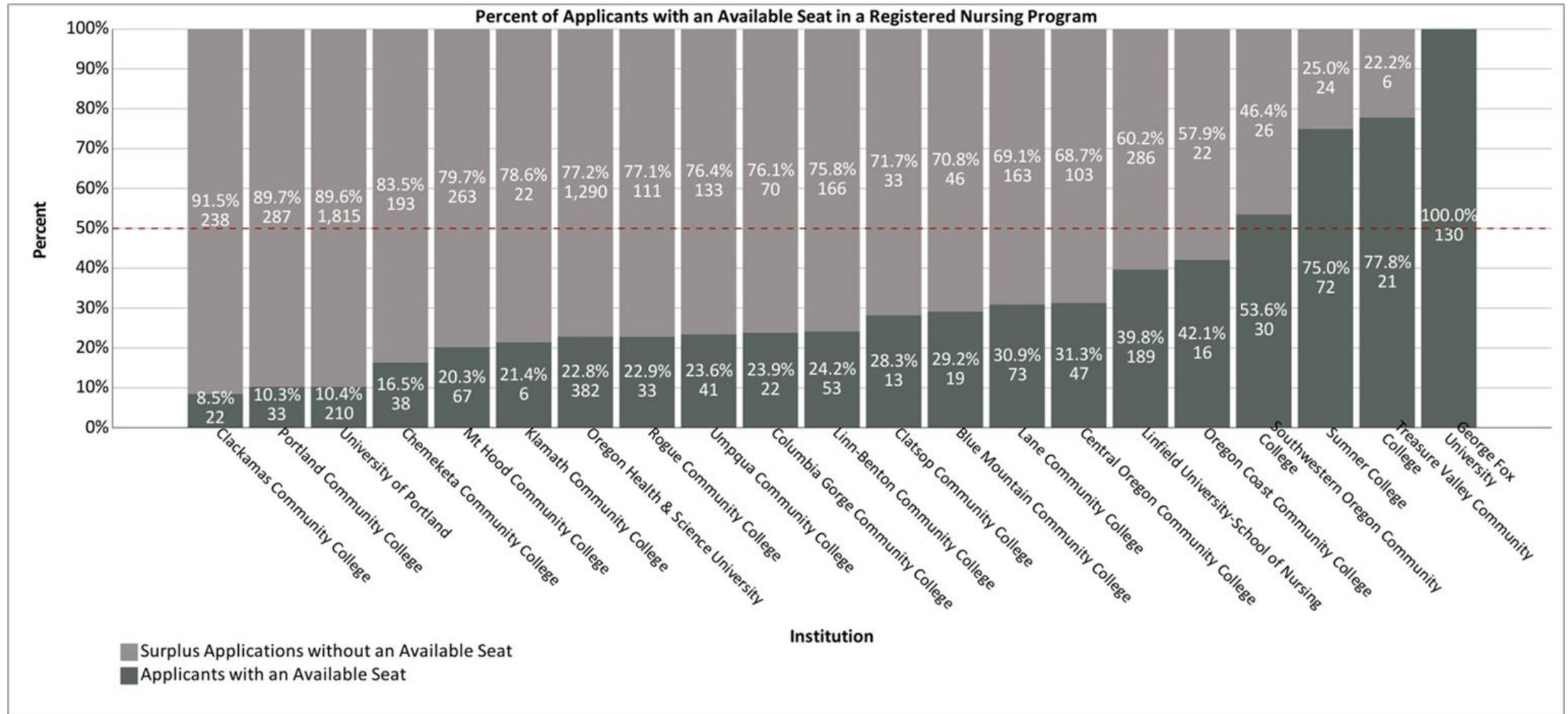
-  Oregon approved Practical Nursing Programs
-  Oregon approved Registered Nurse Baccalaureate Degree Programs
-  Oregon approved Registered Nurse Associate Degree Programs
-  Oregon Approved Graduate Programs

OREGON'S DEMAND FOR NURSING DEGREES BY AWARD LEVEL



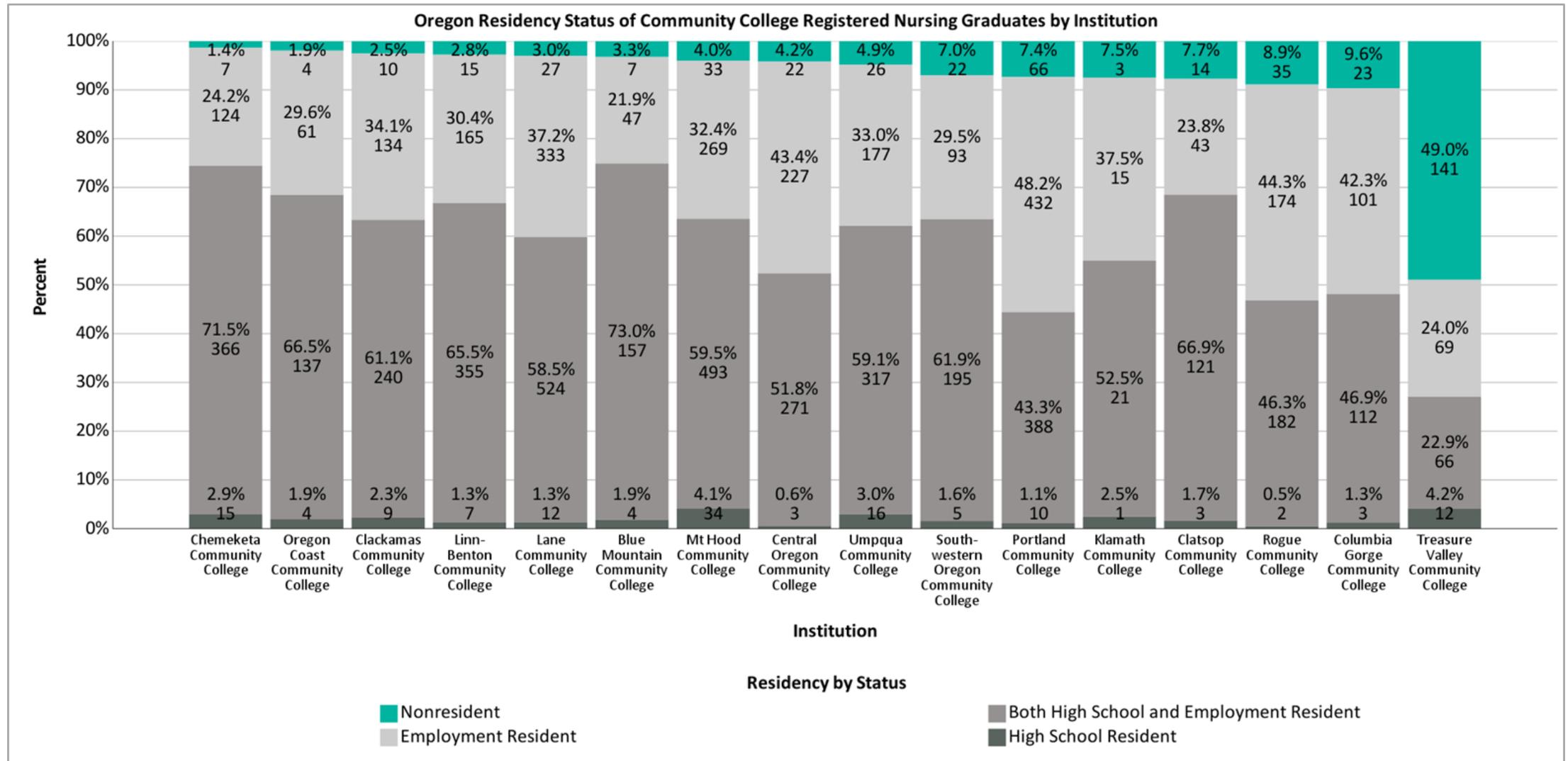
Nelson, OED annual job vacancy survey 2013-2021

OREGON'S SUPPLY OF QUALIFIED PROSPECTIVE STUDENTS

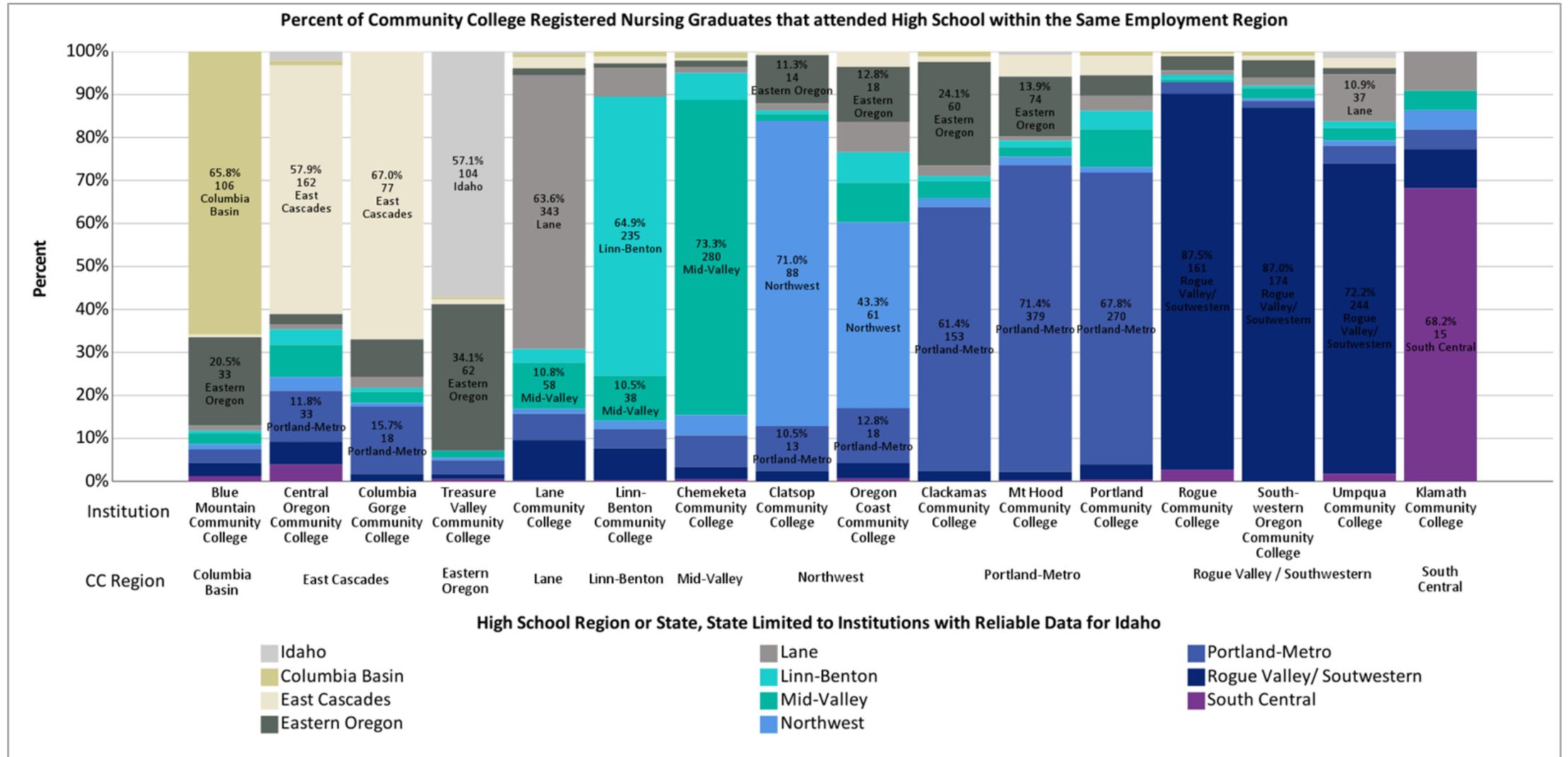


IPEDS 2020, OSBN 2021

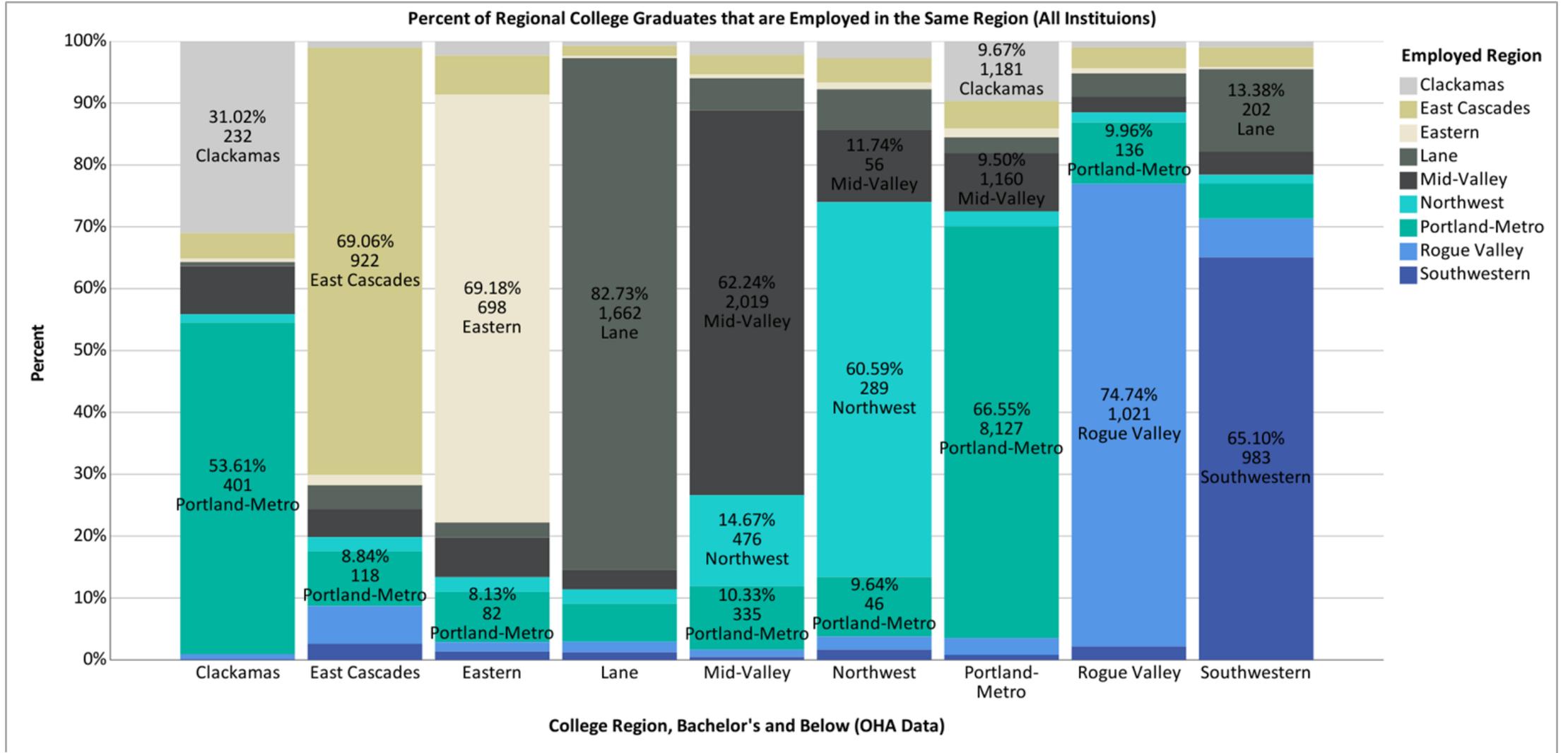
SLDS DATA: RESIDENCY OF OREGON'S NURSING STUDENTS



SLDS DATA: WHERE OREGON'S SUPPLY OF NURSING STUDENTS ORIGINATE.



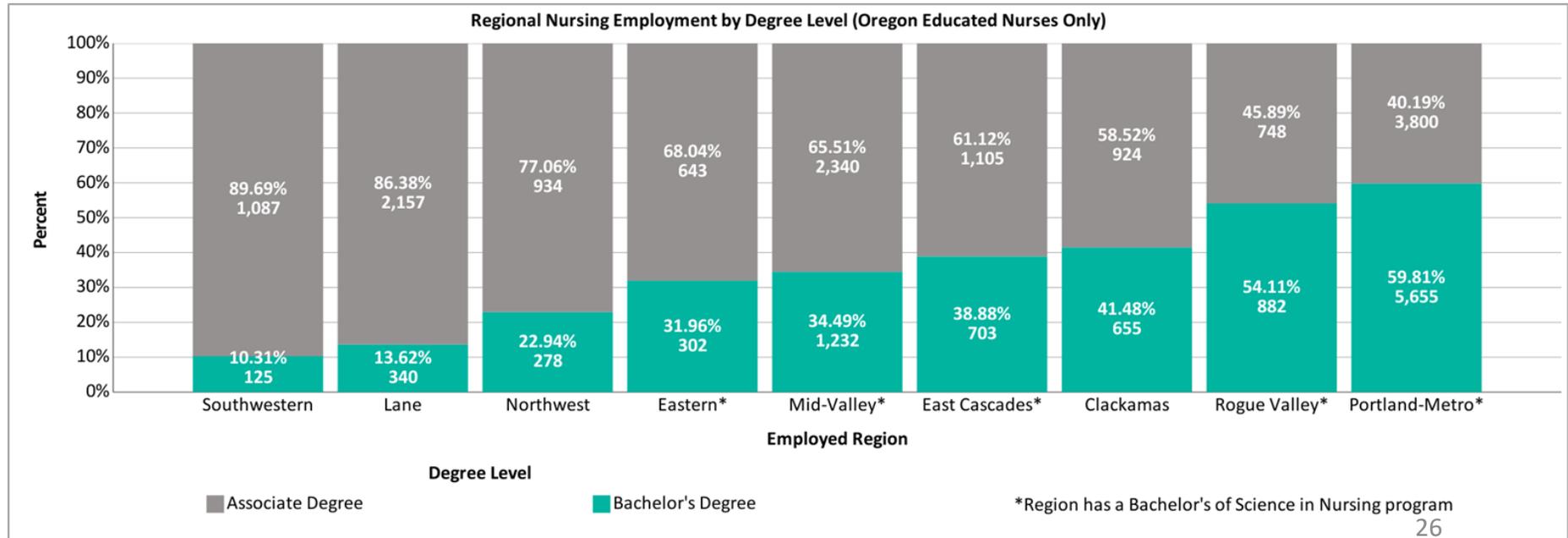
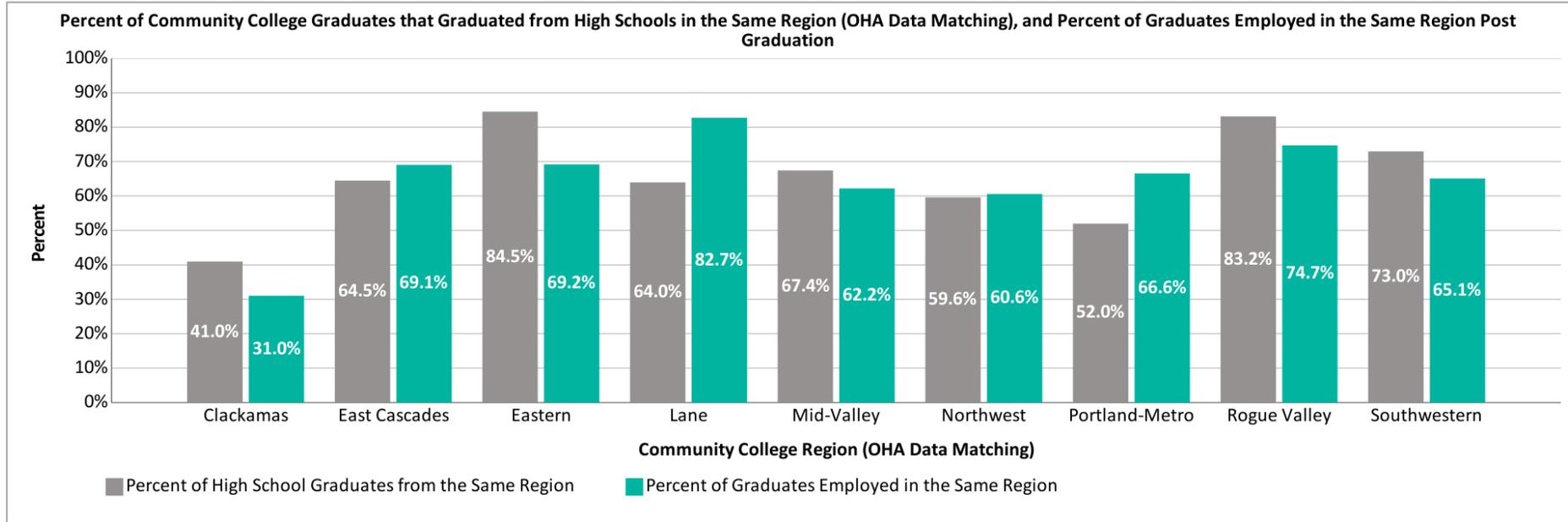
WHERE OREGON'S NURSING GRADUATES WORK POST-GRADUATION



REGIONAL DIFFERENCES & INEQUITIES

Nursing students and graduates do not represent a very mobile professional cohort. The implications of this is that nursing programs must expand in regions facing shortages.

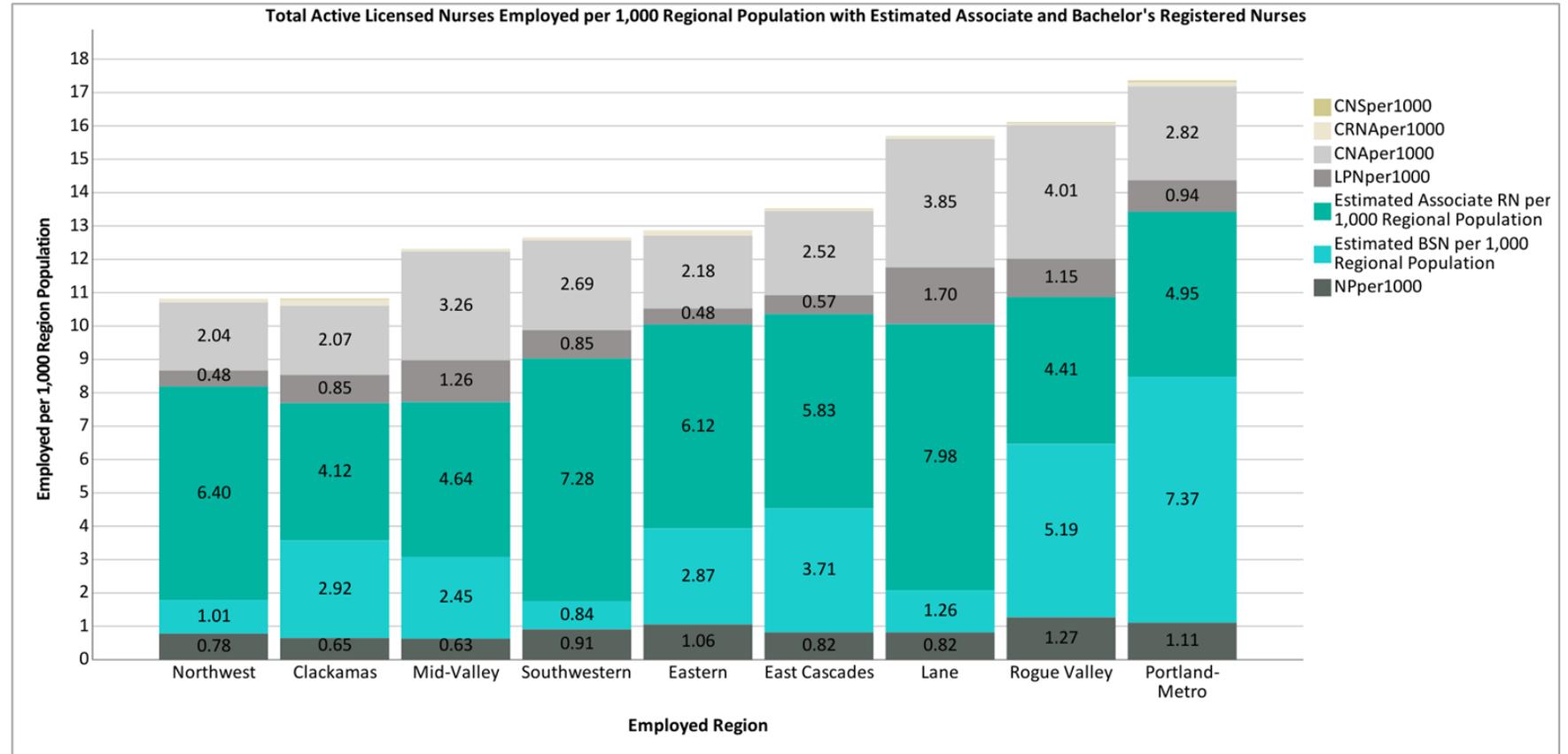
Oregon's regions also have an inequitable distribution of bachelor's level registered nursing programs, which causes inequities in nursing employment.



REGIONAL DIFFERENCES & INEQUITIES

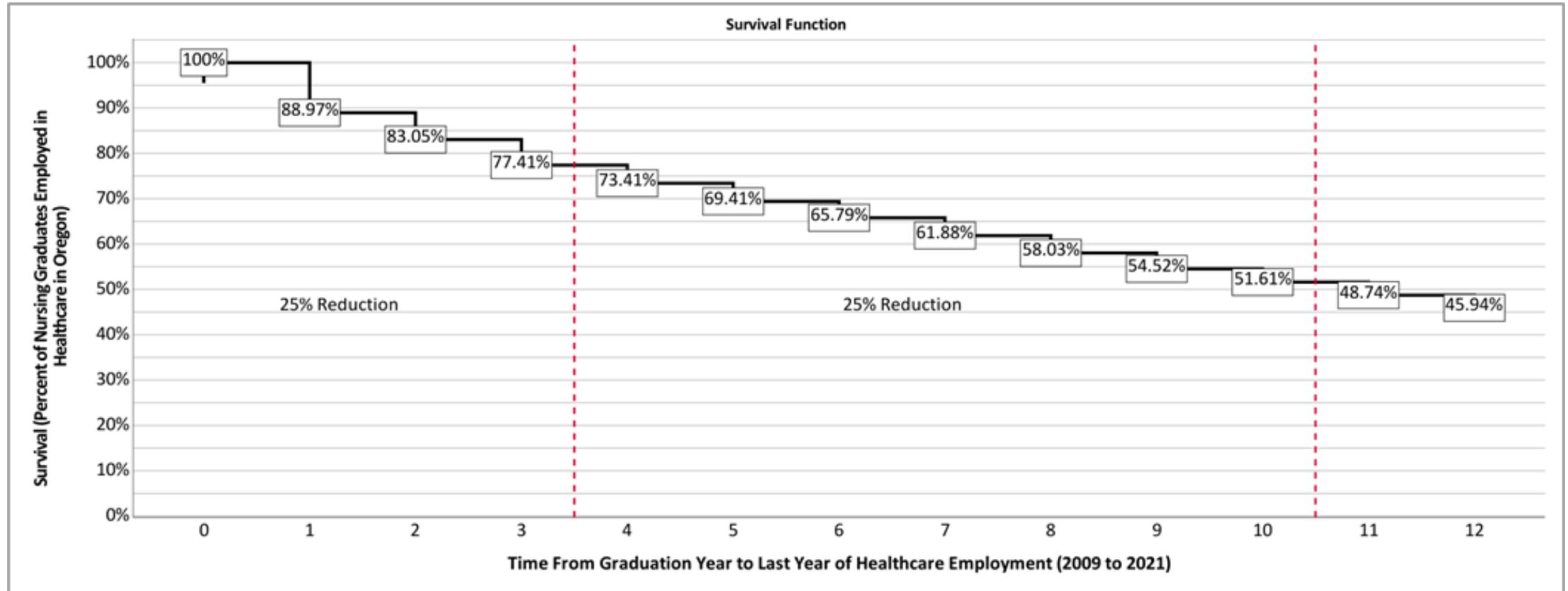
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OHWRP 2022

SLDS DATA: NURSING WORKFORCE RETENTION



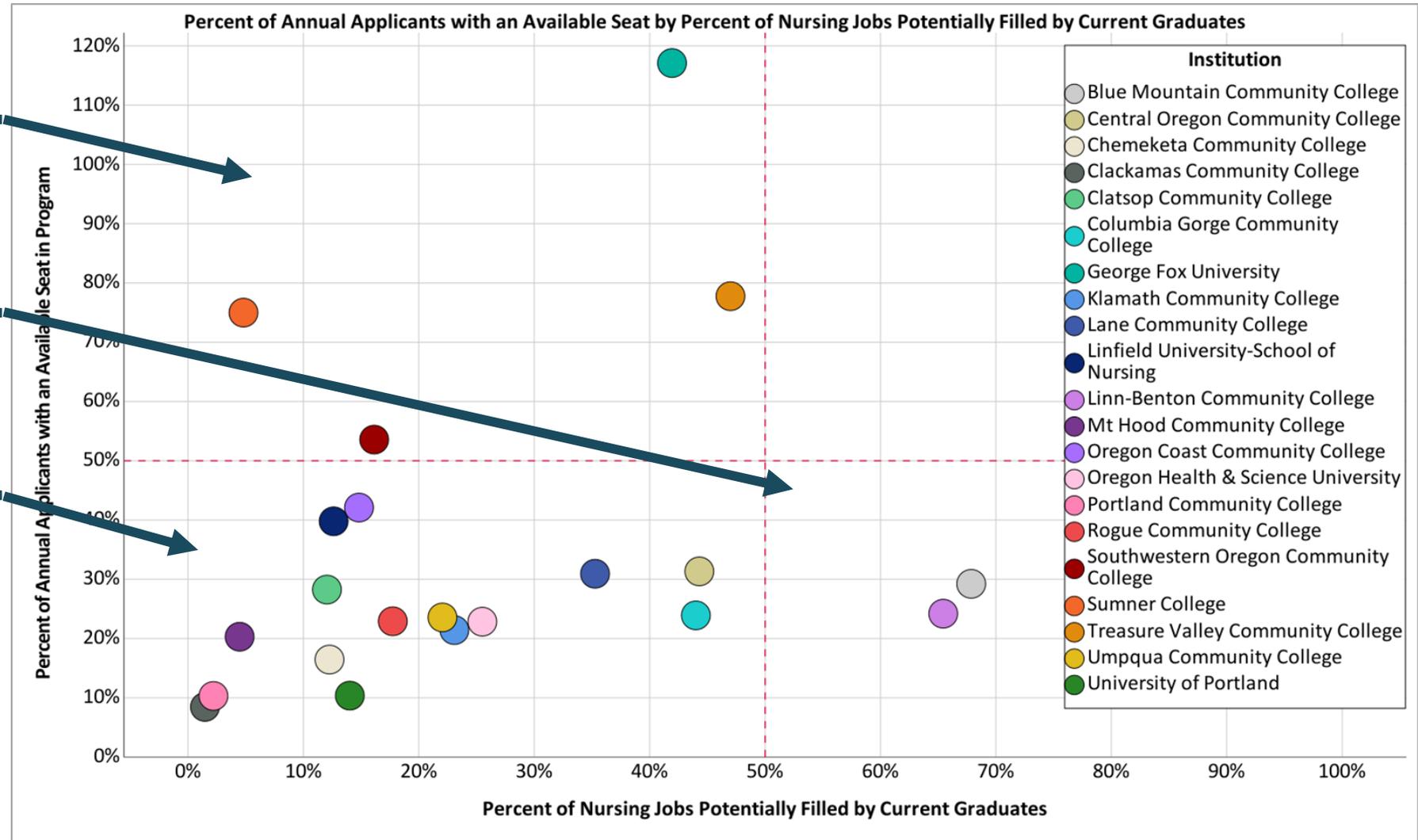
OLDC 2009-2020

REGISTERED NURSING PROGRAMS THAT HAVE THE POTENTIAL TO EXPAND

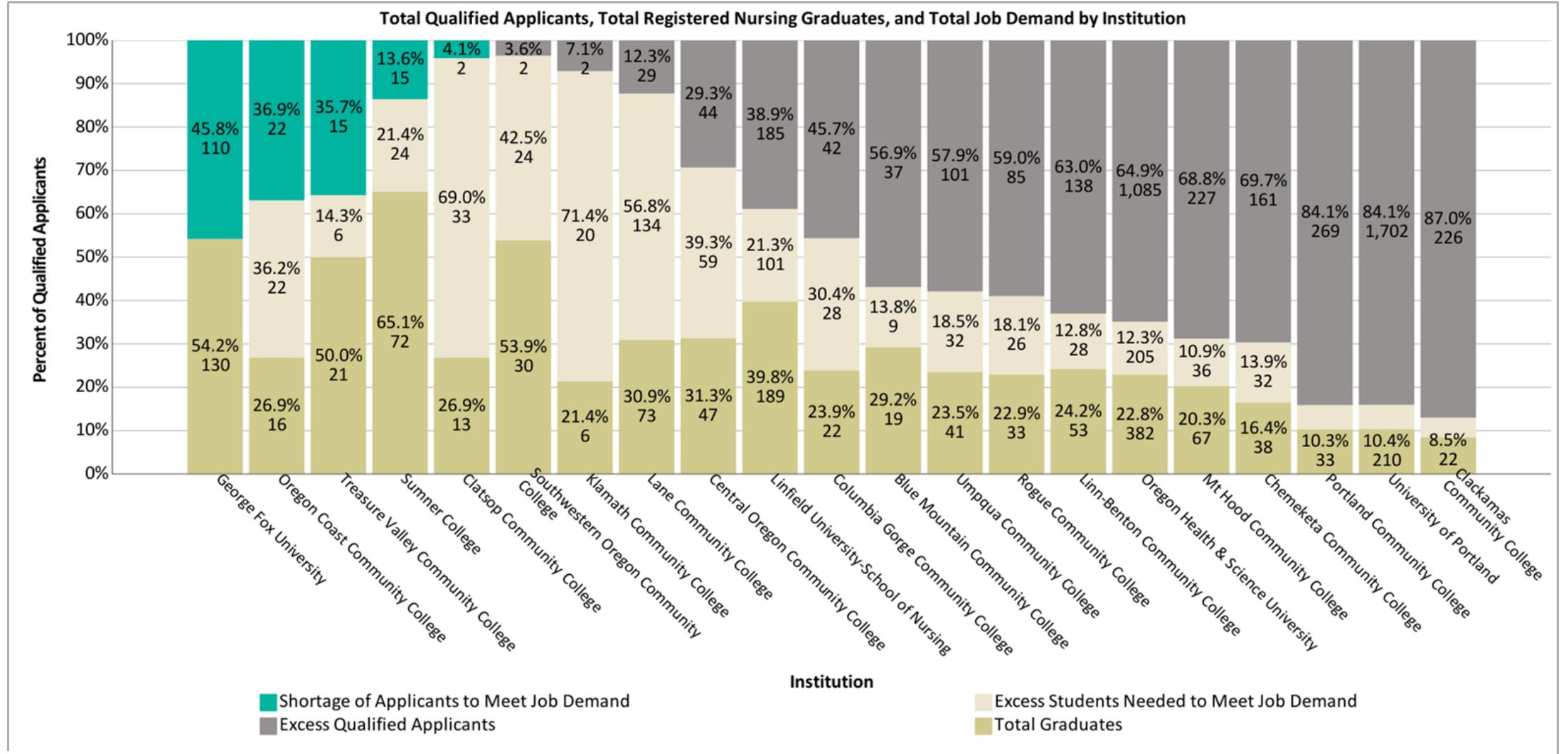
Programs in the top left quadrant may be limited by qualified applicants.

Programs in the bottom right quadrant may be limited by employment demand.

Programs in the bottom left quadrant can potentially double the size of their programs.



REGIONAL SUPPLY AND DEMAND FOR REGISTERED NURSING GRADUATES BY INSTITUTION



The background of the slide is a photograph of the Oregon State Capitol building in Salem, Oregon, taken at sunset. The building is a large, light-colored stone structure with a prominent central dome topped by a statue. The sky is filled with warm, orange and yellow light from the setting sun, with some clouds visible. In the foreground, there are dark silhouettes of evergreen trees and a flagpole. The overall mood is serene and professional.

CAUSES OF OREGON'S POSTSECONDARY NURSING EDUCATION SHORTAGE

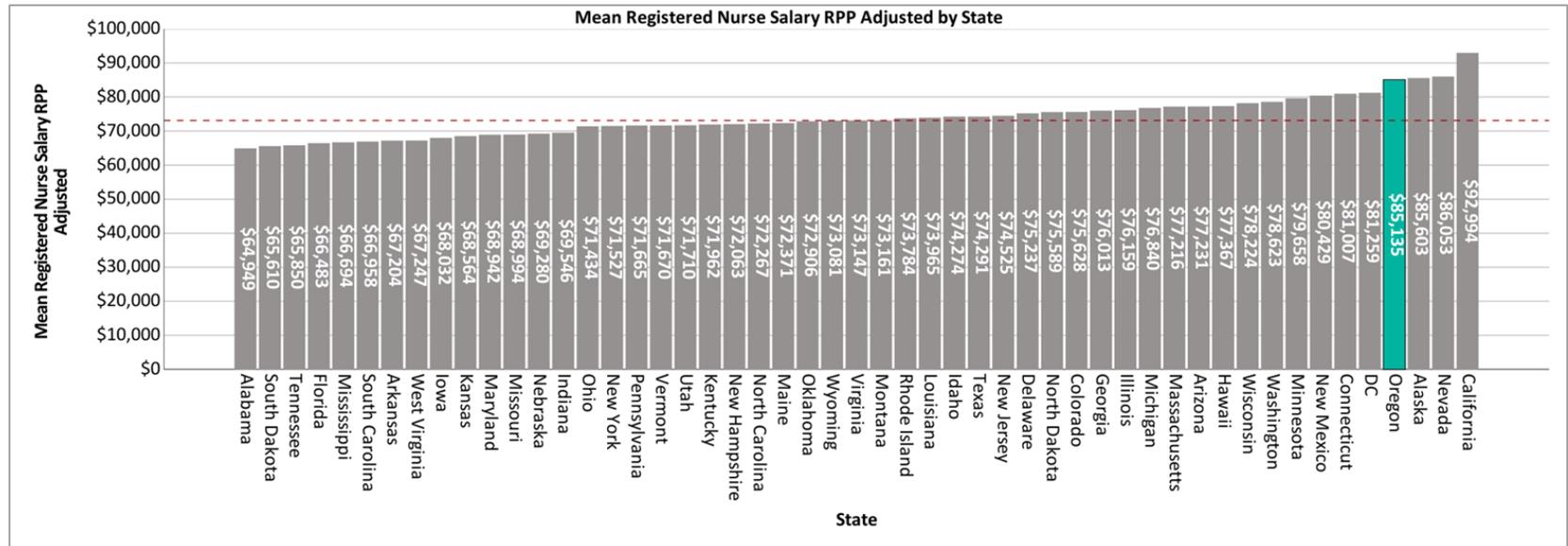
2022 OLDC HEALTHCARE PROGRAM SURVEY

In 2022 the OLDC sent surveys to every community college nursing program in Oregon, to discover the barriers that our registered nursing programs faced in expansion.

REGISTERED NURSING PROGRAMS OPEN RESPONSES		
Institution	Question	Open Response
Blue Mountain Community College	Clinical placements are limited	Rural area with two critical access hospitals available and shared with another university.
	Attracting Faculty for vacant positions	Difficult to recruit qualified faculty and retain related to decreased salary in academia and long work days/weeks. Masters in Nursing degrees are expensive and difficult to attain while working FT in academia.
	Other	Incoming class cohort numbers are depending on number of nursing faculty and other resources such as appropriate clinical sites to meet courses' objectives, lab and simulation space, etc.
Clackamas Community College	Clinical placements are limited	Portland metro area has too many nursing programs who are increasing their enrollment without any thought given to how it may affect other program placements.
	Attracting Faculty for vacant positions	Many, if not all, nursing programs in the state are facing a nursing faculty shortage. OCNE is working on building channels in which OCNE programs will be able to share consortium faculty to fill in needs as able
Clatsop Community College	Attracting Faculty for vacant positions	Wages offered cannot compete with what facilities offer & they need an MSN or to be working on their MSN
	Lack of student interest in program	Interest remains good but more interest from outside area which means may not come even if offered a seat
	Other	Cost of program is often a barrier, but it is not listed here. Students often are not in a position to quit their job in order to focus on studies or meet mandatory training attendance requirements. In particular, the C.N.A. training is not eligible for financial aid at Clatsop. Scholarships are offered by facilities in return for a commitment to working there and some students do not want to make that commitment.
Columbia Gorge Community College	Clinical placements are limited	Staff in community partners are burned out
	Attracting Faculty for vacant positions	Huge wage discrepancy between workforce and academia pay
Oregon Coast Community College	Clinical placements are limited	Clinical placements are difficult to locate and are very limited. The process to obtain clinical placements is cumbersome and sometimes restrictive.
	Attracting Faculty for vacant positions	I have positions open for a year with ZERO applicants. The pay is not competitive to what they could make in the hospitals or outside the college environment. The criteria to teach is strict. The evolving workforce due to COVID also is a factor – there are nurses leaving the profession and they are not leaving to teach.
	Lab/specialized facilities are limited	We have a need to expand our lab and specialized areas to maintain ratios and allow for an increase in enrollment. We lack equipment and/or resources in this area.
	Other	We do not have ample interest in the programs from male applicants and diverse populations.
Treasure Valley Community College	Clinical placements are limited	This is very difficult in almost all of our programs but in particular in Nursing and OTA.
	Attracting Faculty for vacant positions	Very difficult to fill most any of our openings in healthcare.
Umpqua Community College	Attracting Faculty for vacant positions	Very difficult to attract due to "educator" wages. The college has supported and improved salary scale, but we cannot match "industry standards." Educators are also required to earn 1-3 additional degrees to teach in comparison with hospital nurses (many of which will only be required to earn an associate's degree.)

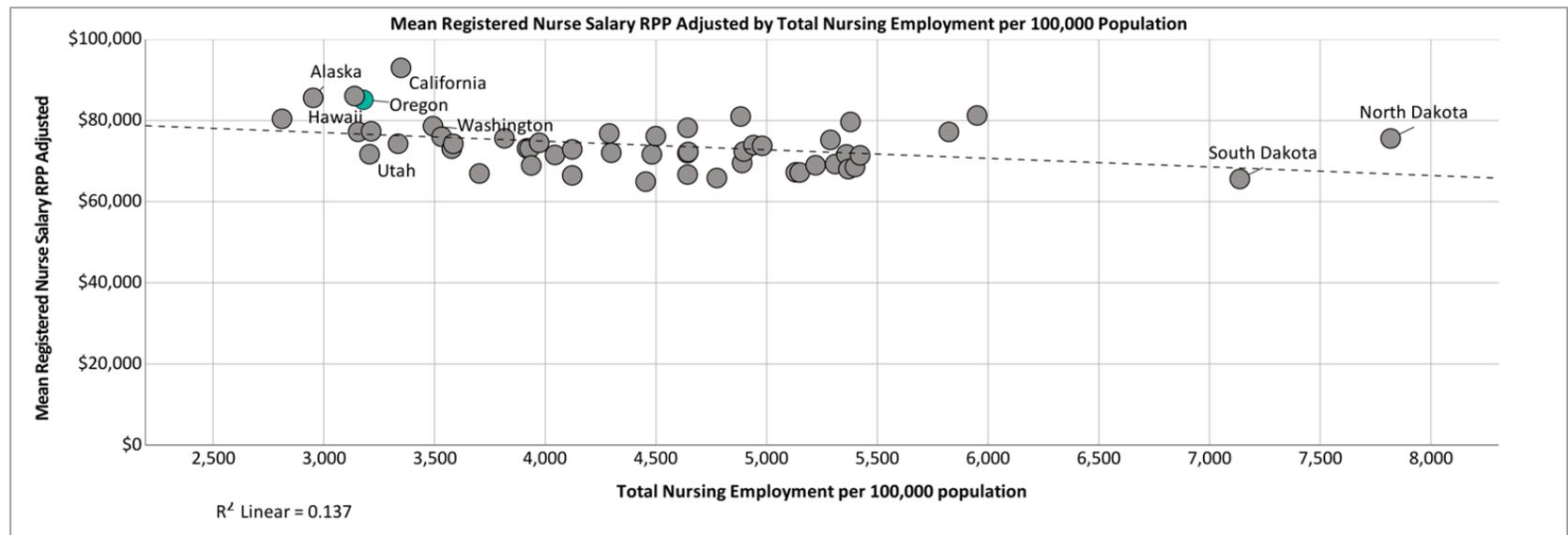
MEAN FTE REGISTERED NURSING SALARIES

(COST OF LIVING ADJUSTED BY RPP)



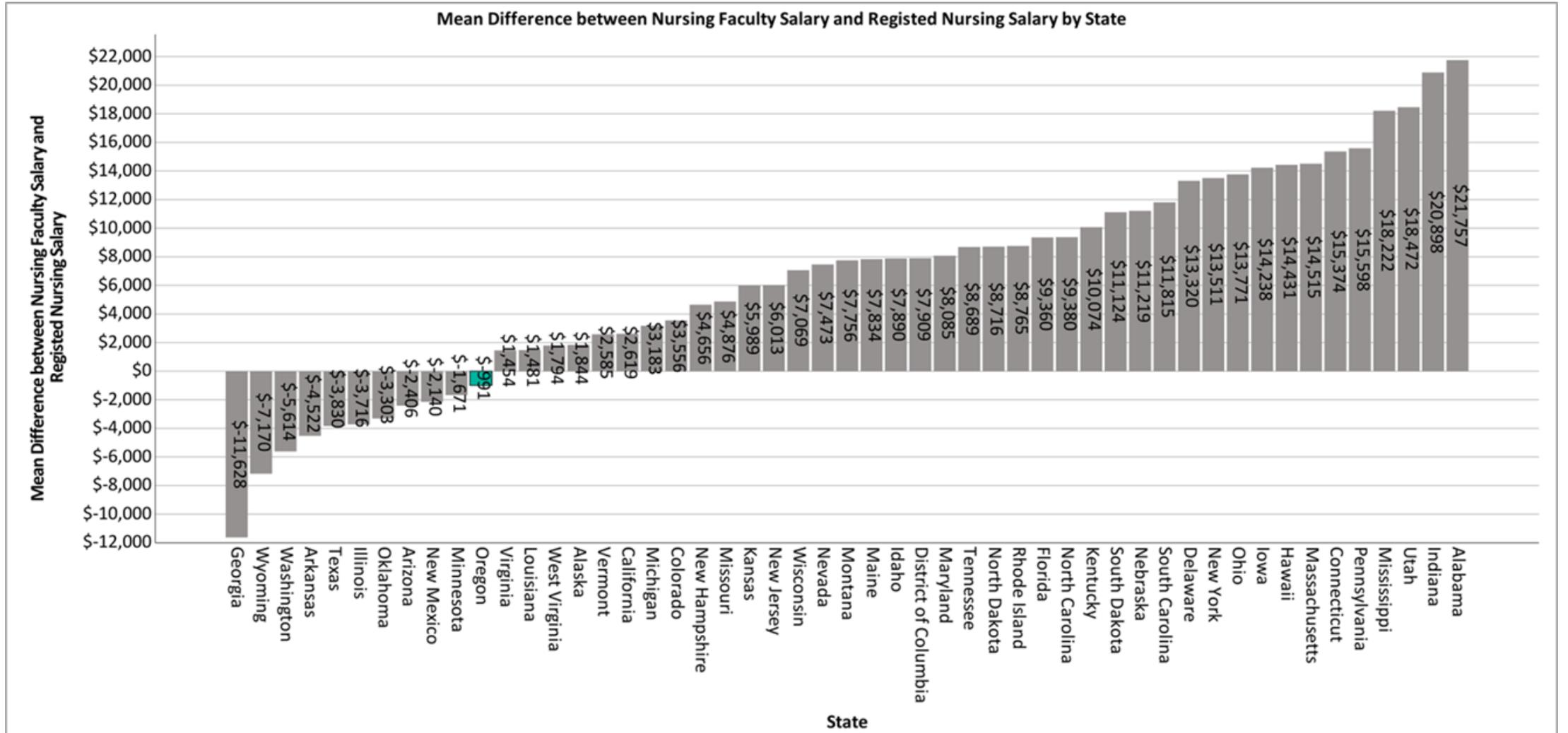
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Based on the survey the OLDC examined the salary differences between graduate level nurses that teach versus graduate level nurses working in the healthcare setting.



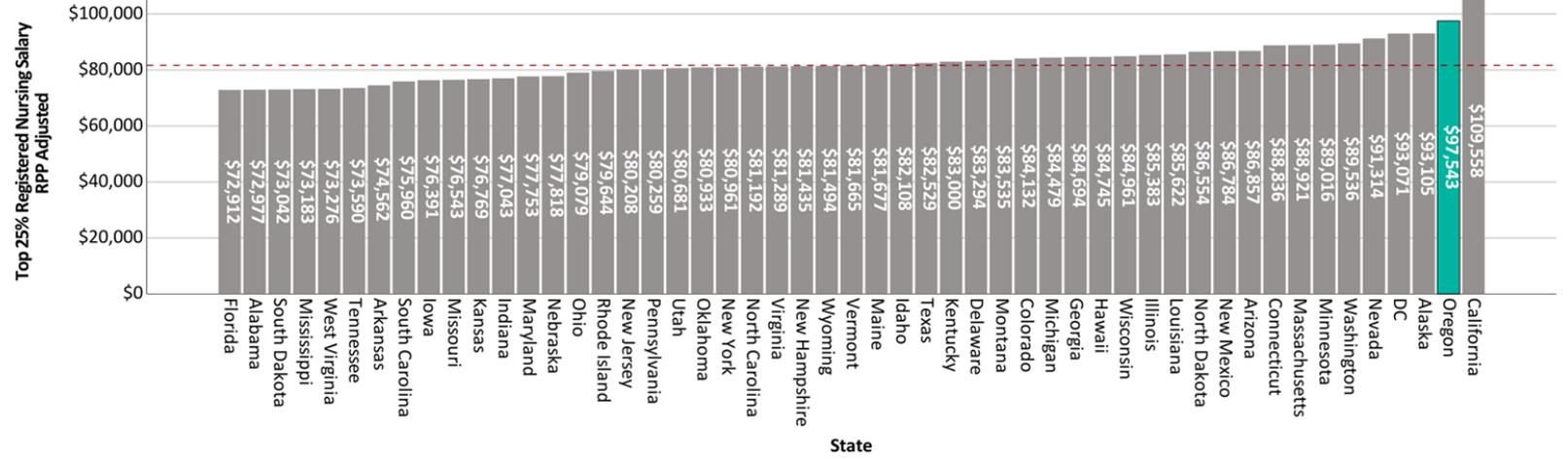
BLS 2021

OREGON IS 1 OF 11 STATES WHERE THE MEAN REGISTERED NURSING SALARY IS MORE THAN THE MEAN NURSING FACULTY SALARY



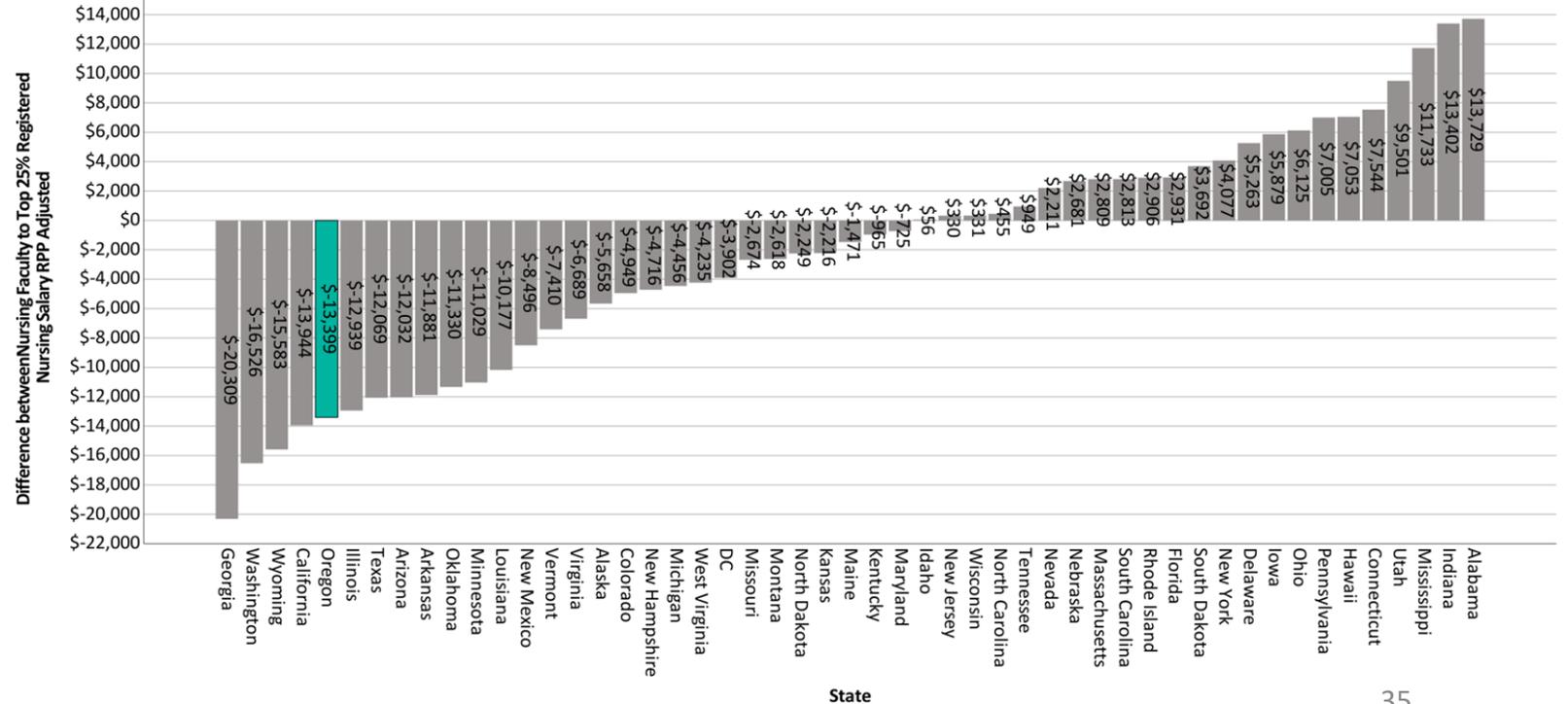
NURSING FACULTY SALARIES AND TOP 25% REGISTERED NURSING EARNERS

Mean of Top 25% Registered Nursing Salary RPP Adjusted by State



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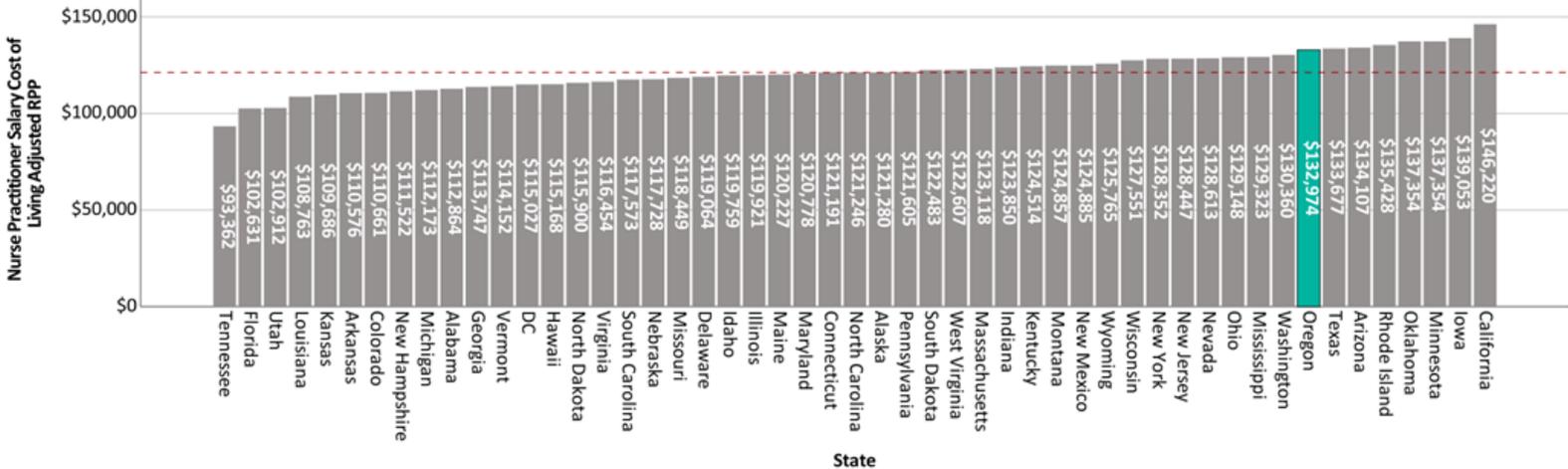
Mean Difference between Nursing Faculty to Top 25% Registered Nursing Salary RPP Adjusted by State



BLS 2021

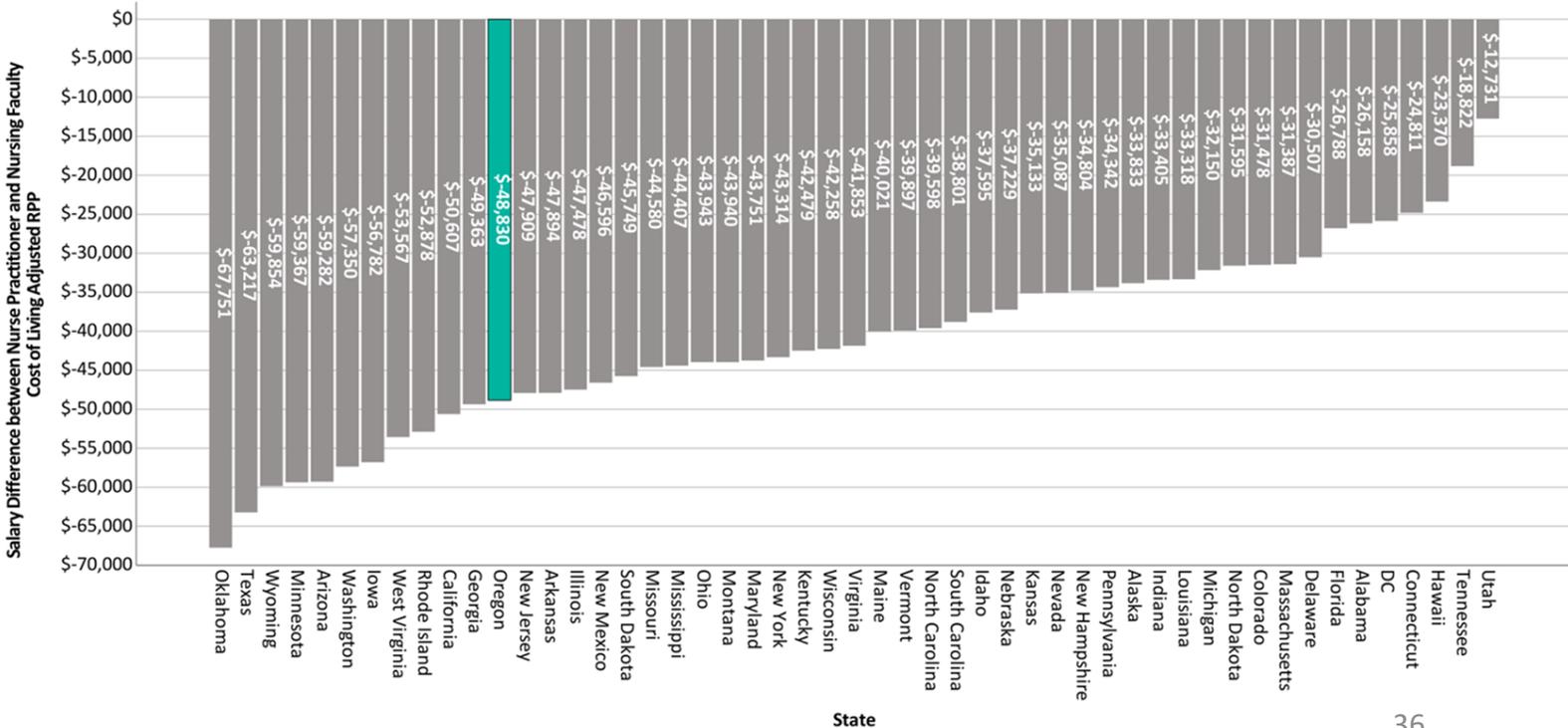
NURSING FACULTY SALARIES AND NURSE PRACTITIONER SALARIES

Mean Nurse Practitioner Salary Cost of Living Adjusted RPP by State



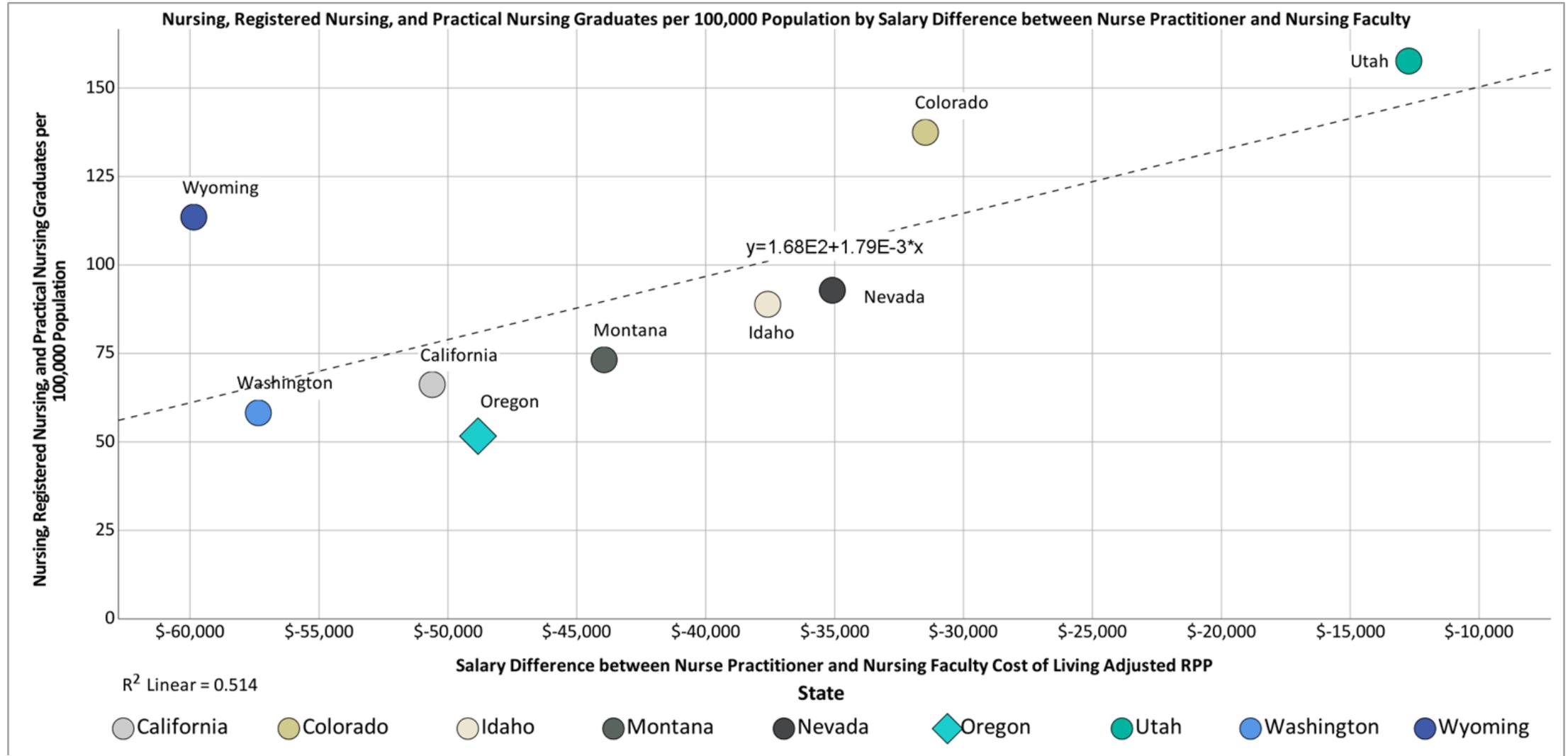
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Salary Difference between Nurse Practitioner and Nursing Faculty Cost of Living Adjusted RPP by State



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REGRESSION ANALYSIS OF FACULTY SALARIES AND PROGRAM CAPACITY



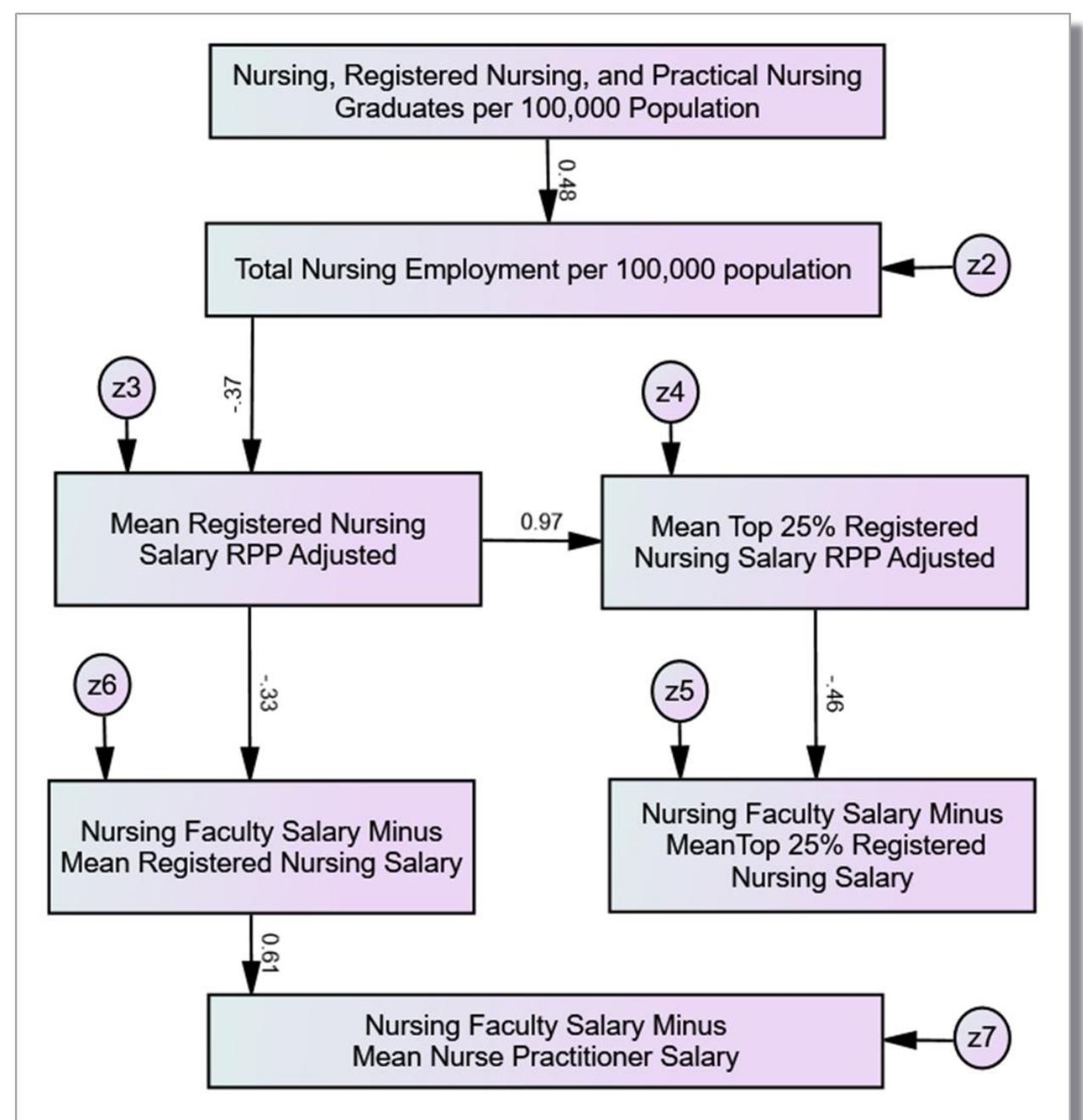
PATH ANALYSIS TO DETERMINE DIRECTIONALITY OF CORRELATIONS

Multiple path analyses were performed, and the direction of correlations was determined.

Competing theories of causality and regression paths were analyzed and found to be statistically insignificant.

This path analysis shows the directionality of all correlations within the data presented with standardized estimates of correlations.

Oregon's nursing graduate shortage is the primary driver of Oregon's overall nursing employment shortage and has caused an increase in the disparity between nursing faculty pay and Master's level nursing pay increasing the difficulty in finding faculty.



CLINICAL PLACEMENT REQUEST DENIALS (2016-2020)

Individual Clinical Placement Requests Denied						
Associate Programs	2016-2017	2017-2018	2018-2019	2019-2020	Multi-year	Location
Klamath Community College	0	0	0	0	None	Rural
Rogue Community College	0	0	Missing	0	None	Rural
Treasure Valley Community College	0	0	0	0	None	Rural
Umpqua Community College	0	0	0	0	None	Rural
Linn-Benton Community College	0	2	8	53	Yes	Rural
Oregon Coast Community College	1	2	3	4	Yes	Rural
Blue Mountain Community College	0	1	0	10		Rural
Central Oregon Community College	0	0	0	48		Rural
Clatsop Community College	0	0	0	1		Rural
Columbia Gorge Community College	0	4	0	0		Rural
Southwestern Oregon C.C.	1	0	0	0		Rural
Chemeketa Community College	0	0	0	0	None	Urban
Clackamas Community College	8	18	7	22	Yes	Urban
Mt. Hood Community College	5	5	7	5	Yes	Urban
Portland Community College	0	13	43	47	Yes	Urban
Sumner College	0	0	4	10	Yes	Urban
Lane Community College	0	0	0	56		Urban
Total	15	45	72	256	388	
Bachelor's Programs	2016-2017	2017-2018	2018-2019	2019-2020	Multi-year	Location
George Fox University	21	24	30	75	Yes	Suburban
Linfield College	121	69	197	197	Yes	Urban
OHSU School of Nursing	34	19	31	79	Yes	Urban*
University of Portland	55	69	83	72	Yes	Urban
Total	231	181	341	423	1176	

Cohort Clinical Placement Requests Denied							Combination
Associate Programs	2016-2017	2017-2018	2018-2019	2019-2020	Multi-year	Location	Multi-year Individual and/or Cohort
Linn-Benton Community College	0	0	2	8	Yes	Rural	Both
Blue Mountain C.C.	0	0	1	2	Yes	Rural	Cohort
Central Oregon C.C.	1	0	0	6	Yes	Rural	Cohort
Rogue Community College	0	1	3	1	Yes	Rural	Cohort
Umpqua Community College	0	3	1	0	Yes	Rural	Cohort
Oregon Coast Community College	0	0	0	5		Rural	Individual
Clatsop Community College	0	0	0	5		Rural	Single year only
Columbia Gorge Community C.C.	0	0	0	0	None	Rural	Single year only
Klamath Community College	0	0	0	2		Rural	Single year only
Southwestern Oregon C.C.	0	0	0	0	None	Rural	Single year only
Treasure Valley C.C.	1	0	0	0		Rural	Single year only
Clackamas Community College	4	5	0	5	Yes	Urban	Both
Mt. Hood Community College	3	3	2	4	Yes	Urban	Both
Portland Community College	2	20	17	15	Yes	Urban	Both
Sumner College	0	0	1	3	Yes	Urban	Both
Lane Community College	1	0	0	7	Yes	Urban	Cohort
Chemeketa Community College	0	0	0	0	None	Urban	None
Total	12	32	27	63	134		
Bachelor's Programs	2016-2017	2017-2018	2018-2019	2019-2020	Multi-year	Location	Multi-year Individual and/or Cohort
George Fox University	10	10	9	14	Yes	Suburban	Both
Linfield College	32	25	54	54	Yes	Urban	Both
OHSU School of Nursing	6	35	34	6	Yes	Urban*	Both
University of Portland	29	23	21	19	Yes	Urban	Both
Total	77	93	118	93	381		

Recommendation #1

Establish workgroup to address nurse faculty salary

in order to attract enough nursing faculty to meet student and employment market demand.

Workgroup Coordination and Membership

- This workgroup should be led by the *Higher Education Coordinating Commission* to facilitate discussion among the interested parties.
- The following interested parties should include, but not limited to:
 - Community College Nursing Programs
 - Oregon Health and Science University
 - Oregon Alliance of Independent Colleges and Universities
 - Faculty unions
 - Oregon Legislature
 - Healthcare industry leaders

Why Statewide Coordination Is Important

- If individual institutions increase nursing faculty pay and other institutions do not, this would likely lead to competition between programs for faculty rather than lead to expanding the statewide nursing program capacity and market share.
- Additionally, relying on individual institutions to remedy the nursing faculty pay would require faculty representatives to agree to an exception to institution-wide faculty contracts and the institution to come up with the funds needed to increase the pay. Increasing funding for nursing faculty is particularly difficult due to mandated faculty-student ratios for clinical placements and credit hour costs.

Recommendation #2

Establish a statewide centralized clinical placement system

to reduce competition between programs and hospitals for clinical placements, increase cooperation and coordination between programs and hospitals for clinical placements, increase clinical placement options and opportunities for students, and expand overall clinical placement capacity.

Workgroup Coordination and Membership

- This workgroup should be lead by the Oregon State Board of Nursing to facilitate discussion among the interested parties.
- The following interested parties should include, but not limited to:
 - Higher Education Coordinating Commission
 - Community College Nursing Programs
 - Oregon Health and Science University
 - Oregon Alliance of Independent Colleges and University
 - Faculty unions
 - Oregon Legislature
 - Healthcare industry leaders

Why Statewide Coordination Is Important

- Other states that established centralized clinical placement systems have increased clinical placement capacity through this coordination and cooperation.
- Currently, clinical placements are coordinated institution-by-institution through personal relationships between programs and hospitals, causing competition between programs in the same region. Programs in regions without competition often lack the capacity to expand within regional hospitals
- Students are unable to attend clinical placements outside of these individual arrangements, limiting students' options and their ability to relocate to areas with higher need.