

POSTSECONDARY HEALTHCARE EDUCATION SHORTAGE IN OREGON: OVERVIEW

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

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

OLDC Senior Research and Data Analyst



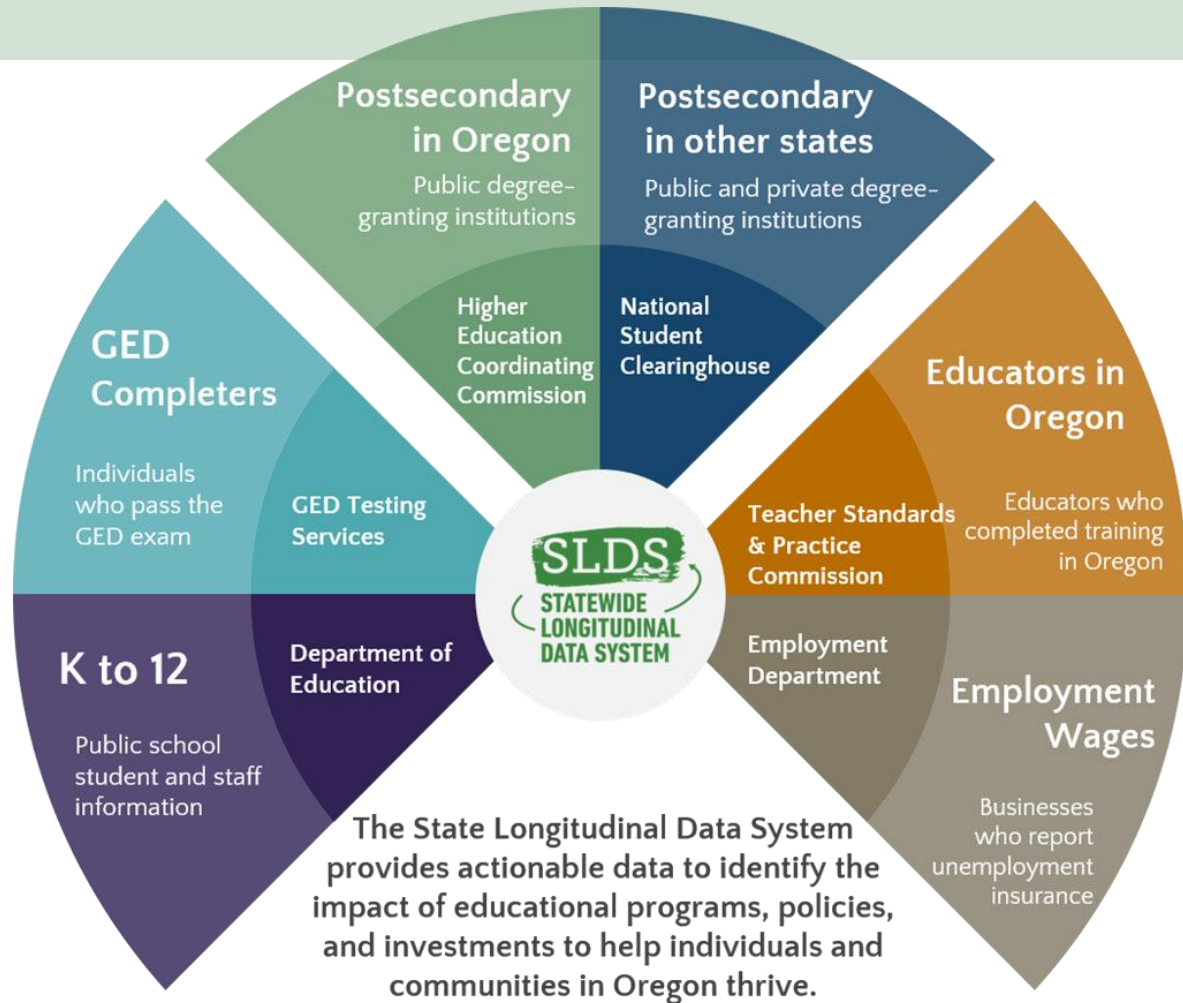
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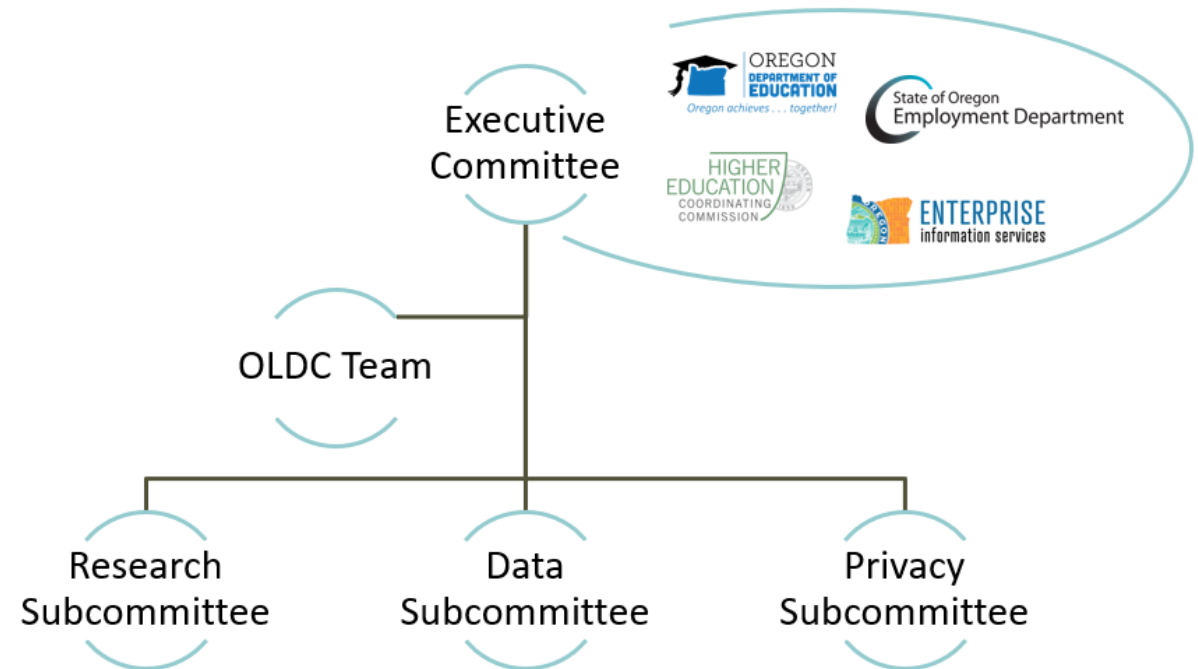
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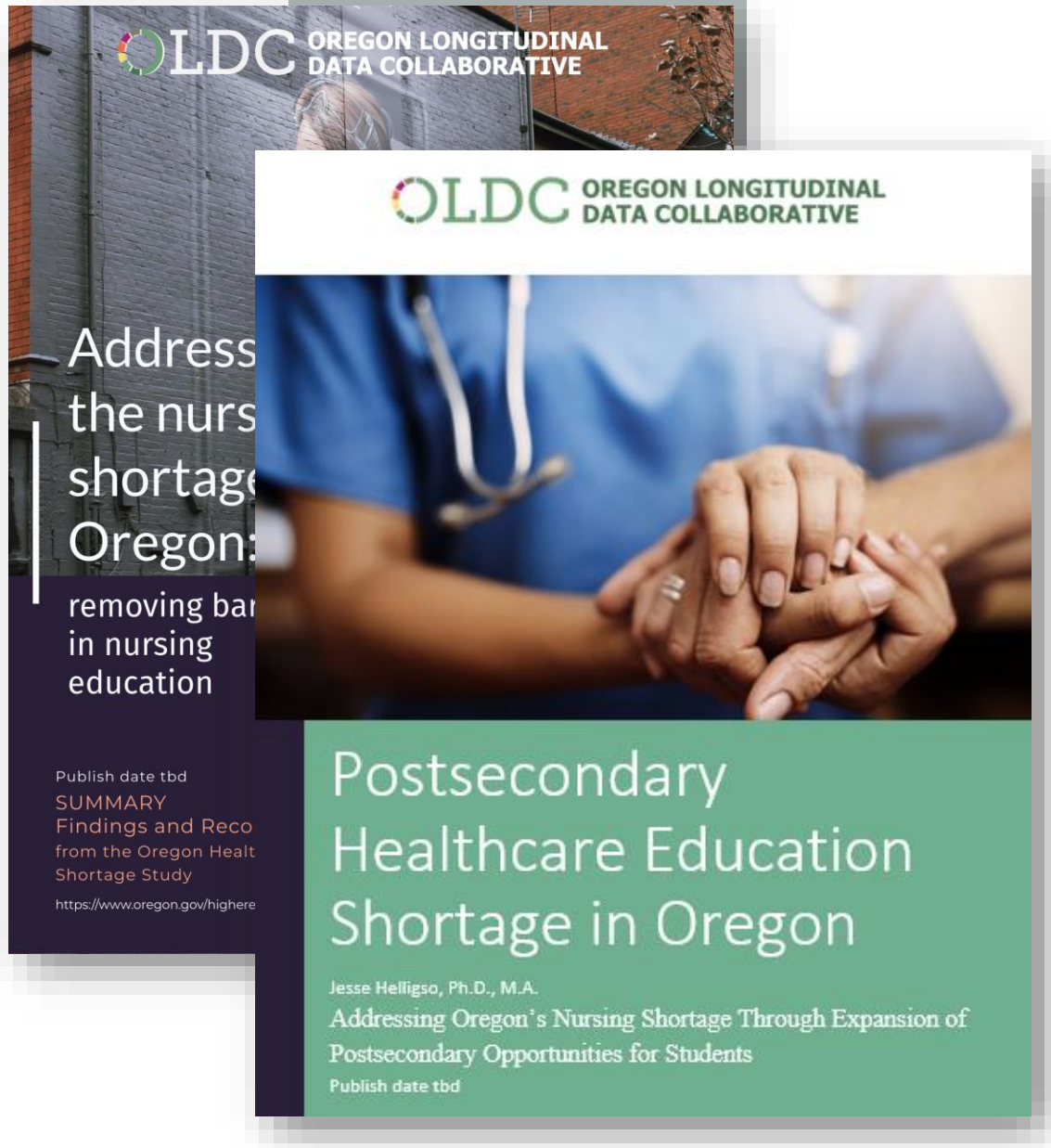
OVERVIEW OF THE **OLDC** OREGON LONGITUDINAL DATA COLLABORATIVE



OLDC Governance Structure



The OLD C is administratively housed within the HECC



STUDY OVERVIEW

- The OLDC governance committees prioritized a research study into the supply and demand of postsecondary degrees in Oregon with an emphasis on areas of degree shortages.
- Scoping this request required a reduction in the scope of the study into something more feasible. Oregon's governor had emphasized healthcare education as an area of need in the state. The scope of the study was therefore reduced to postsecondary healthcare programs in the state of Oregon.
- The data analysis on national trends caused a further reduction in the scope to focus specifically on registered nursing education in the state as the area of greatest need based on the supply and demand of healthcare degrees.

STUDY LINKS

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

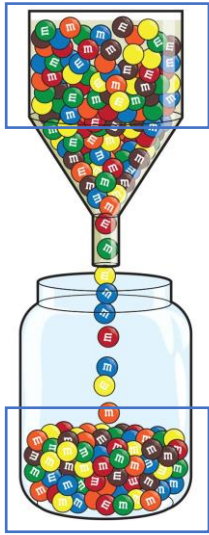


STUDY HYPOTHESES

The problem.

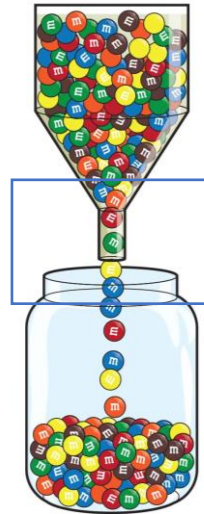
Hypothesis 1: There is a shortage of healthcare workers in Oregon.

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

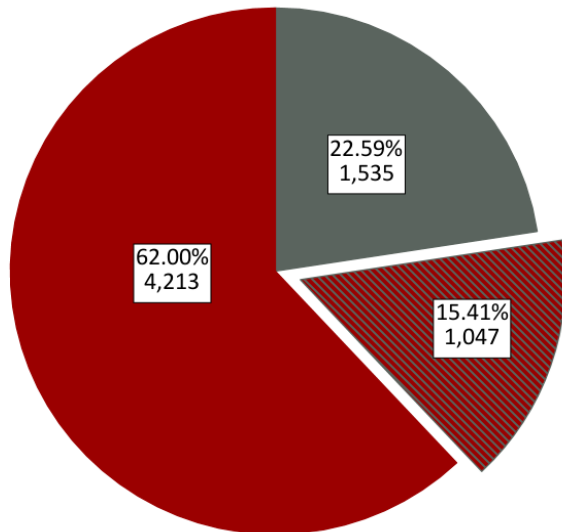
The problem.

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



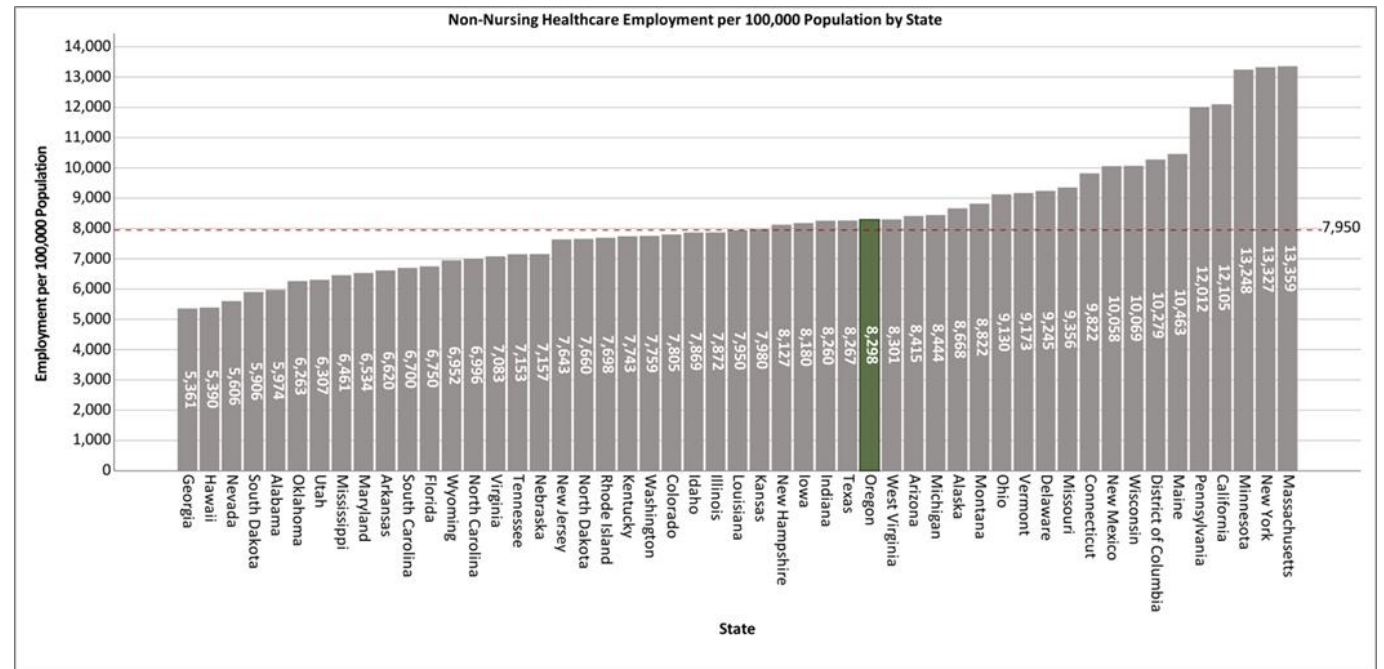
HEALTHCARE EMPLOYMENT PER CAPITA

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

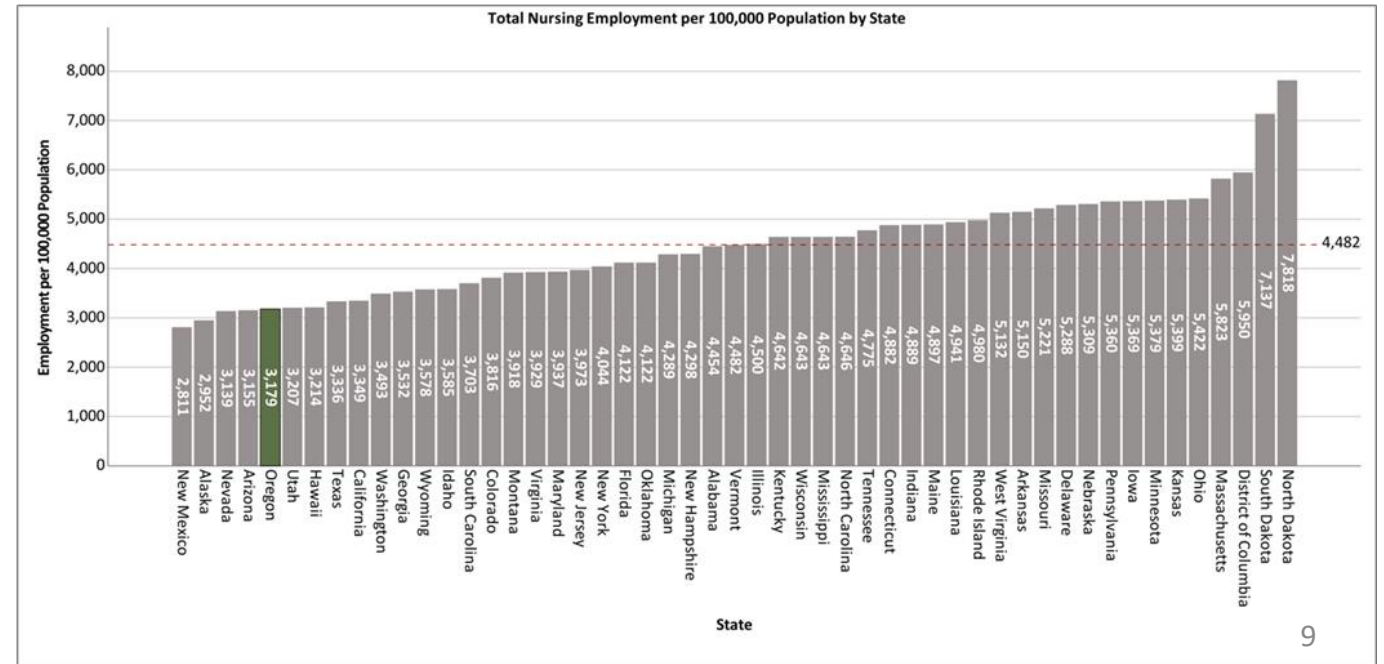
Data from the Integrated Postsecondary Education Data System (2020) was collected for comparison of graduate counts across states, and to supplement data missing from the SLDS from private colleges and universities.

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.

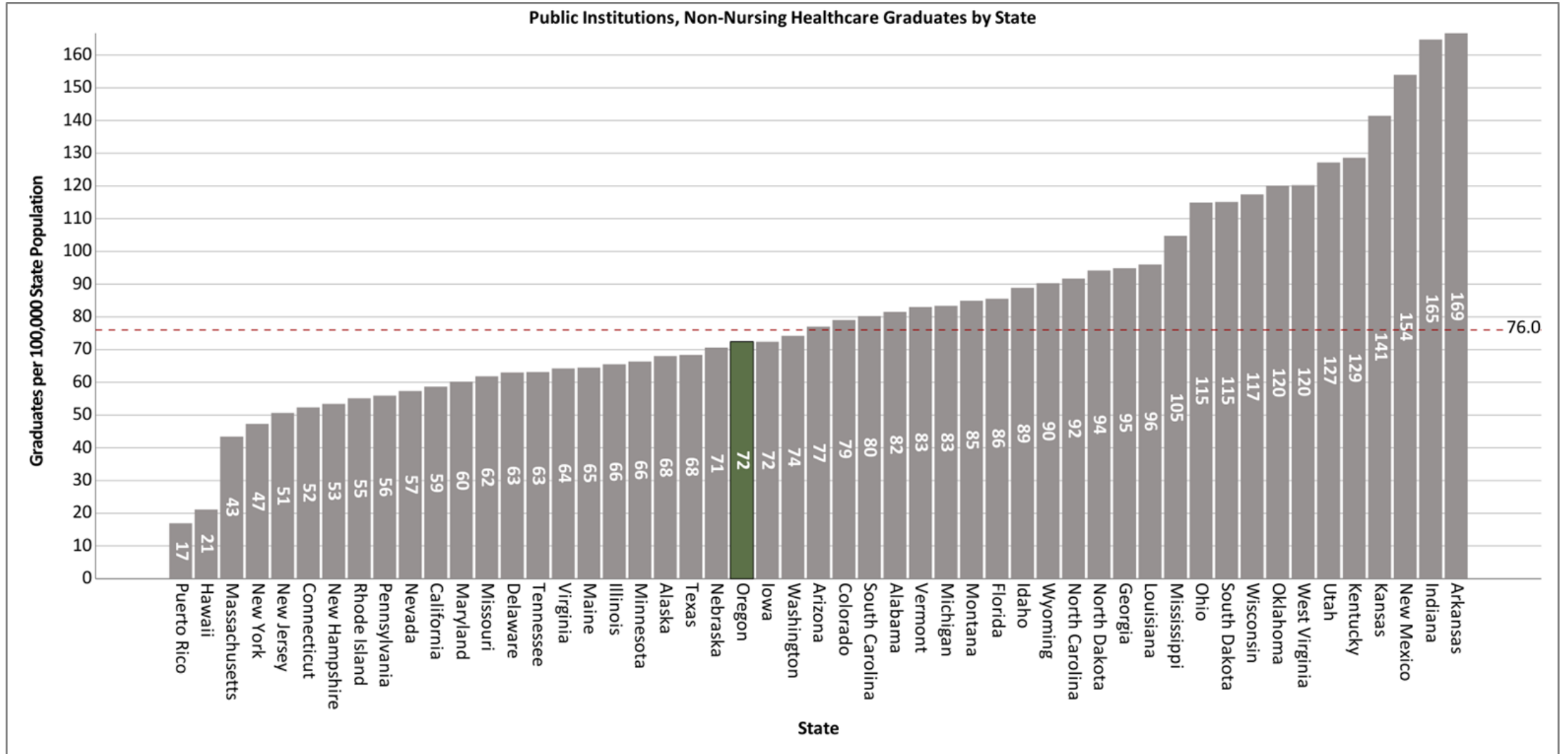


BLS 2021



BLS 2021

Non-Nursing Healthcare Graduates per Capita

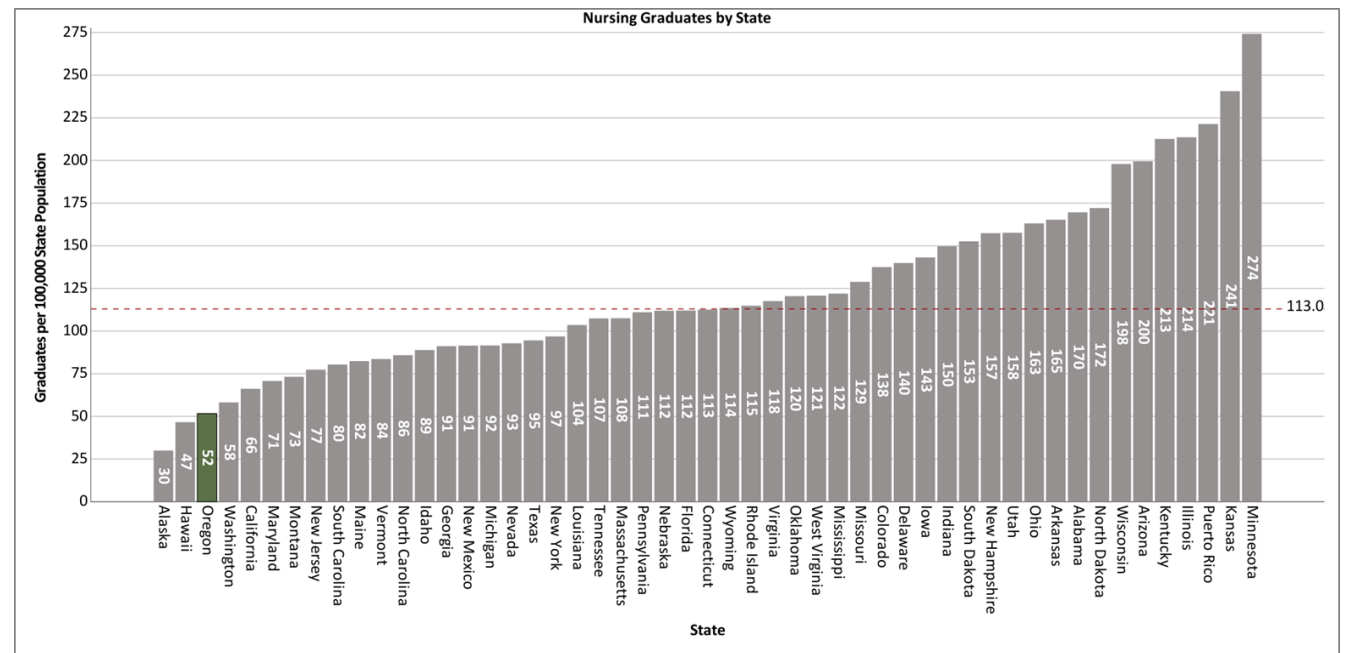


PER CAPITA NURSING GRADUATES

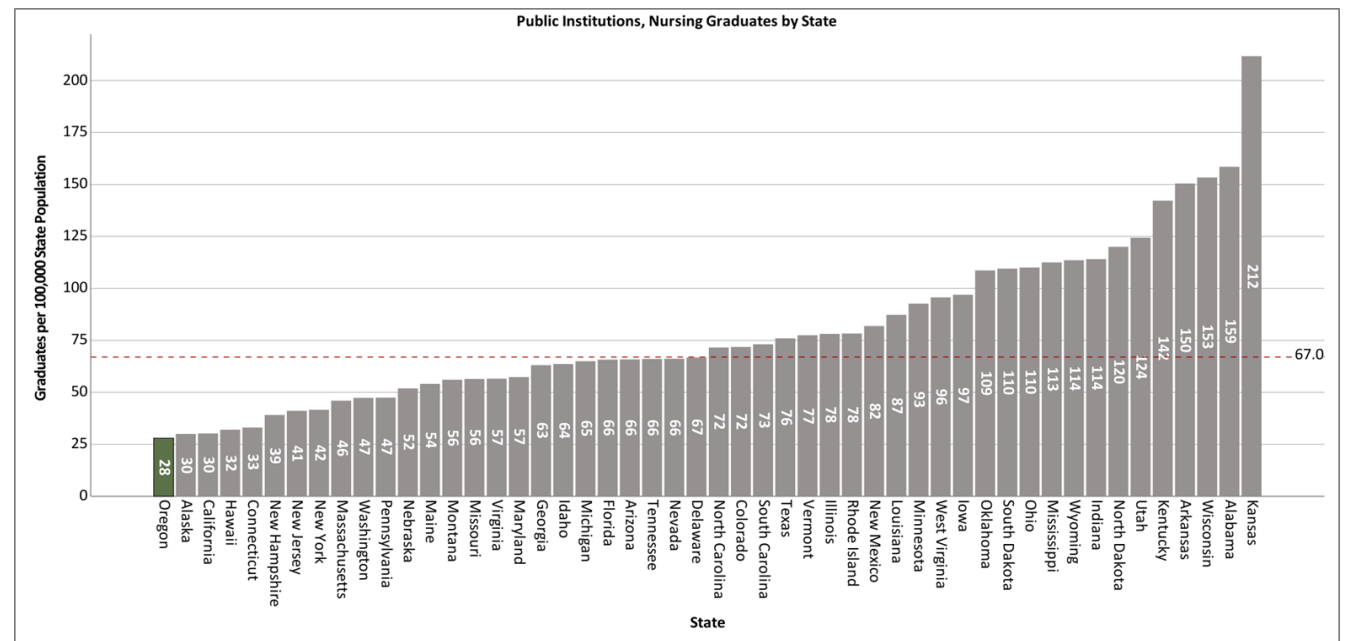
Oregon's primary area of deficit in healthcare graduates per capita is in nursing, compared to national medians.

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

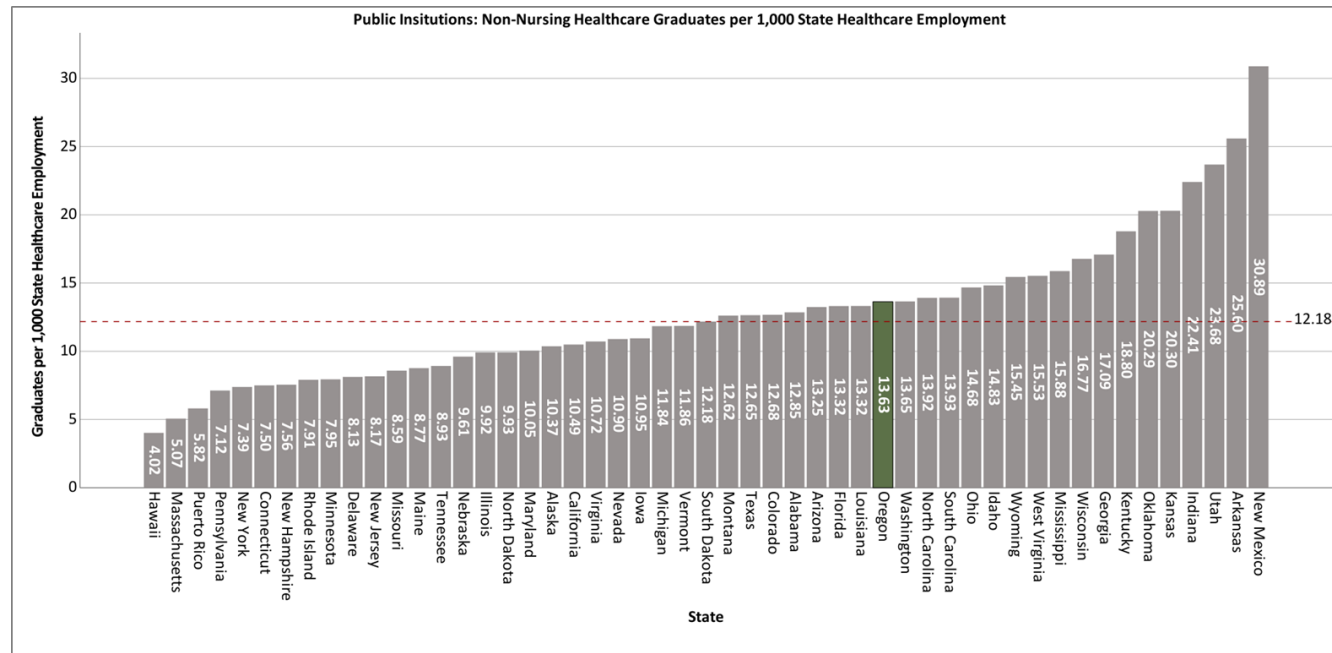


IPEDS 2020

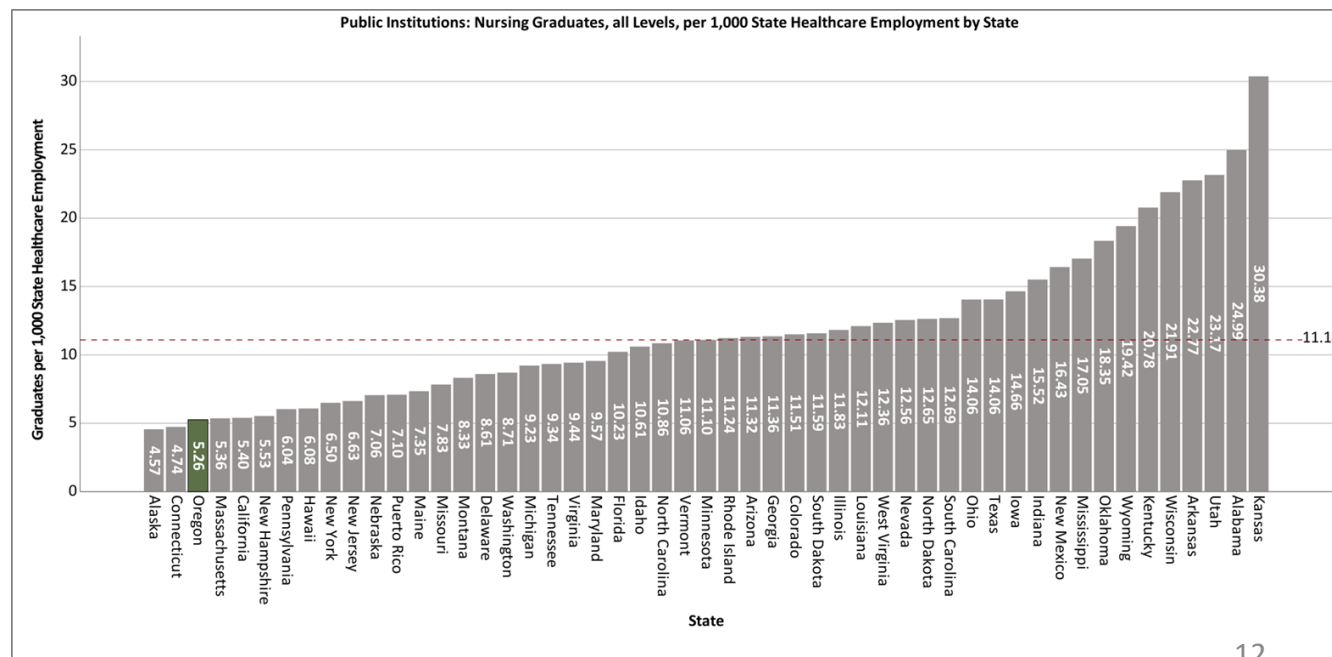
HEALTHCARE GRADUATES PER HEALTHCARE EMPLOYMENT

The same pattern between non-nursing healthcare graduates and nursing graduates is seen in per healthcare employment measures.

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

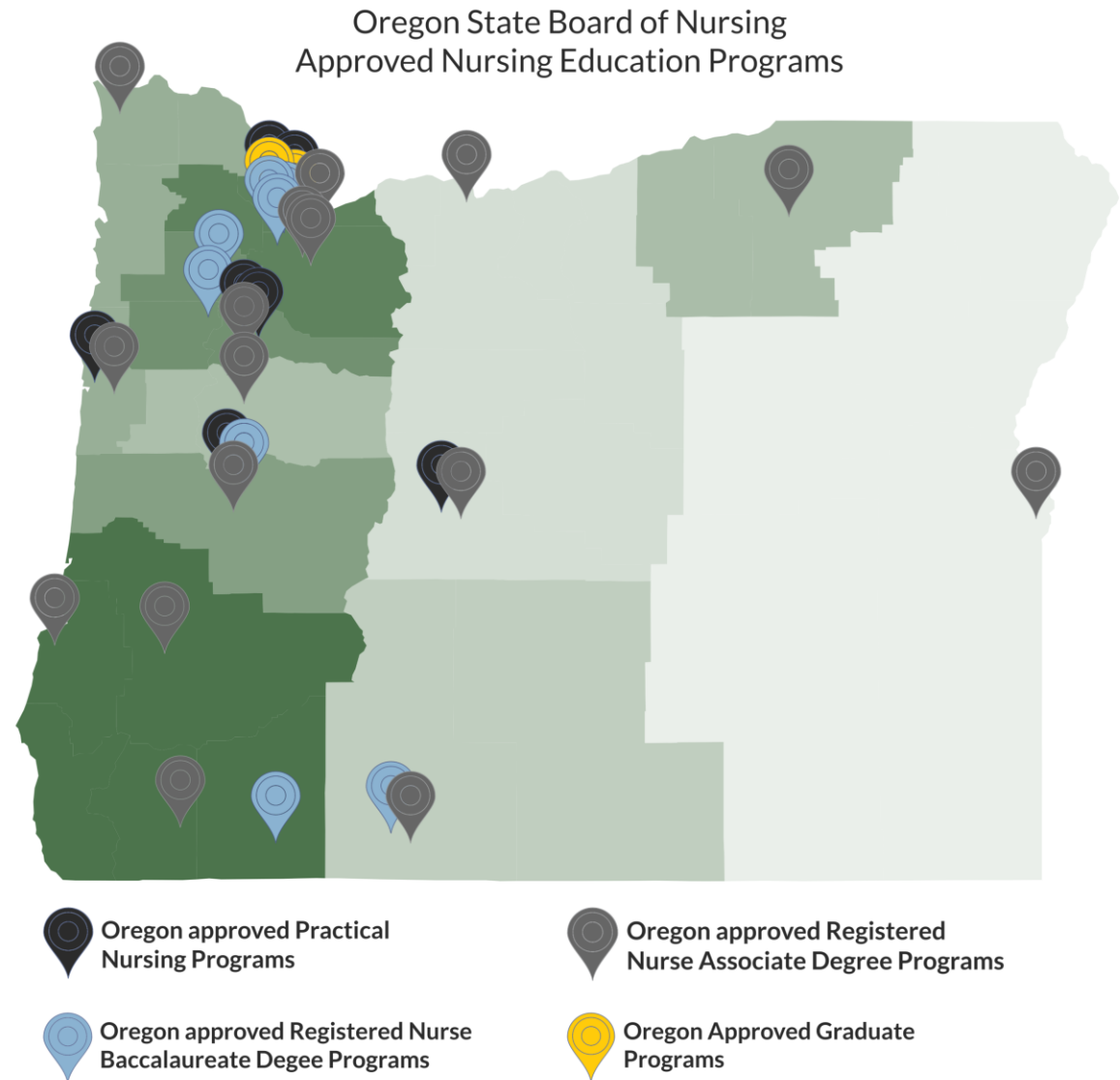


IPEDS 2020, BLS 2021

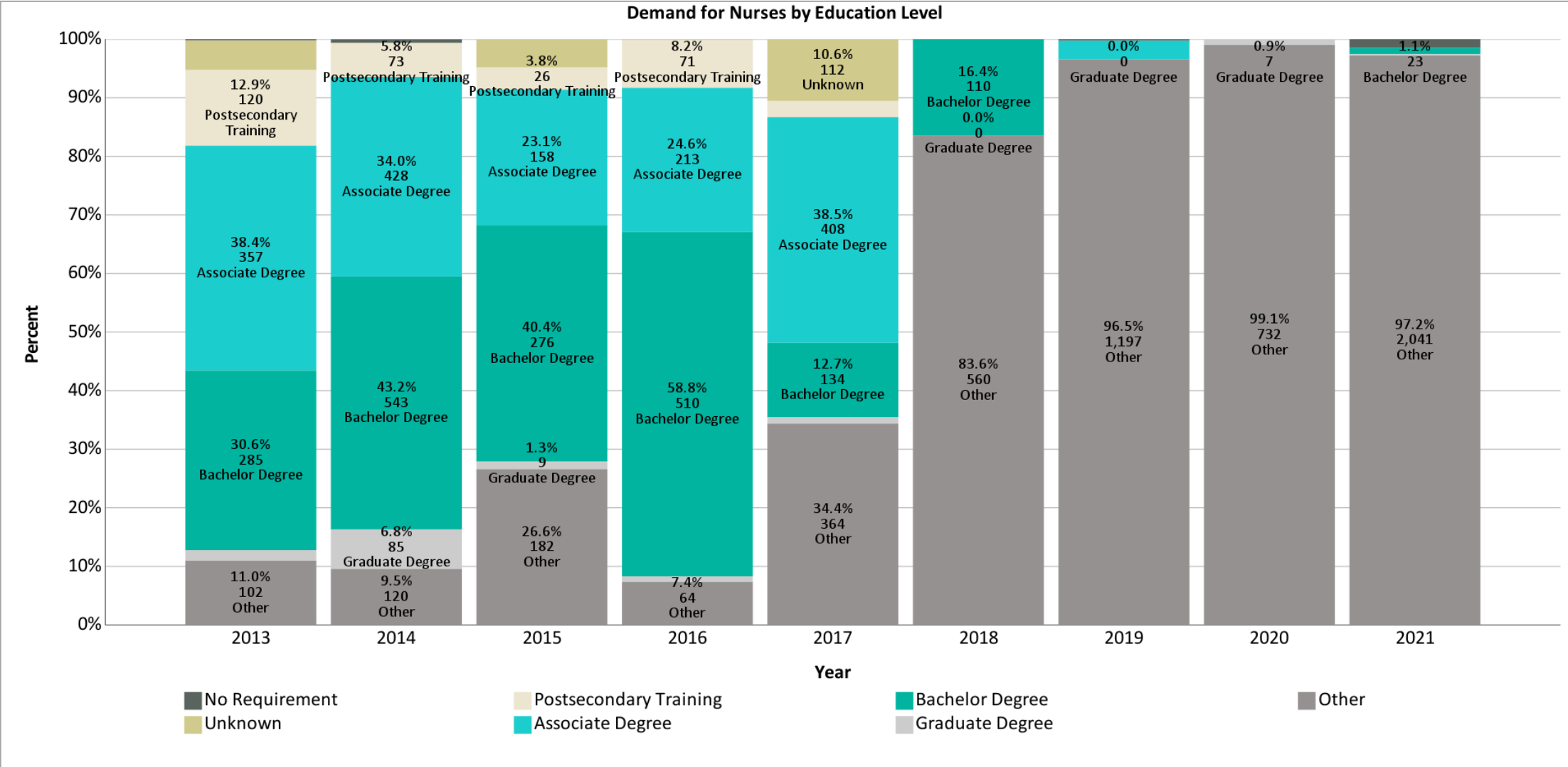


IPEDS 2020, BLS 2021

REGIONAL SUPPLY AND DEMAND FOR REGISTERED NURSES IN OREGON

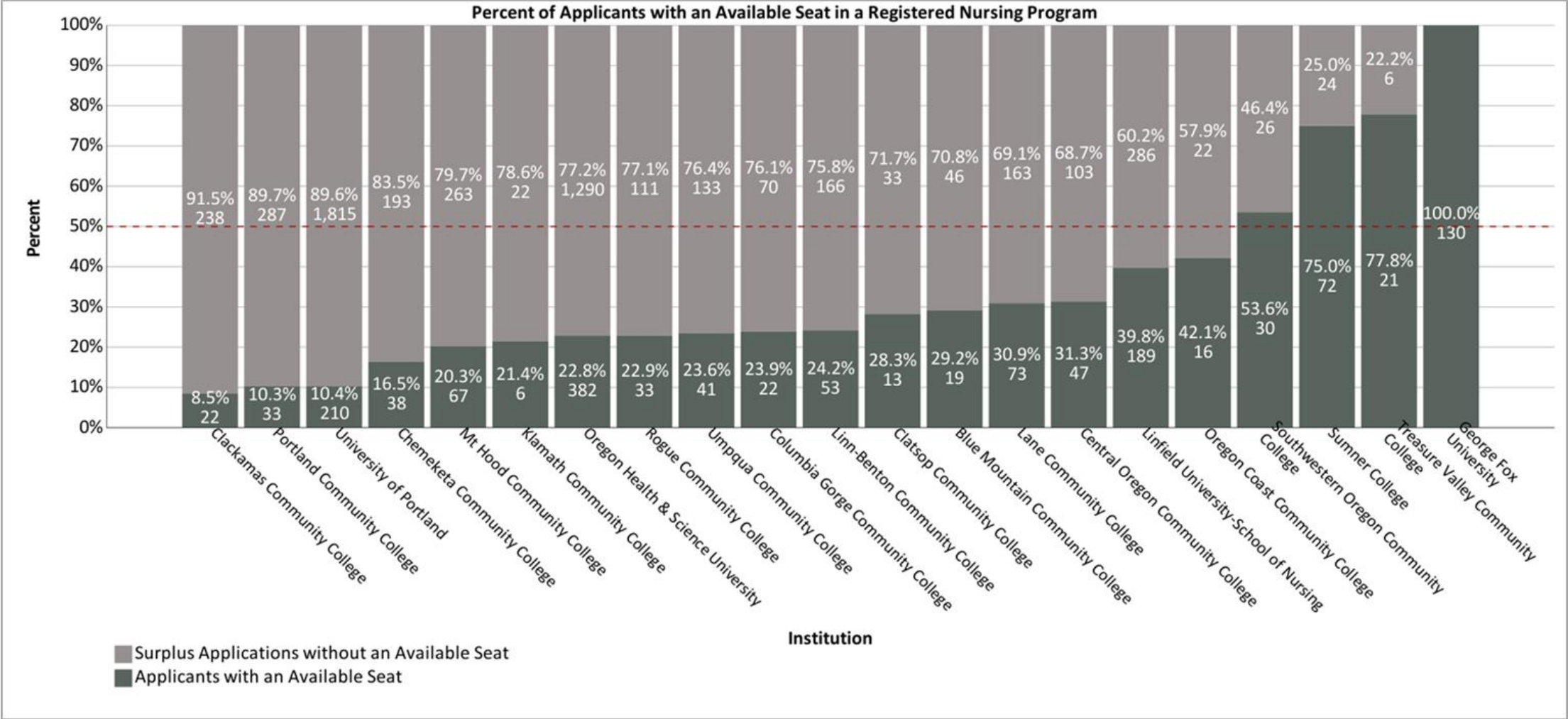


OREGON'S DEMAND FOR NURSING DEGREES BY AWARD LEVEL



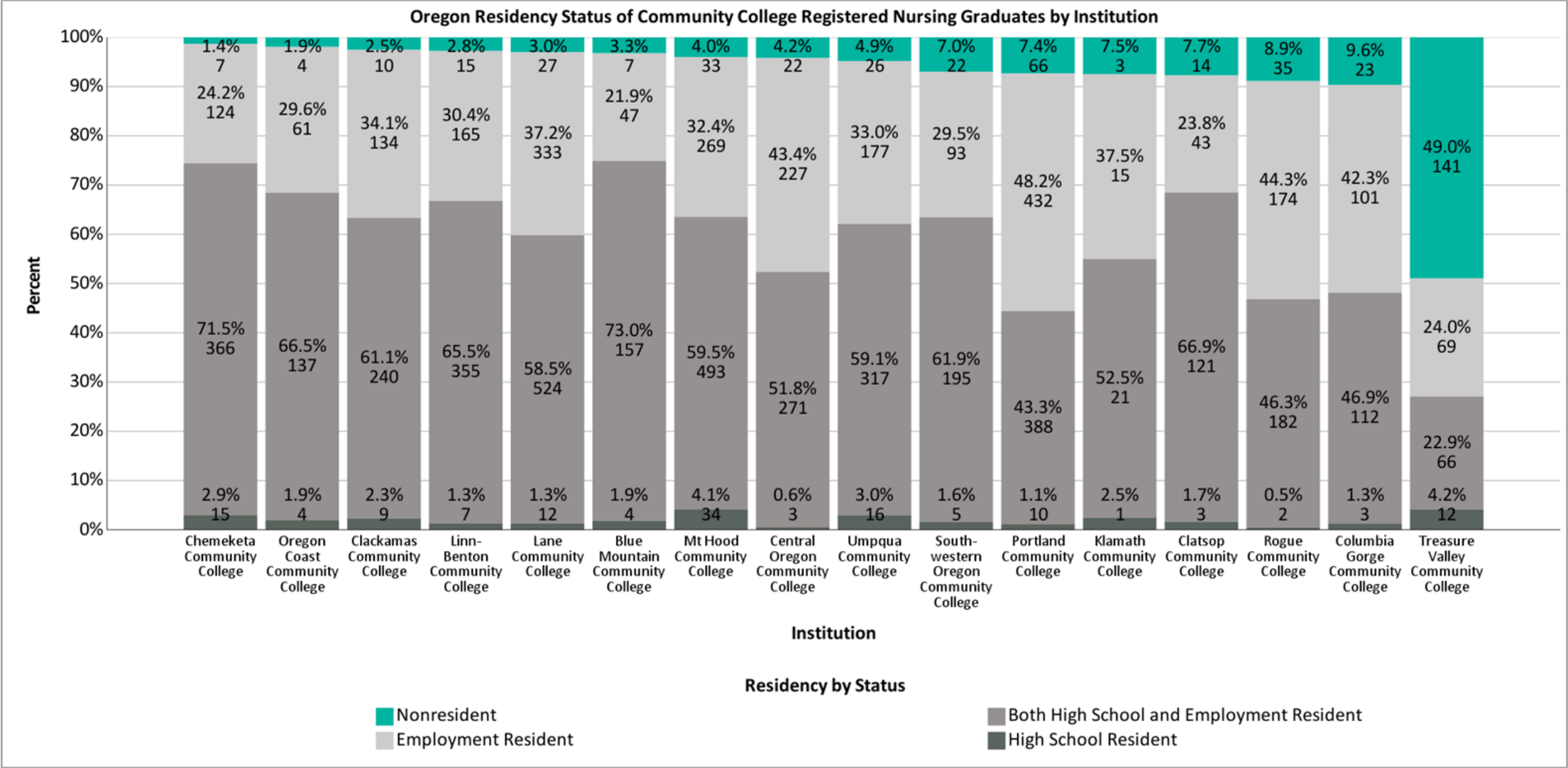
Nelson, OED annual job vacancy survey 2013-2021

OREGON'S SUPPLY OF QUALIFIED PROSPECTIVE STUDENTS

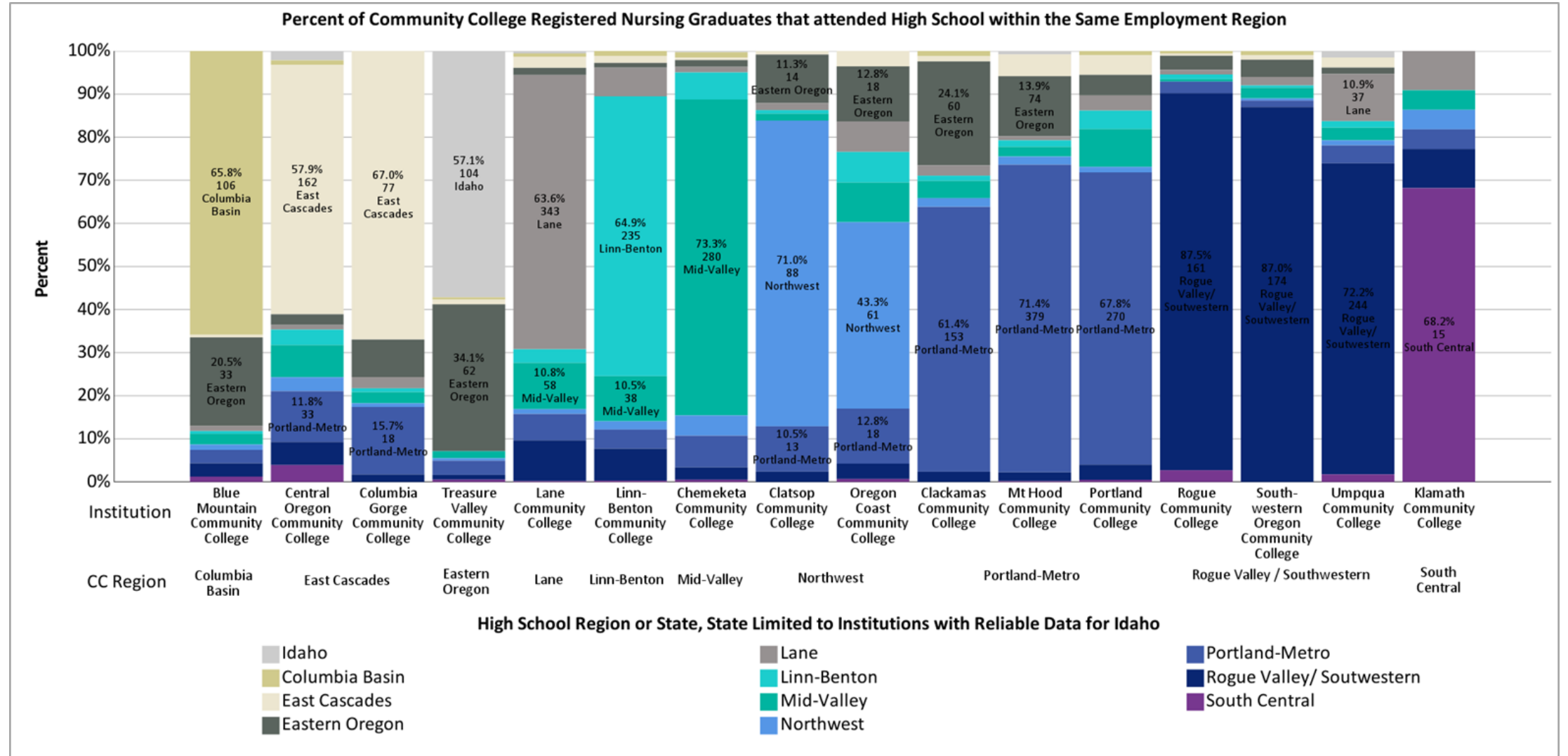


IPEDS 2020, OSBN 2021

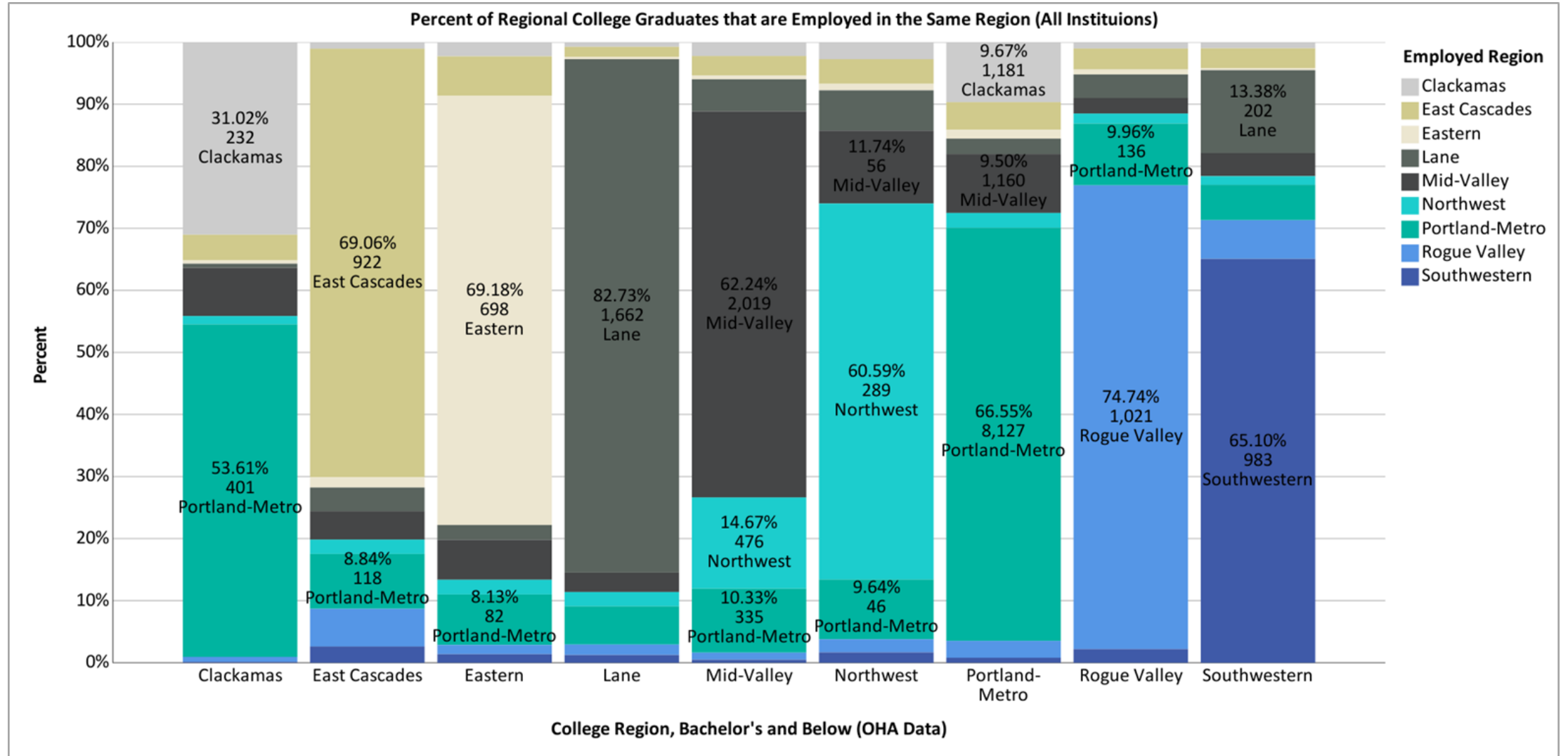
SLDS DATA: RESIDENCY OF OREGON'S NURSING STUDENTS



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



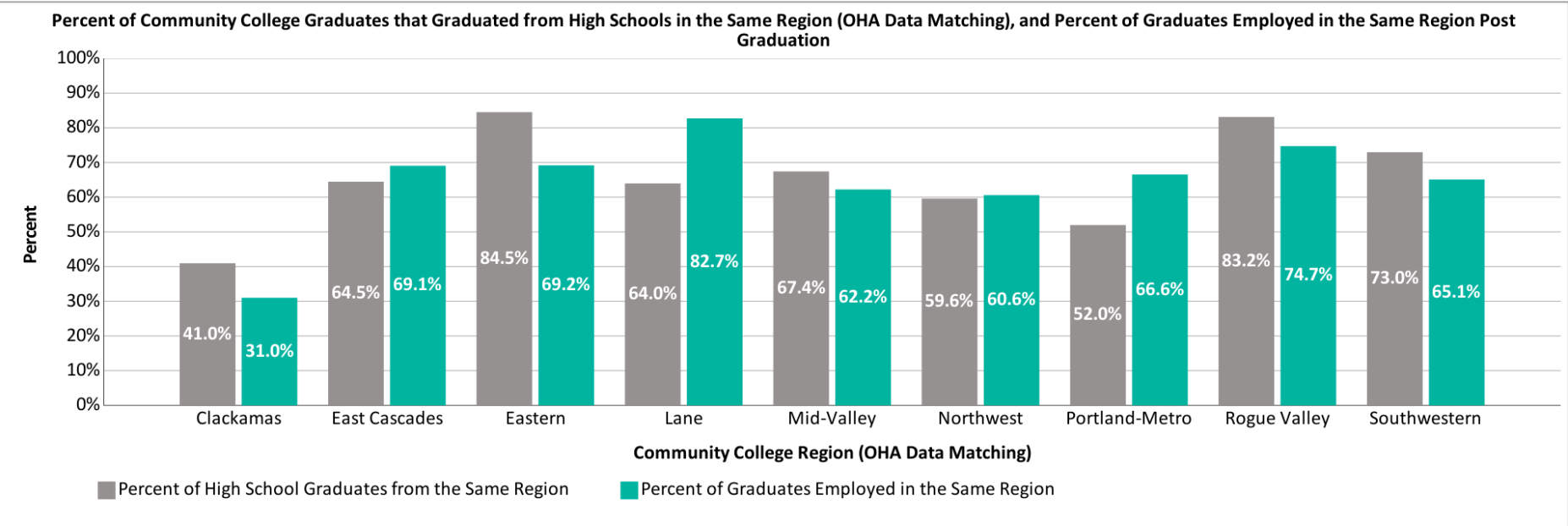
WHERE OREGON'S NURSING GRADUATES WORK POST-GRADUATION



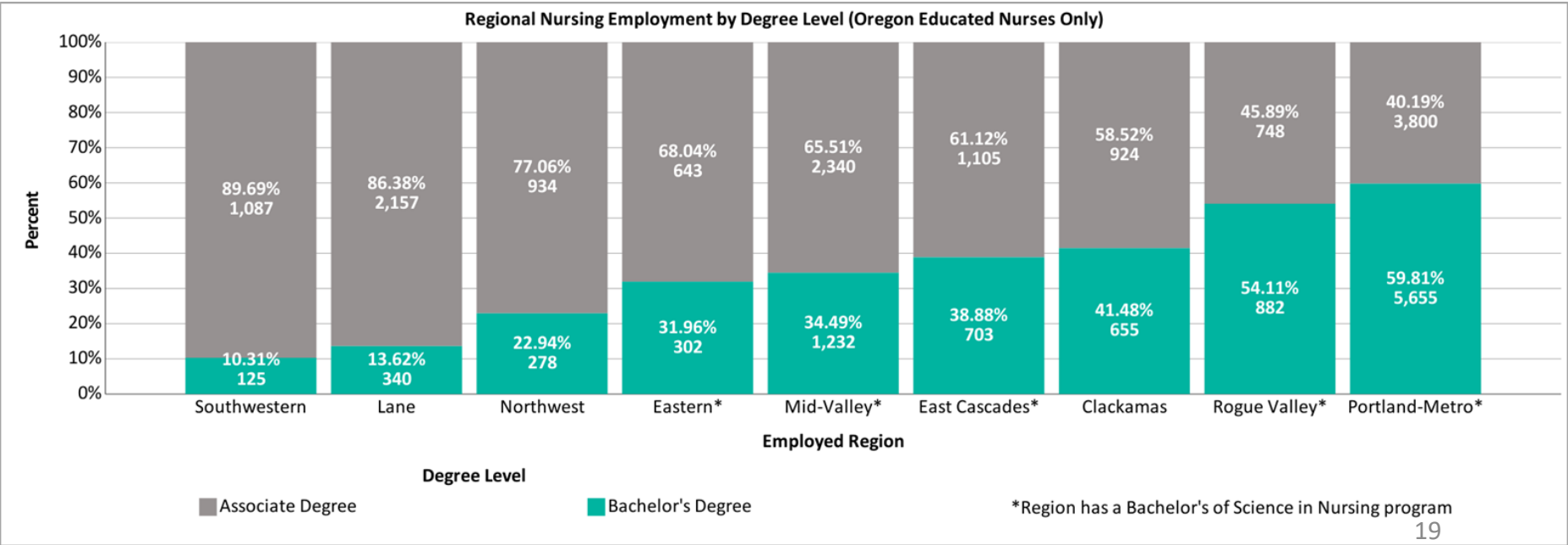
REGIONAL DIFFERENCES & INEQUITIES

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.



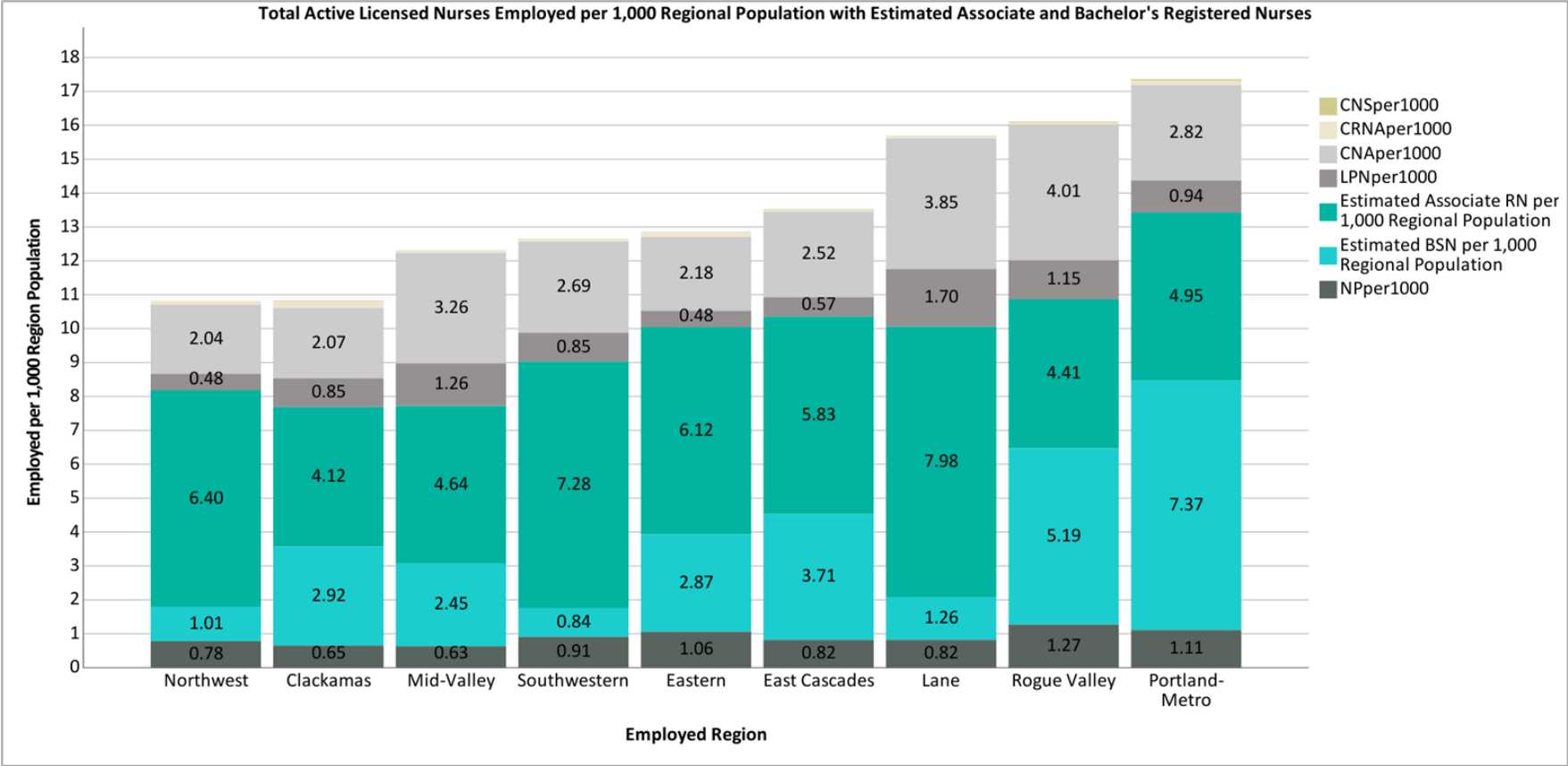
OSBN 2021, IPEDS 2020, OHA 2022



REGIONAL DIFFERENCES & INEQUITIES

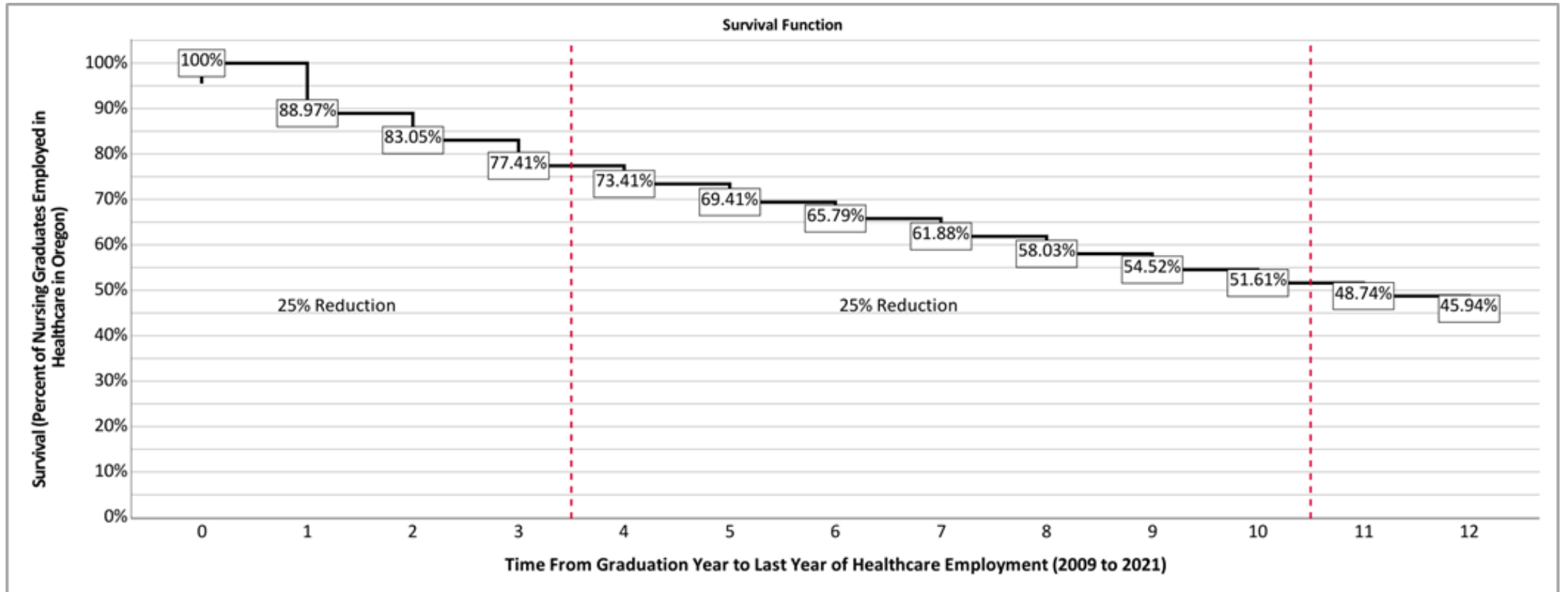
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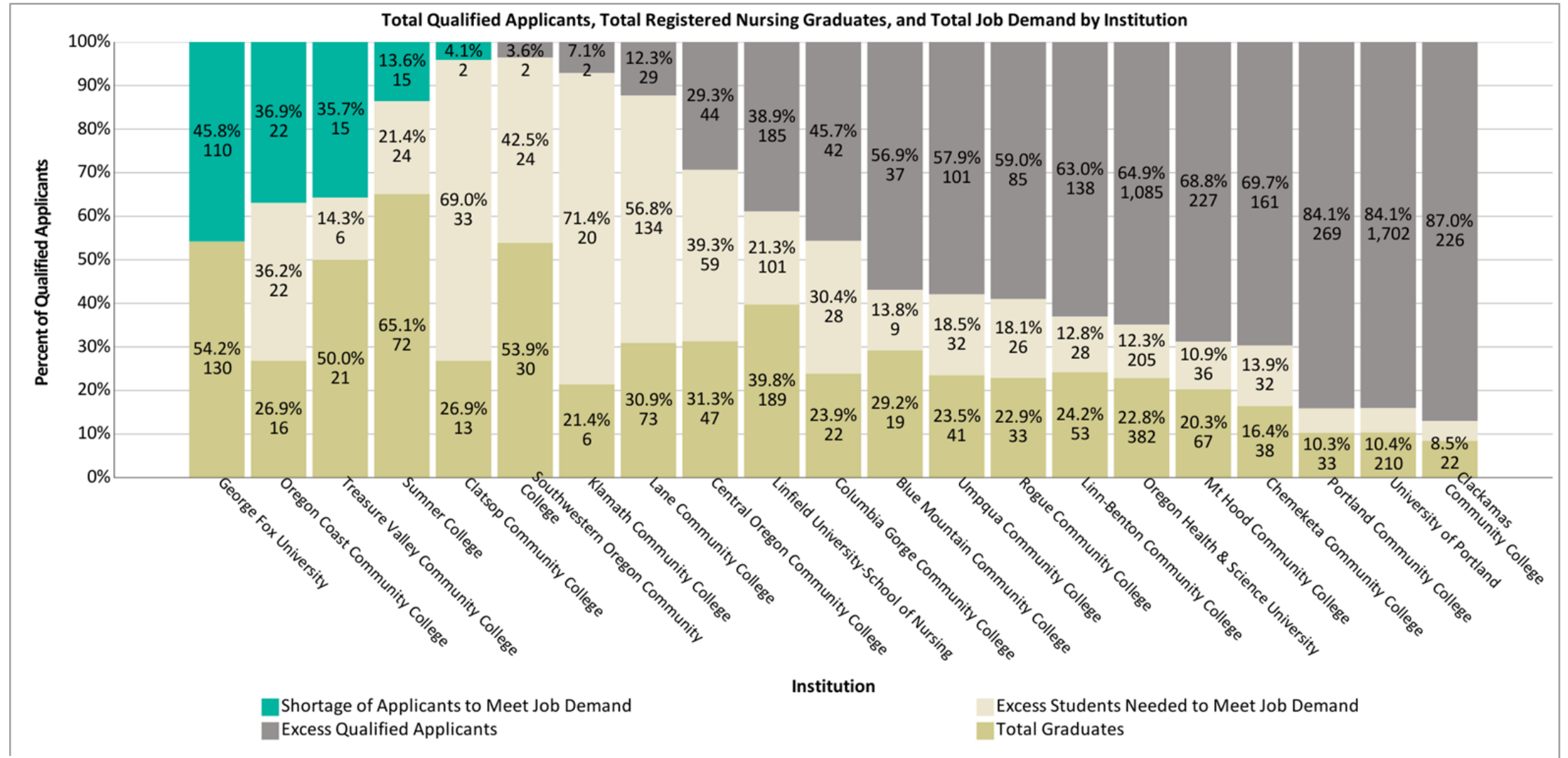
OHWRP 2022

SLDS DATA: NURSING WORKFORCE RETENTION



OLDC 2009-2020

REGIONAL SUPPLY AND DEMAND FOR REGISTERED NURSING GRADUATES BY INSTITUTION

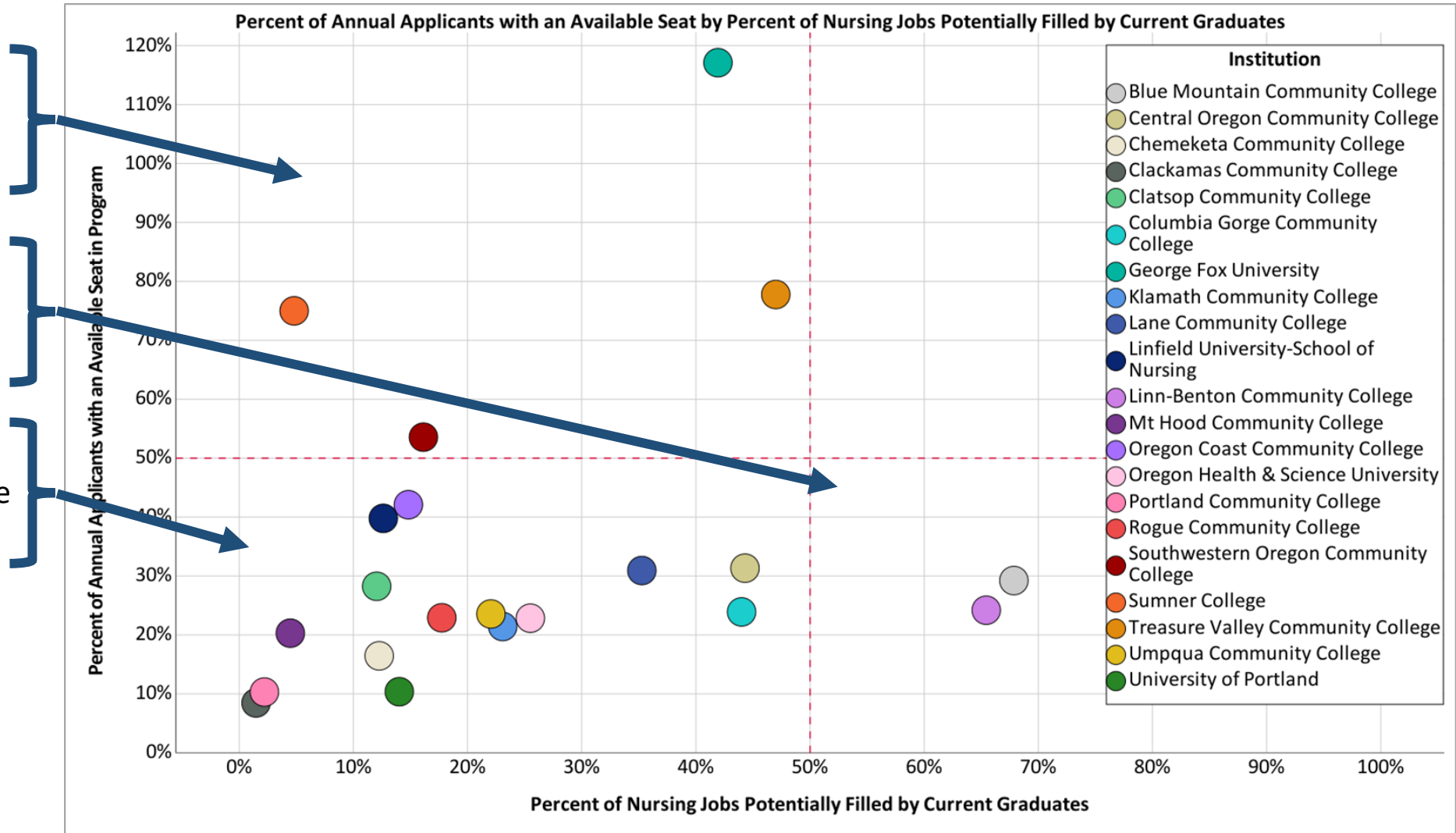



REGISTERED NURSING PROGRAMS THAT HAVE THE POTENTIAL TO EXPAND

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.



The background of the slide is a photograph of the Oregon State Capitol building. The building is a large, light-colored stone structure with a prominent central dome topped by a statue. It is set against a dramatic sunset sky with streaks of orange and yellow light. To the left of the building, there are dark silhouettes of evergreen trees and a flagpole. The overall mood is serene and official.

CAUSES OF OREGON'S POSTSECONDARY NURSING EDUCATION SHORTAGE

2022 OLDC HEALTHCARE PROGRAM SURVEY

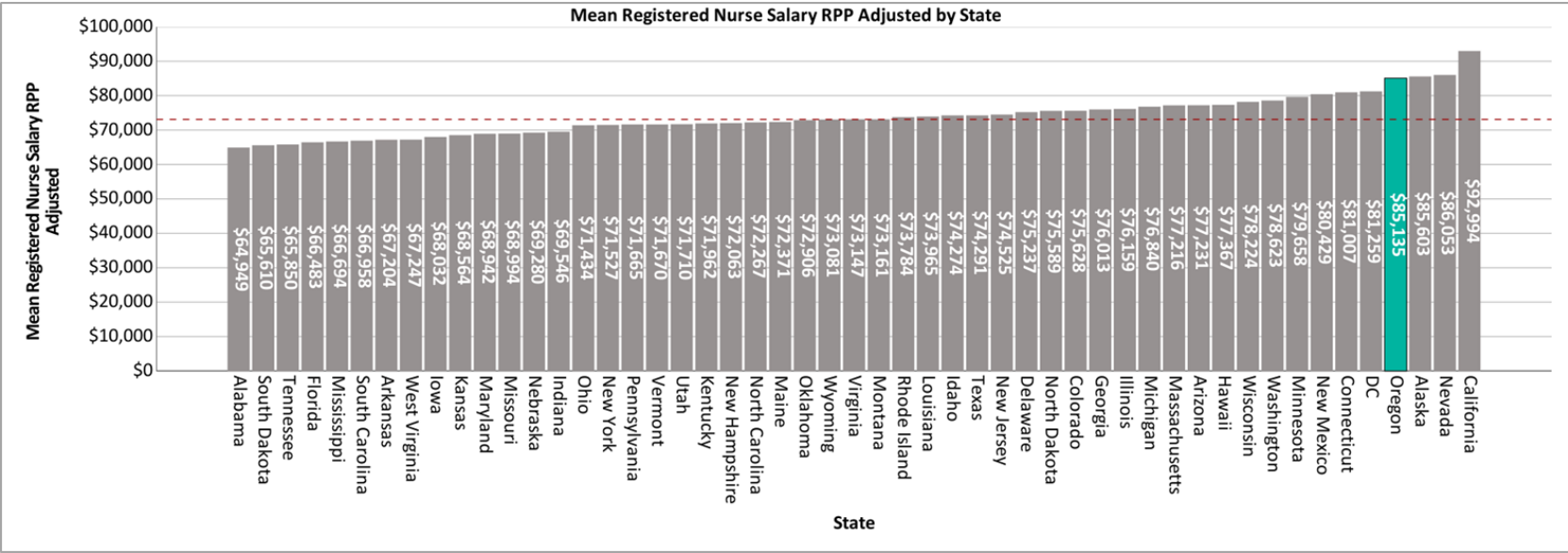
In 2022 the OLDC sent surveys to every community college nursing program in Oregon, to discover the barriers that our registered nursing programs faced in expansion.

| 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.) |

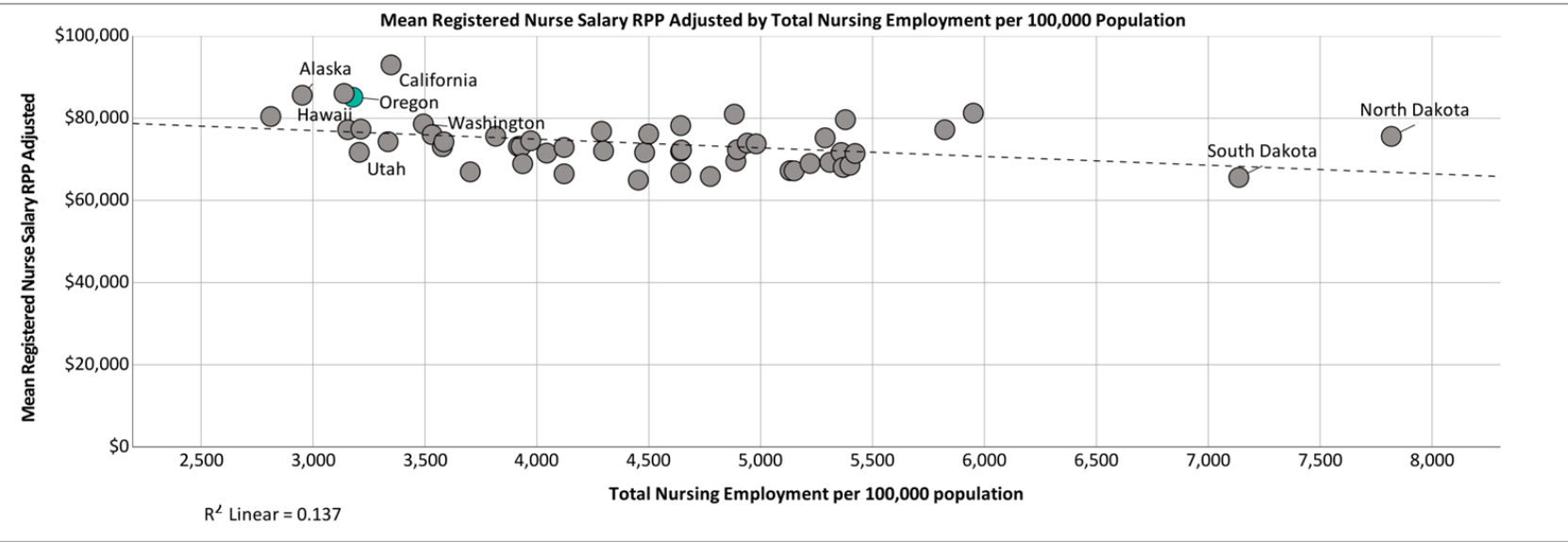
MEAN FTE REGISTERED NURSING SALARIES

(COST OF LIVING ADJUSTED BY RPP)

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.

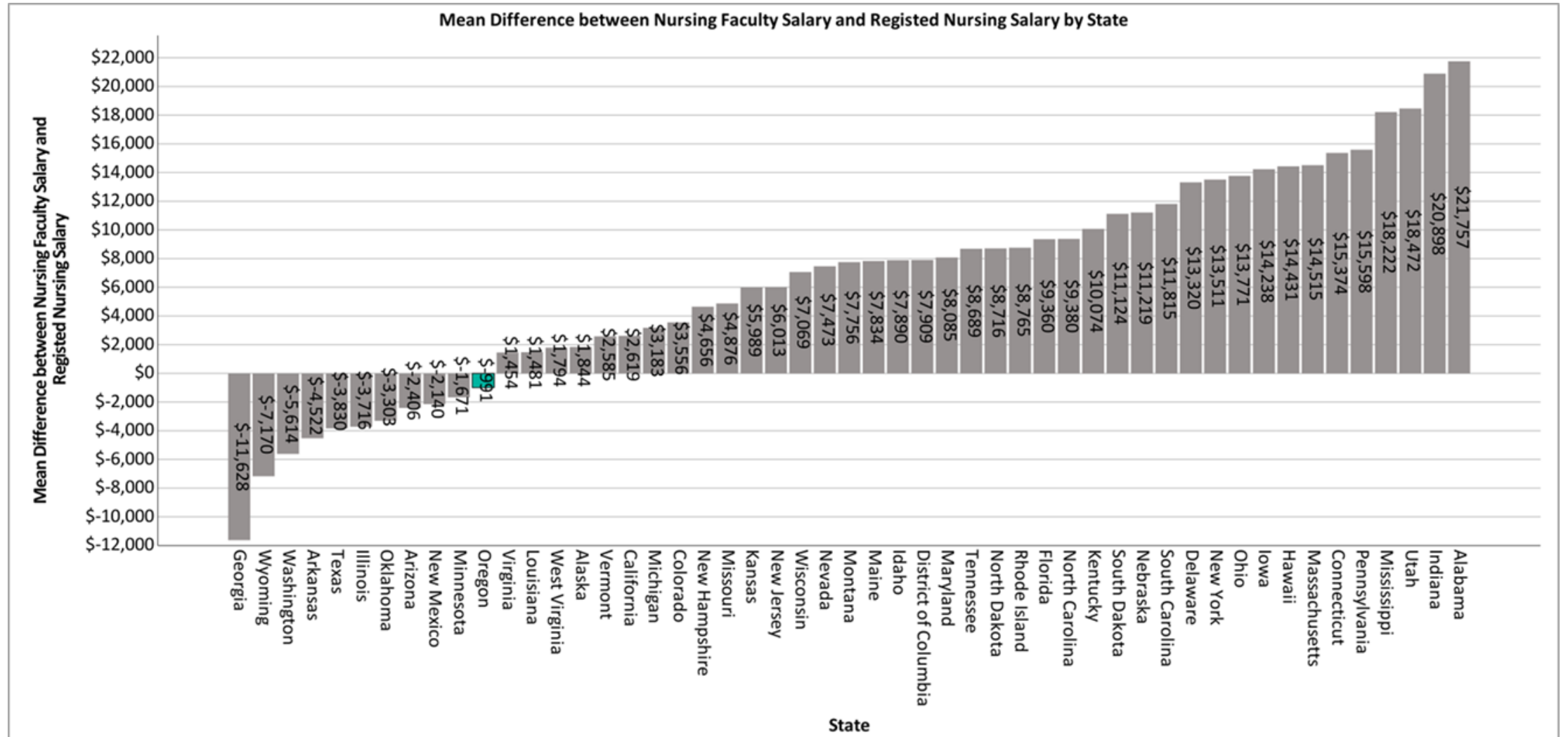


BLS 2021

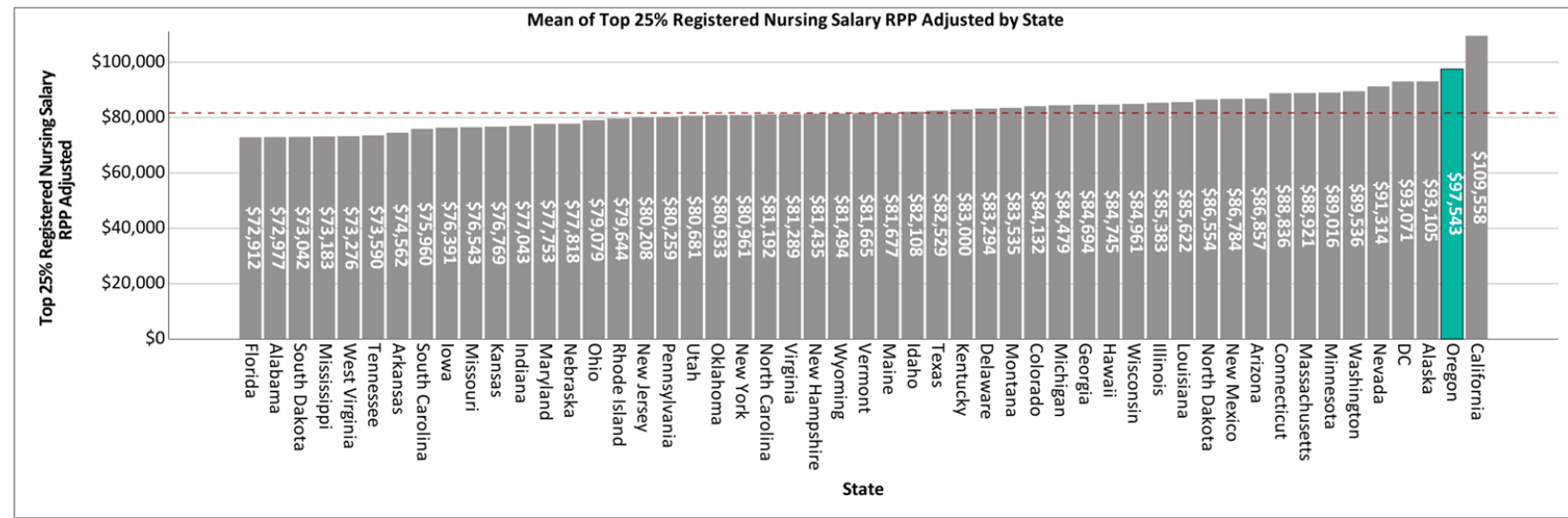


BLS 2021

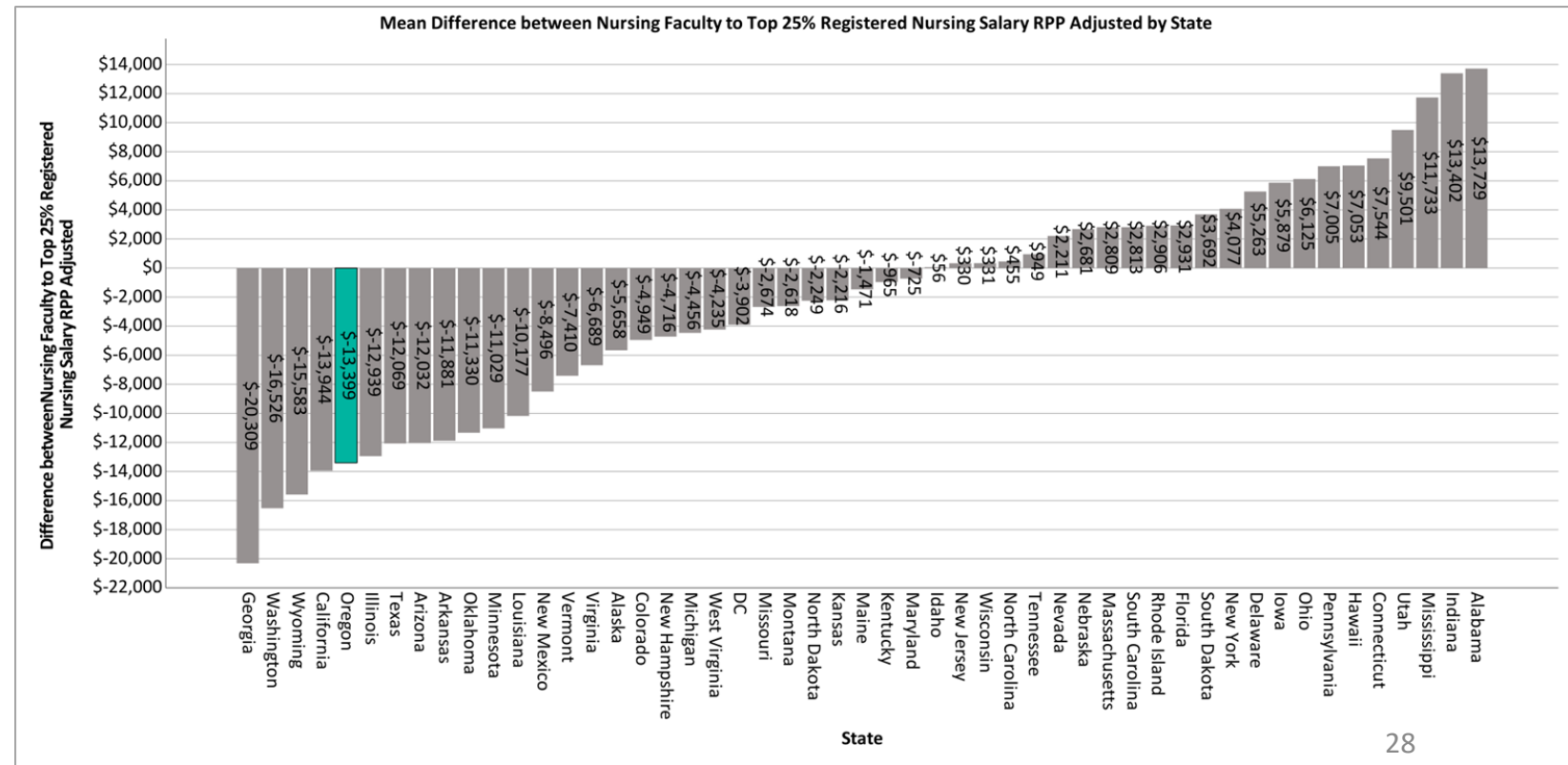
OREGON IS 1 OF 11 STATES WHERE THE MEAN REGISTERED NURSING SALARY IS MORE THAN THE MEAN NURSING FACULTY SALARY



NURSING FACULTY SALARIES AND TOP 25% REGISTERED NURSING EARNERS

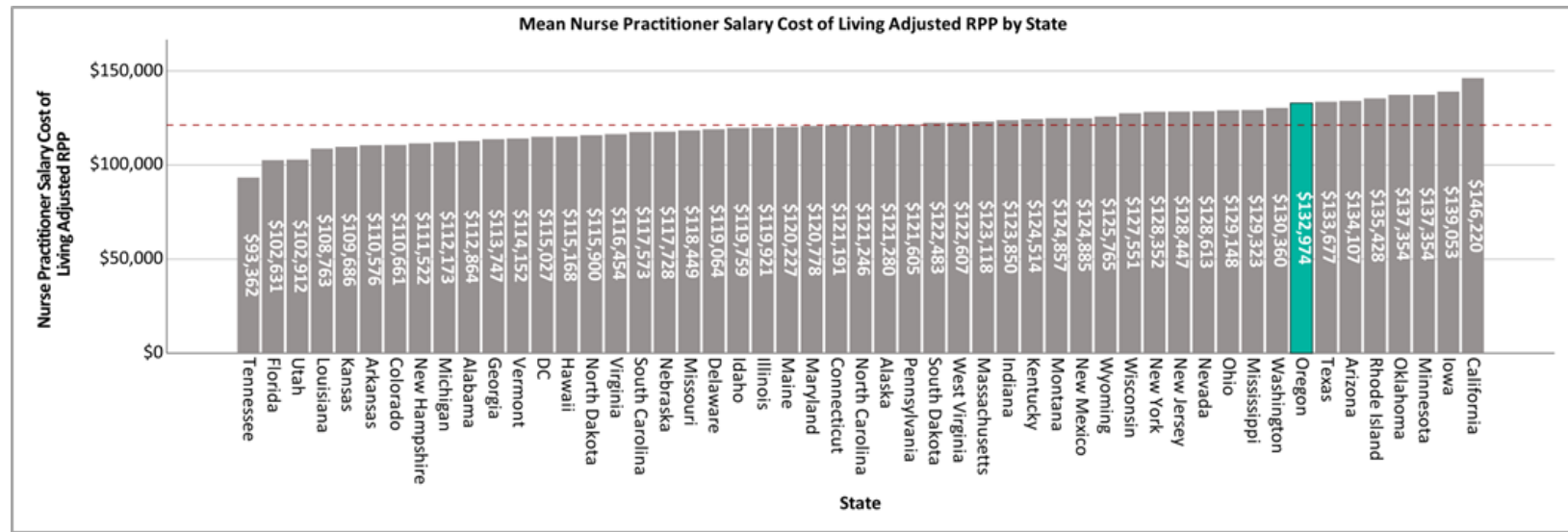


BLS 2021

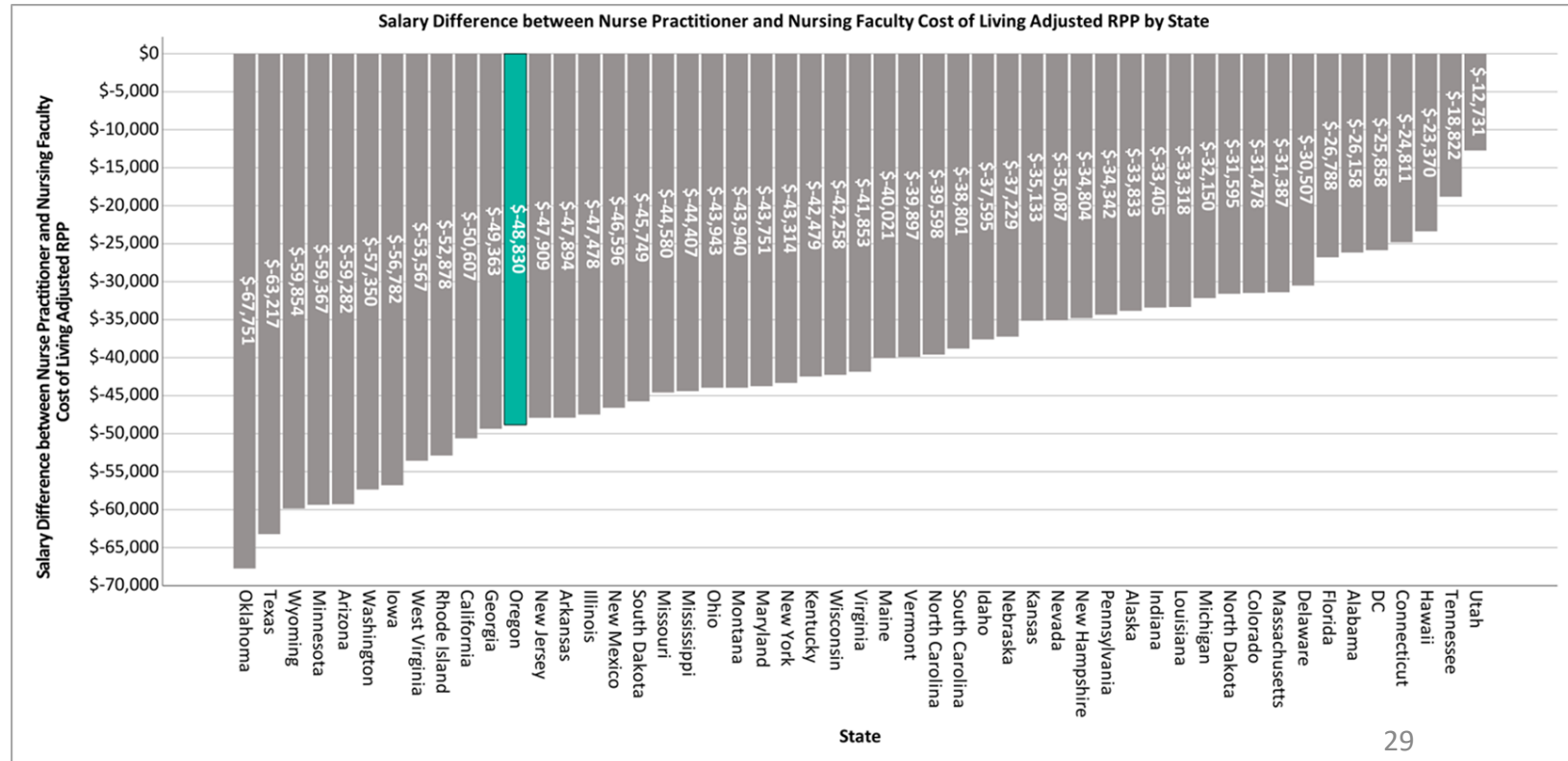


BLS 2021

NURSING FACULTY SALARIES AND NURSE PRACTITIONER SALARIES

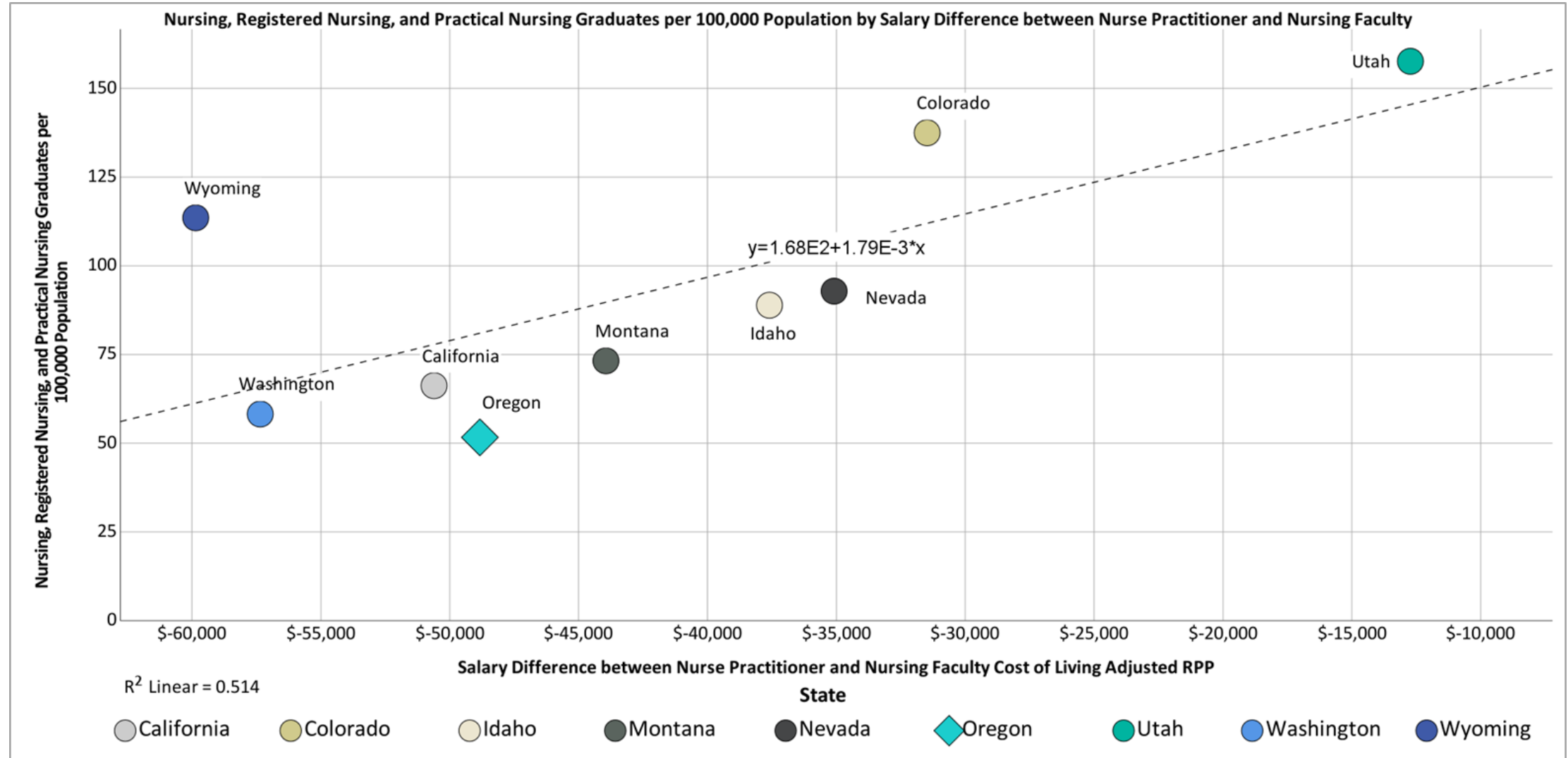


BLS 2021



BLS 2021

REGRESSION ANALYSIS OF FACULTY SALARIES AND PROGRAM CAPACITY

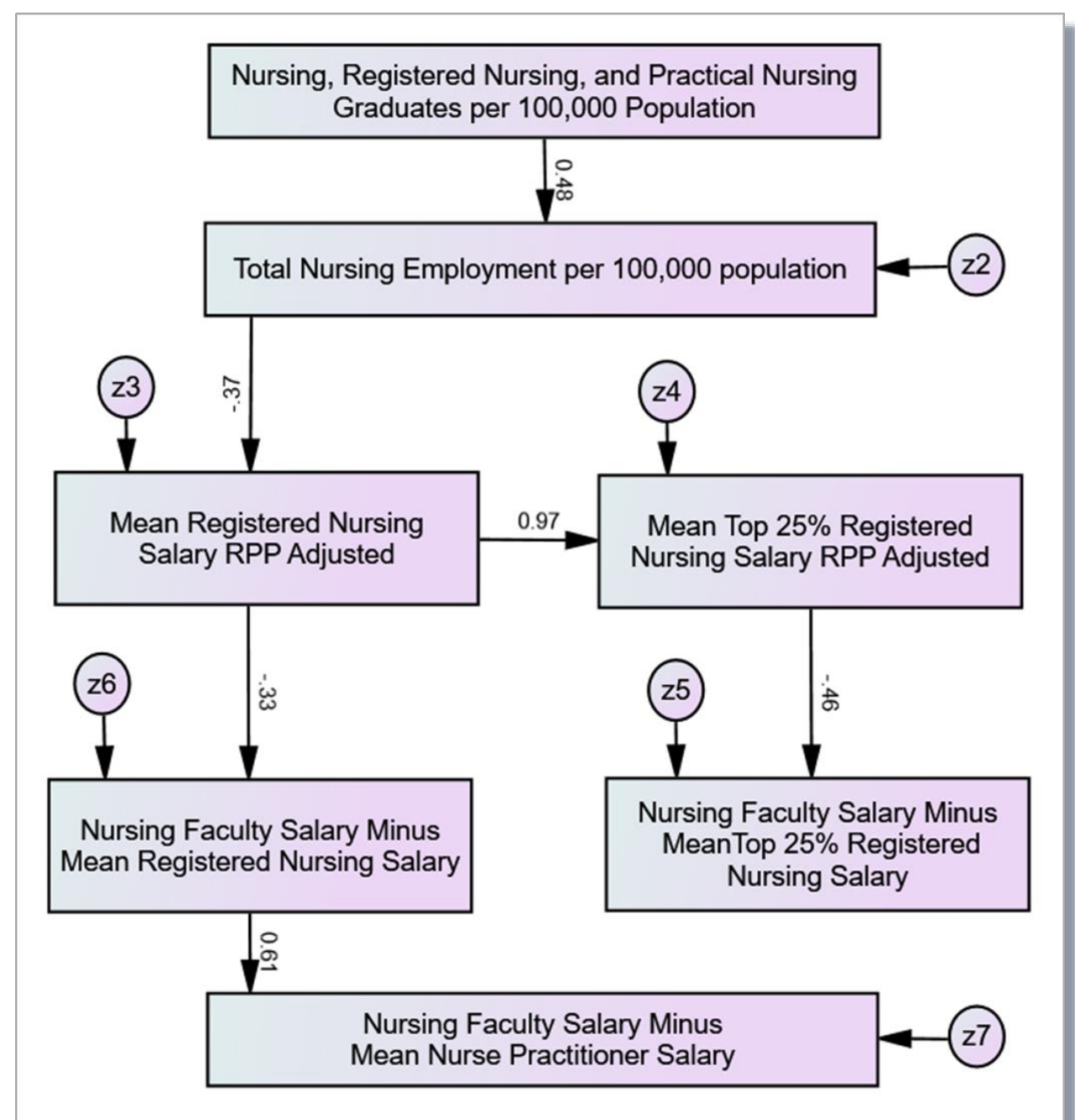


PATH ANALYSIS TO DETERMINE DIRECTIONALITY OF CORRELATIONS

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.



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 | | |

OSBN 2016-2020

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.

Press Coverage

- Local Television News:

- https://www.kdrv.com/video/study-details-nursing-shortage-in-oregon/video_487a5a39-988d-5e3e-8e70-5e73e64b02cb.html

- Local Print Media:

- <https://www.opb.org/article/2023/03/17/oregon-nursing-shortages-nurse-education-shortage-study/>