

Oregon Healthcare Workforce Committee

AGENDA – September 7, 2016

9:00 – 11:15 am

Wilsonville Training Center, Wilsonville, OR 97070

29353 SW Town Center Loop, E Room 111/112

Meeting Objective: Advance the work on each and every one of the Committee's deliverables

#	Time	Agenda Item	Presenter(s)	Action Item
1	9:00 – 9:05	Convene HCWF Committee, Welcome, Introductions	David Pollack	
2	9:05 – 9:10	Approval: Jan 6, 2016 meeting summary	David Pollack	X
3	9:10 – 9:25	Wrap-Up of HB 3396 work	Carla McKelvey, OHPB Robyn Dreibelbis Marc Overbeck, OHA Members	
4	9:25 - 10:10	Charter Deliverable: Behavioral Health Integration Deliverables, Committee Discussion	Alicia Moreland Sheldon Levy Steph Jarem	
5	10:10 – 10:20	Health Care Workforce Reports	Marc Overbeck Stacey Schubert	
6	10:20 – 10:40	Health Care Training Programs	Art Witkowski, Oregon Department of Education	
7	10:40 – 11:00	Discussion of Committee Charter	All	
8	11:00 – 11:10	Public Comment	Any	
9	11:10 – 11:15	Good of the Order, Adjourn: Next Meeting November 2, 2016	David Pollack	

Subcommittee on Behavioral Health Integration

11:30 am – 1:00 pm

Wilsonville Training Center, Wilsonville, OR 97070

29353 SW Town Center Loop, E Room 111/112

Time	Agenda Item	Participating	Action Item
11:30 – 1:00 pm	Meeting on Behavioral Health Integration Deliverables: <ul style="list-style-type: none">• Environmental Scan• Taking Behavioral Health Pilots to Scale• Identification of Barriers to Integration and Solutions	Any Committee Member, plus Invited Subject Matter Experts	

Meeting Materials

1. Agenda
2. July 6, 2016 Meeting Summary
3. Final materials on HB 3396
4. Behavioral Health Integration Subcommittee Materials
5. Department of Education Report
6. Committee Charter

Oregon Healthcare Workforce Committee
July 6, 2016 9:00 am– 12:15 pm
at Wilsonville Training Center
DRAFT - Meeting Summary

Committee Members in Attendance:	Patrick Brunett Jeff Clark Jeff Papke Robyn Dreibelbis Janus Maybee Alisha Moreland Maria Lynn Kessler	David Pollack Annette Fletcher Kate Lee (By phone) Troy Larkin Shilena Battan Dr Gorman
Committee Members not in Attendance:	Tawna Sanchez David Nardone	Daniel Saucy
OHA staff, OHWI, OCN	Stephanie Jarem, OHA Marc Overbeck, OHA Margie Fernando, OHA Oliver Droppers, OHA	David Simnitt, OHA Chad Johnson, OHWI Jana Bitton, OCN
Others	Carla McKelvey, Oregon Health Policy Board Liaison Paul Hogan, Lewin Group Sebastian Negrusa, Lewin Group Scott Ekblad, Oregon Office of Rural Health Catherine Cushing, Oregon GME Consortium	

1	Welcome
	David Pollack welcomed everyone to the meeting.
2	Approval: Meeting Summary
	The meeting summary of May 4, 2016 was accepted without changes.
3	Updates
	<u>OHPB Updates</u> Carla McKelvey noted that OHPB is expecting a presentation of HB3396 on July 15, 2016. Robyn and Marc will be presenting the progress report to the Legislature, along with representatives of the Lewin Group.

4	OHA update
	<p>Marc introduced Dr. Paul Gorman as a perspective member who is being considered for appointment to the Committee. Patrick Burnett will be retiring and leaving the Committee at the end of August. David thanked Patrick for his contribution to the Committee and welcomed Dr. Gorman to the meeting.</p> <p>Marc informed the committee that the application cycle has closed for new sites that want to participate in the National Health Service Corps (NHSC). 23 applications were received from around the state. 8 of these were from Behavioral Health practice sites. The PCO is recommending to NHSC that all 23 be approved. If approved, these sites will be added and their providers can apply for federal loan repayment next January.</p> <p>Marc also informed that he is working with the Analytics staff to collect and display provider data across oral, behavioral and physical health care. This data will be able to tell us how much provider capacity exists in what parts of Oregon.</p> <p>Alisha Moreland asked if telehealth statistics will be included in the data that is being collected. Marc replied that there is not much telehealth data being included. He noted that the Lewin group also was unable to include telehealth data in their findings. However Marc said that in the context of finding out how many FTE providers are out there, telehealth providers will probably be included in future datasets.</p> <p>Mike Morris from Health Policy and Analytics introduced Jackie Fabrick, OHA, who will be joining the committee as the lead analyst for the Behavioral Health and will be working on the mapping tool. She will be updating the committee on the progress of this tool and other activities and working with the BHI Subcommittee.</p> <p>Art Wikowski was scheduled to give a presentation on Health Sciences education on the training programs for the healthcare workforce committee but he was unable to attend due to a late conflict at the office. He may be able to present his report at the next meeting.</p>
5	Update on HB3396: Provider Incentives Study
	<p>Since the last meeting, the HB3396 team held 5 Listening sessions with stakeholders in Astoria, Lebanon, Pendleton, Prineville and Roseburg. The goal of these meetings was to hear directly from health care clinicians, employers, local officials and others impacted by the availability of health care providers, provide feedback on Lewin’s recommendations and hear from communities in Oregon.</p> <p>Marc provided a summary of the responses for the committee in this powerpoint.</p>

	<p>There was a great deal of discussion of the work done to date with additional questions of the Lewin Group team. The Committee decided to set up a date in August to review the final draft report and agree on recommendations to the Board.</p>
6	<p>Behavioral Health Update</p>
	<p>Alisha presented a brief update of the work of the Subcommittee, including the survey of practices and some preliminary findings. She indicated that the list of perceived barriers is being summarized and she will have more to present at the next meeting. The Subcommittee is on-track for its work to be completed by November.</p> <p>A phone meeting will be set up for members of the Subcommittee prior to the September HCWF Committee meeting.</p>
7	<p>Invited Testimony</p>
	<p>There was invited testimony from key experts surrounding HB3396:</p> <ul style="list-style-type: none"> • ORH – Scott Ekblad <p>Scott commended the Lewin Group for doing a great job with limited data resources that were available. Scott indicated he agreed that more data needs to be gathered over a longer period of time, and that there should be an ongoing evaluation of the various programs.</p> <p>Scott indicated that we don't have a lot of control over the federal programs, but that we can with the state-funded incentives. He said that "Grow your own programs are good" but that they are more of a long term investment and not one for the short-term to achieve results now. Overall he believes we need more incentives, not less, especially for rural communities</p> <ul style="list-style-type: none"> • OCN – Jana Bitton <p>OCN submitted written testimony.</p> <ul style="list-style-type: none"> • OHWI – Chad Johnson <p>OHWI submitted written testimony. Chad generally spoke to being pleased with the work products of this effort and agreed that more data collection will be helpful moving forward.</p> <ul style="list-style-type: none"> • GME Consortium – Cathryn Cushing, Executive Director <p>Cathryn introduced herself and spoke about the GME Consortium as one of the solutions for addressing the shortage of rural residency programs and training slots in Oregon. She noted that evidence shows that physicians who train at rural locations are 70% more likely to stay at the location; an example is Klamath Falls.</p>

	Cathryn spoke out for more data in order to make further decisions and a comprehensive, coordinated approach that is not “piecemeal.”
8	Adjourn The meeting was adjourned at 12:15pm.

DRAFT

**Oregon Healthcare Workforce Committee
August 16, 2016 10 am – 12 pm
Webinar Meeting Minutes**

Committee Members in Attendance:	David Pollack, Chair Robyn Driebelbis, Vice Chair Shilena Battan Jeff Clark Annette Fletcher	Marialynn Kessler Troy Larkin Kate Lee Jeff Papke Daniel Saucy
Committee Members not in Attendance:	Patrick Brunett Janus Maybee Alisha Moreland	David Nardone Tawna Sanchez
OHA staff,	Margie Fernando, OHA Stephanie Jarem, OHA Marc Overbeck, OHA	David Simnitt Tim Sweeney
Others	Carla McKelvey, Oregon Health Policy Board Liaison Paul Hogan, Lewin Group Sebastian Negrusa, Lewin Group	

1	Welcome
	David Pollack welcomed everyone to the meeting. David and Marc thanked the Lewin Group for their extensive work on this project.
2	Discussion: Final Recommendations for HB 3396
	<p>Marc presented the resource material for the meeting. Members discussed the various documents and turned to the four categories of recommendations presented.</p> <p>After considerable discussion, there was consensus to sending the four main recommendations along with the “bullets” to the Health Policy Board with various revisions. Staff will work up the revised recommendation set this week. The final set of recommendations will be sent to all members, requesting a SUPPORT or DO NOT SUPPORT vote.</p>
3	Adjourn
	The meeting was adjourned at 12:05 pm.



An Overview and Recommendations for Oregon's Provider Incentive Programs

For The Oregon Health Policy Board

September 6, 2016

Background

HB 3396

- Replaced most current provider incentives with OHA-administered Health Care Provider Incentives Fund
- Directed OHBP to “study and evaluate” existing programs and make recommendations to the Legislature regarding:
 - continuing, restructuring, consolidating or repealing current incentives;
 - prioritization of incentive funds to qualified providers; and,
 - consideration of new financial incentive programs.

Health Policy Board Action:

- Direction to Work Force Committee to study and report on existing programs and make recommendations on improvements to current incentives

Lewin Report and Listening Sessions

Key Findings and Data from Lewin Report

- Current programs *ALL* help increase number of providers in rural Oregon
- Recruitment vs. Retention effects are both important & existing programs can more effectively and efficiently work together to boost overall success
- Identified which programs had recruitment vs. retention effects & estimated marginal costs per FTE for existing programs.

Themes from Listening Sessions

- Short-, medium-, and long-term approaches are important
- Incentives must be flexible to respond to specific community needs
- Community involvement in recruitment and retention is important & state programs should encourage and support greater community involvement

Work Force Committee Conclusions

Flexibility in program design and implementation is needed to ensure communities can tailor state incentives to meet their individual needs

A holistic approach and increased coordination among incentive programs can improve efficiency and effectiveness

Additional State support to help communities take more ownership / involvement in recruitment and retention can pay dividends in the long run

Better and more data can help evaluate and direct incentives moving forward

Specifically committee recommends:

- Enhance data collection for all incentive programs.
- Expand awareness and ease of use for incentives among clinicians and employing sites.
- Consolidate and restructure programs for greater effectiveness and efficacy.
- Include community support in statewide systems to encourage providers to practice in rural and non-rural underserved areas.

1. Enhance data collection for all incentive programs

Top priorities from the Committee

- Collect common information on all program applicants and participants
- Create a comprehensive provider dataset (underway within OHA) that is linked to other data sources (i.e. medical and/or nursing boards) through unique identifiers.

Secondary recommendations

- Collect additional provider-level information
- Collect data on tele-health services and providers
- Identify providers in All-Payer All-Claims data for greater analysis of utilization

2. Expand program awareness and ease of use among clinicians and employing sites

- Create common application tools for all clinicians and clinical sites seeking both federal and state incentive funds that consolidates important information about each of the many programs
- Consider a “recruitment & retention hub” to streamline sharing of best practices & existing and new informational resources related to incentives
- Expand outreach through various networks—training programs, CCOs, statewide associations

3. Consolidate and restructure programs for greater effectiveness and efficacy

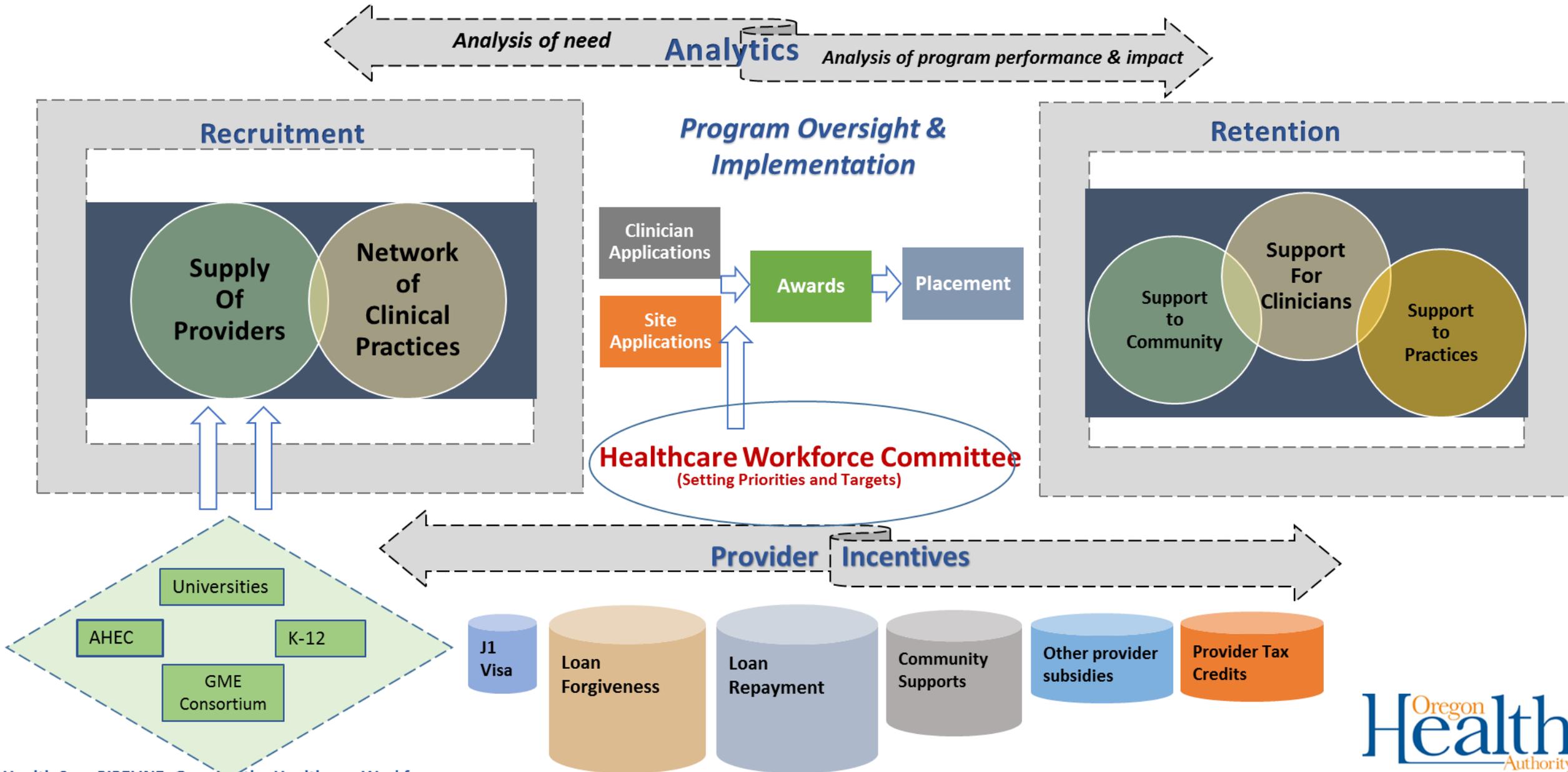
- Modify programs to allow differential award amounts based on: individual community needs, which clinical specialties are most needed, and/or the level of practitioner indebtedness
- Encourage applicants to commit to longer duration of service in order to increase likelihood of award approval
- Relax or remove existing requirements that applicants for loan repayment programs already have a job or agreement in place
- Direct more resources to loan repayment & forgiveness programs



4. Include community support as part of statewide systems to encourage providers to practice in rural and non-rural underserved areas

- Consider a “Recruitment and Retention Collaborative” or Institute to train sites and communities to bolster capacity around recruitment and retention
- Use grant dollars to leverage and support communities efforts to expand their recruitment and retention capacity
- Assist communities to create “incentive packages” that go beyond the financial incentives offered by the state

A potential “transformed view”-- Oregon healthcare Service Collaborative on Analytics, Recruitment & Retention (OSCARR)





MEMO

August 29, 2016

To: The Oregon Health Policy Board
From: Healthcare Workforce Committee
Subject: **Overview and Recommendations for Improving Oregon's Provider Incentive Programs**

The Health Care Workforce Committee is pleased to submit this report with recommendations on the future of health care provider incentives in Oregon, as directed by the Board and called for by House Bill 3396. Specifically, the memo is designed to fulfill the following requirement:

The Oregon Health Policy Board shall study and evaluate the effectiveness of financial incentives offered by the state to recruit and retain qualified health care providers in rural and medically underserved areas, and produce recommendations regarding 1) continuing, restructuring, consolidating or repealing current incentives; 2) prioritization of incentive funds to qualified providers; and, 3) consideration of new financial incentive programs.

With the support of the Committee, Oregon Health Authority (OHA) contracted with the Lewin Group— a nationally known leader in the health care program and workforce analysis—to conduct an assessment of Oregon's health care market and an empirical analysis of Oregon's existing provider incentive programs. A Steering Committee of stakeholders was formed to guide the work, and the Committee conducted a series of five Rural Listening Sessions around the state to hear directly from those impacted by these programs. (Summaries of these resources are included in the attached Report.)

The Committee took more than three hundred pages of analysis and findings into consideration to address the legislative mandate from HB 3396. In particular, these recommendations are greatly informed by the Lewin Group's finding that **all** of Oregon's incentive programs act to increase the supply of practitioners in underserved communities in some fashion, but that greater efficiency could be achieved with thoughtful programmatic improvements. Because HB 3396 has already directed the repeal of existing programs, the following recommendations provide principles and new approaches to ensure that Oregon's new Health Care Provider Incentive Fund builds on the success of previous efforts. New mechanisms to explore greater support for communities are also spelled out.

The Committee's recommendations can be summarized as:

1. Enhance data collection for all incentive programs
2. Expand program awareness and ease of use among clinicians and employing sites
3. Consolidate and restructure programs for greater effectiveness and efficacy
4. Include community support as a part of a statewide system to encourage providers to practice in rural and non-rural underserved areas

Please see the attached Report for the unabridged set of recommendations.

BACKGROUND

HB 3396, passed by the Oregon Legislature in 2015, repealed the authorizing statutes and funds for most of Oregon's existing health care provider incentive programs, and created a new Health Care Provider Incentive Fund to be administered by the Oregon Health Authority (OHA). In response to the requirements of the bill, the Board directed the Committee to study and report "on the efficacy of Oregon's provider incentives and recommendations on improvements to the current incentives."¹

The Committee's recommendations are derived from the key findings from Lewin and the Rural Listening Sessions, as follows:

Key Lewin Findings

- All of Oregon's programs have a positive effect on the number of providers serving rural communities.
- Loan repayment and forgiveness programs have an important recruiting effect on primary care physicians, nurse practitioners, and physician assistants, but only a minor retention effect.
- State tax credits and other subsidies have negligible recruiting effect on primary care physicians and small recruiting effect on NPs and PAs, yet have a sizeable retention effect on eligible providers.
- Costs of attracting an additional FTE-year through any of the programs are similar across programs for all provider types, but are lower for NPs and PAs, compared to primary care physicians.

The full findings of Lewin may be found in Appendix A of the Report.

Listening Session Feedback

- An "Oregon Solution" is required that includes both short and long-term changes to the state's existing provider incentive programs.
- Recruitment and retention of health care providers is important from the standpoint of ensuring quality access to health care, but also as an economic investment in the community.
- Both state- and federally-funded incentive programs are vital and need to continue into the future.

See Appendix B of the Report for the full summary of the Listening Sessions.

Thank you for the opportunity to support the Board through our work on this topic over the past nine months to envision an improved system, which includes robust funding for loan repayment and loan forgiveness, consolidation of programs for greater flexibility, improving community capacity for recruitment and retention, and data collection and analysis to keep improving the effectiveness of our efforts. Between the empirical analysis conducted by Lewin, feedback received from rural communities about what works and what is needed, and the other stakeholder engagement undertaken, we are confident that the knowledge and ability exist to achieve the streamlined system of supports as envisioned in HB 3396. We look forward to continuing to assist in the development of this system over the coming years.

¹ Health Care Workforce Committee Charter August 2015.

OREGON HEALTH POLICY BOARD
Health Care Workforce Committee

**Overview and Recommendations
for Improving Oregon's Provider
Incentive Programs**

Report and Recommendations for the Oregon
Health Policy Board

September 6, 2016

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Appendix A: Lewin Group Report Executive Summary

Appendix B: Listening Sessions Summary Memo

Appendix C: Conceptual Framework for Oregon healthcare Service Collaborative on Analytics, Recruitment & Retention (OSCARR)

Appendix D: Discussion Guide Matrix for Committee

Overview and Recommendations for Improving Oregon’s Provider Incentive Program

Background

In 2015, the Oregon Legislature enacted HB 3396, which repealed authorizing language and funding sources related to most of Oregon’s health care provider incentives used to attract and retain providers in rural and non-rural underserved areas and populations. In their place, HB 3396 created the Health Care Provider Incentive Fund to be administered by the Oregon Health Authority (OHA) and further directed the Oregon Health Policy Board to “study and evaluate the effectiveness of financial incentives offered by the state to recruit and retain qualified health care providers in rural and medically underserved areas.” The Board was directed to produce recommendations to the Legislature regarding:

- continuing, restructuring, consolidating or repealing current incentives;
- prioritization of incentive funds to qualified providers; and,
- consideration of new financial incentive programs.

In response to these and other requirements of HB 3396, the Board directed the Health Care Workforce Committee (Committee) to study and report “on the efficacy of Oregon’s provider incentives and recommendations on improvements to the current incentives. Recommendations should also include other types of incentives...”¹

To this end, members of the Committee worked with the OHA to contract with The Lewin Group to perform an analysis of Oregon’s health care market and its existing provider incentive programs, resulting in data-driven recommendations to guide the Workforce Committee’s deliberations. A Steering Group was also formed to assist and guide the direction of Lewin’s work. The Steering Group included members of the Health Care Workforce Committee, the Oregon Office of Rural Health (ORH), the Oregon Healthcare Workforce Institute, Oregon Center for Nursing, and the Oregon Association of Hospitals and Health Systems (OAHHS). Further, OHA and the Committee collaborated with OAHHS, the Oregon Medical Association, and ORH to conduct five listening sessions in rural communities across the state to hear from providers, community leaders, clinic administrators, public health officials and other stakeholders about the strengths and weaknesses of Oregon’s current array of provider incentive programs. OHA staff provided a summary of these visits to the Committee.

Both the Lewin Group research and the feedback from the Listening Sessions greatly informed the Committee’s thinking. Below is a summary of the key points from each of these efforts:

¹ Health Care Workforce Committee Charter August 2015.

A. Overview of the Lewin Group Report

The Lewin Group has provided OHA and the Health Care Workforce Committee with a comprehensive report that:

- provides an overview of Oregon’s population and health care workforce along with projections of provider supply and demand in future years;
- examines Oregon’s existing programs and analyzes their impact on both retention and recruitment; and,
- makes various programmatic, policy, and data collection recommendations to increase the effectiveness of existing programs and enhance Oregon’s capacity for recruitment, retention and our ability to evaluate the effectiveness of our efforts over time.

Broadly, the Lewin Group found that **all** of Oregon’s incentive programs, “are successful in increasing the number of providers in rural areas in Oregon.”² While marginal costs per additional FTE vary slightly by program and provider type, the Lewin study showed that these costs are on the same basic order of magnitude.

The report further noted that the differing structures of the programs make some programs more suited to being recruitment tools while noting that the primary benefit of others was to encourage retention. The recommendations from Lewin – many of which are forwarded within this memo from the Committee – focus on making the programs more effective and efficient and collecting better data to inform policymakers and program administrators. Importantly, they also highlight the need to increase community-level support systems that are often outside the scope of the state’s incentive programs in order to help recruit and retain health care practitioners to underserved and/or rural communities.

B. Overview of Listening Sessions

Listening Sessions on the current performance and future of provider incentive programs in Oregon were held at five locations throughout the state:

- Astoria (Columbia Memorial Hospital)
- Lebanon (Good Samaritan Hospital)
- Pendleton (St. Anthony Hospital)
- Prineville (St. Charles)
- Roseburg (Mercy Medical Center)

Structure of sessions: Each listening session was scheduled for two hours in the evening at local, community hospitals. Health care employers, clinicians, CCOs and members of the local communities were invited. More than 100 Oregonians participated either in-person or remotely through webinars that were hosted at each site location, and 24 of Oregon’s 36

² 2016 Negrusa and Hogan, The Lewin Group

counties were represented. Thirteen of the state’s Coordinated Care Organizations were represented, as were local area school districts, rural health centers, federally qualified health centers, private clinics, local hospitals and health systems, county health departments, area universities, health care professionals, and a migrant health center. Physicians, hospital executives, nurse practitioners, residents, behavioral health professionals, and other interested health allied professionals also participated. Although the selected communities vary in size, composition, available local resources, and needs, a number of thematic areas were identified as key to informing recommendations.

Findings: Participants attending the listening sessions identified the need for both short and long-term solutions to address workforce issues in rural communities. They recognized that developing and ensuring an adequate primary care workforce requires a multi-prong strategy that should include investing state resources in “grow your own” (workforce pipeline) solutions, programs that more directly target recruitment, retention, or both in the short- and medium terms, and community support around recruitment and retention. It was also noted that communities would likely receive a greater benefit from incentive programs, either state or local, if combined with federally funded programs and other local resources. This could lead to a “comprehensive” package—particularly in rural areas—that simultaneously addresses both recruitment and retention needs together, rather than separately.

Committee Recommendations to the Board

The Workforce Committee offers the Board four key recommendations which summarize the research, analysis and feedback received throughout this process:

1. Enhance data collection for all incentive programs.
2. Expand program awareness and ease of use among clinicians and employing sites.
3. Consolidate and restructure programs for greater effectiveness and efficacy.
4. Include community support in statewide systems to encourage providers to practice in rural and non-rural underserved areas.

In developing these recommendations, the Committee reviewed the Lewin report, as well as reviews of the listening sessions. In many cases, it became apparent that recommendations in one category overlap and enhance the goals within another category. This underscores the interdependency of various incentive programs and the need to consider the overall methods by which the state and its local communities must coordinate their efforts to attract health care providers to underserved and rural communities.

The following section provides more detail on the recommendations within each category.

Recommendation 1: Enhance data collection for all incentive programs.

Enhancing the type and amount of data available to policymakers and program administrators will support greater evaluation of programs over time. The top priorities within this category focus on the following:

- **Collect common information on all program applicants and participants;** and,
- **Create a comprehensive provider dataset** that is linked to other, existing data sources through unique identifiers.

The latter of these two recommendations is currently underway within OHA through the development of a Provider Directory (scheduled to be completed by the end of 2017), but would be greatly boosted in its usefulness if coupled with revised application materials that enabled the collection of consistent data from the providers participating in Oregon's many incentive programs.

In addition to these recommendations, longer-term data improvements could be used to identify the practice locations of providers over time, and to better facilitate analysis of provider capacity and community need. In particular, the Committee recommends:

- **Additional provider-level data be collected** to ensure comprehensive and common information is available;
- **More data be collected on tele-health services and providers;** and to
- **Identify providers (through unique identifiers) in All-Payer All-Claims** data to enable greater analysis of utilization patterns and areas of greater need.

It should be noted that while the Lewin Group collected a large amount of information for their report, they noted shortcomings of Oregon's existing data collection and analysis efforts. In the end, increased data will better enable ongoing analysis and evaluation of Oregon's provider incentive programs and better enable policymakers and administrators to invest limited state resources in a way to deliver the biggest return on its investment. In addition, many of the recommendations in the following categories will also contribute to the data collection goals described above.

Recommendation 2. Expand program awareness and ease of use among clinicians and employing sites.

The Committee suggests several approaches designed to improve the utilization of Oregon's incentive programs by prospective clinicians and the hospitals and clinics that hire them to recruit and retain health care providers. In particular, the Committee recommends:

- **Creating common application tools for all clinicians and clinical sites seeking both federal and state incentive funds that consolidates important information about each of the many programs.** Such tools could be modeled after federal and state student aid

applications that attempt to gather all relevant data from an applicant in order to direct them to any and all financial help for which they might qualify. This recommendation also helps to achieve the data collection goals offered by the Committee.

- **Streamlining the sharing of best practices, including existing and new informational resources related to the incentive programs**, perhaps through the creation of a “recruitment and retention hub” for clinical sites, clinicians, and others who use these incentive programs. Such a hub could ensure that resources that have already been created are more broadly shared and that new resources or materials adequately fill existing information gaps.
- **Expand outreach efforts through various networks**, including clinician training programs, CCOs, other health plans, provider and other statewide associations.

Recommendation 3: Consolidate and restructure existing programs for greater effectiveness and efficiency.

Pursuant to the requirements of HB 3396, the Lewin report and the listening sessions offered a variety of suggestions as to how the state could reimagine its existing programs. Furthermore, while the Lewin report found that all the programs succeeded in increasing provider capacity in underserved areas beyond what would be anticipated without the incentives, there are many opportunities to enhance their impact.

The Committee recommends to:

- **Modify programs to allow differential award amounts based on: individual community needs, which clinical specialties are most needed, and/or the level of practitioner indebtedness** (which is currently the case).

The Committee notes that while all Oregon communities share common needs for an adequate supply of health care providers, they may vary in the specific needs and priorities for improving the capacity of their health care systems. It is possible to customize state programs to meet these unique needs. Enhancing the flexibility of state programs to adapt to local needs should also allow communities to prioritize workforce diversity and other goals related to the needs for types of providers who are most appropriate. The committee also recommends that these awards *not* disproportionately favor specific provider types (e.g., physicians, nurses, dentists, physician assistants, etc.) but be targeted to meet community needs on a case-by-case basis.

Some ideas to maximize the impact of incentive programs on recruitment and retention could include:

- **Encourage applicants to commit to longer duration of service in order to increase likelihood of award approval**, which could help the state to increase the length of stay of awardees at lower marginal costs than at present.

- **Relax or remove existing requirements that applicants for loan repayment programs already have a job or agreement in place** to enable not-yet-employed practitioners to apply if they're willing to locate in a community in need as directed by the state. This would enable the state to be more directive in getting providers to areas most in need.

Finally, the committee strongly recommends that:

- **More resources be directed to loan repayment and forgiveness programs** to enable more providers to benefit from these programs, which will increase the overall benefit to underserved communities throughout Oregon. While we currently experience limited funds, the many studies which demonstrate substantial return on investment for the placement of a single physician in a rural community argue strongly for the legislature to invest more, rather than fewer, dollars to assist communities with medium- and long-term provider supply issues, especially since the gains seem to significantly outweigh the costs per FTE.

Recommendation 4: Include community support as a part of statewide systems to encourage providers to practice in rural and non-rural underserved areas

The final recommendation and its component parts acknowledge the vital role that communities themselves play in recruiting and retaining the health care providers they need. While state financial support provides needed resources to recruit and retain health care providers in underserved communities, robust community engagement is critical to the long-term success of these efforts. To this end, the committee recommends the state:

- **Consider a recruitment and retention collaborative or institute to enable clinical sites and communities to bolster their recruitment and retention capability.** The collaborative could build on current efforts within OHA and the ORH, and help communities engage civic leaders, citizen groups, educational resources and to persuade prospective provider applicants about a given community, which, in turn, could increase their connections to communities in ways that foster greater civic engagement and clinical service tenure.
- **Use grant funds (which could come from outside of state General Funds) to leverage and support community efforts to expand their recruitment and retention capacity.** Expanding local capacity to participate in the recruitment and retention of prospective providers could have a profound impact on the success of state financial incentives and on the length of time providers choose to stay in their new community.
- **Assist communities to create “incentive packages” that go beyond the financial incentives offered by the state** to motivate practitioners to move to their community.

Conclusion

Across the nation, states are struggling to deal with shortages in the number of health care providers, and with significant maldistribution of current providers, leaving many communities underserved. Despite having practitioner-per-1,000 resident ratios which are roughly equal to the national average, the distribution of health care providers throughout Oregon leaves many rural and non-rural communities with problematic provider shortages. Furthermore, supply and demand forecasts in the Lewin Report note that many of the shortages in Primary Care will only be exacerbated in the future without intervention.

Like many other states, Oregon has provided a variety of financial incentives to help recruit providers to rural and other underserved areas. Loan forgiveness or repayment programs, tax credits focused on rural health care providers, and subsidies for malpractice insurance all positively impact efforts to recruit or retain health care providers in underserved communities. And according to the Lewin Report, all of Oregon's state and/or federally funded programs are successful at increasing the number of practitioners who serve rural and other underserved areas.

The next step to increase the effectiveness and efficiency of these incentive is to create a more holistic approach to these efforts. It is necessary to ensure that these programs adequately address the big picture issues and deal with the fundamental reasons why practitioners move to rural and underserved areas and then remain in those communities. The Lewin report and the Committee's recommendations emphasize that efforts to recruit and retain health care providers to these communities must go hand in hand, and that better coordination of Oregon's existing programs is needed to help accomplish these goals.

From the diverse array of communities on Oregon's vast coastline, to the high desert and mountain wilderness of central and eastern Oregon, to the Columbia River gorge, to cities and towns in Southern Oregon – the state's diverse geography means that communities possess different resources and face unique health care challenges. Ensuring that state financial assistance is flexible enough to meet these differing needs will make these programs more effective in the long run.

Additionally, local communities play critical roles in building the capacity of their local health system. Increased community involvement in recruiting efforts can help bring new practitioners to their area. Building ties between these practitioners and the people they treat can help increase retention in the community. Simply spending more state funds is not the answer. Oregon's executive agencies, however, can and should have a role in facilitating greater community involvement in recruitment and retention of needed health care providers. To this end, the state should consider creating more formal systems, such as a learning collaborative focused on recruitment and retention efforts at the community level, to help communities learn from each other in order to better meet their health care needs.

Similarly, community efforts to cultivate the next generation of health care providers from within the community (“Grow Our Own” strategies) may also prove fruitful in lengthening the stay of practitioners in the community. The Workforce Committee has long supported such strategies and we agree strongly with those in the Listening Sessions who want to see efforts devoted to this approach, which can also assist us with expanding the diversity of our workforce.

As is often the case, better data is needed for more in-depth and ongoing analysis to determine what works best and whether and how best practices can be replicated. Enabling multiple incentive programs to operate in tandem or to better share data and leverage the best from one another will improve their efficiency and enable them to incentivize more providers to practice in rural and other underserved areas.

HB 3396 was a first step toward a more comprehensive and community-focused approach to addressing the supply and distribution of health care providers in Oregon. The legislature has embarked on a course of reworking our existing programs into a more flexible system of supports that can keep what works as well as offering new approaches that should yield even more effective returns on our investments.

The Workforce Committee has learned much from our national experts and our local leadership from this study. Our recommendations to improve Oregon’s recruitment and retention efforts offer both short- and long-term strategies to master the challenge of the supply and distribution of Oregon’s health care workforce.

Appendix A: Lewin Group Report Executive Summary

August 12th, 2016

To: Oregon Health Authority

Subject: HB 3396 Lewin Report

One of the requirements of House Bill 3396 passed by the Oregon Legislature in 2015 is to study and evaluate Oregon's health care workforce incentive programs, in light of current and projected health care workforce shortages. The Lewin Group was tasked to conduct an analysis of existing strategies to address these shortages and evaluate provider incentive programs to inform future funding decisions by the Oregon Legislative that ensure incentive programs are based on demonstrated effectiveness and are as cost effective as possible. The current study and recommendations will provide the Oregon Health Policy Board and the Legislature with information to help ensure Oregon is supporting programs that are both effective and cost-efficient in terms of recruiting and retaining qualified health care providers, particularly in rural and areas in high need of medical services.

We consider the incentive programs to be effective if the number of provider FTE-years in targeted areas increases as a direct result of the program. Based on this metric, we find empirical evidence that all programs increase the number of provider FTE-years above what would have been available in rural areas over the period between 2010 and 2014 without the programs. Some programs have a recruiting effect – they attract new providers into the area, some have a retention effect – they keep providers in the area longer, while some have both a recruiting effect and retention effect. More specifically, we find that:

- NHSC LRP has an important recruiting effect on primary care physicians, and an even larger effect on NPs and PAs, which makes this program an effective recruiting tool
- NHSC LRP also has a relatively minor retention effect
- The other loan repayment programs (SLRP, BHLRP and MPCLRP) are likely to have similar effects, given that they are similar in terms of award amounts and eligibility criteria
- RPTC and RMPIS have negligible recruiting effect on primary care physicians, but do have a small recruiting effect on NPs and PAs
- Instead, RPTC and RMPIS have a sizeable retention effect on all providers, which makes them efficient retention tools in rural areas
- Costs of attracting an additional FTE-year through any of the programs are lower in the case of NPs and PAs, relative to primary care physicians
- Costs of an additional primary care physician FTE-year are similar across programs, and the same is true for NPs and PAs.

We also formulate a number of recommendations that have the potential to improve the analysis and evaluation of the provider incentive programs in the future. These recommendations are aimed at increasing the programs' recruiting effect, retention effect, or both, as well as improving their cost-effectiveness. Our analysis of the key features of the current programs yields a number of insights into the features that tend to be associated with incentives that offer greater cost-effectiveness. They are centered on issues such as the:

- targeting of benefits
- budget control
- cash vs in-kind benefits
- current vs deferred benefits
- costs incurred today vs costs incurred later

We then assess the current programs through the prism of these features and provide observations on how the programs may be made more efficient and cost-effective. Also, as future efforts to enhance the effectiveness of these programs should focus on increasing the number of providers who would not serve in rural areas without incentive programs, we formulate a number of recommendations on how to achieve this objective. These include:

- Creation of a bidding mechanism allowing providers to offer more years of service in rural areas
- Increasing the value of the program “package” (for instance, by allowing for a stipend to cover moving expenses for providers who are not in rural areas)
- Relaxing job requirement as a condition for a loan repayment application
- Increasing awareness of the availability of programs, by providing a consolidated single source of information and applications across programs
- Encouraging multiple program participation
- Increasing the amount of awards
- Increasing the number of loan repayment awards
- Allowing for different award amounts by provider type

Moreover, once participating providers locate to rural areas, we propose a set of measures to increase the retention of participating providers in those areas. These recommendations include:

- Encouraging the combination of benefits
- Introducing obligation periods
- Retaining former obligors in the state
- Increasing the number of limited-funded awards

Although they are outside the scope of the incentive programs, changing clinical practices in rural centers, and boosting community support for providers may also have the beneficial effect of increasing retention of providers in rural areas.

The main conclusion of this report is that all incentive programs analyzed are successful in increasing the number of providers in rural areas in Oregon. Some programs are better recruiting tools, while other programs are better retention tools. Our program and policy recommendations are aimed at further increasing the efficacy and cost-effectiveness of programs in the future. Also, our data collection recommendations ensure that future program evaluations will have a deeper and wider scope, hence more effectively informing funding decisions by the Oregon Legislative.



HEALTHCARE AND HUMAN SERVICES POLICY, RESEARCH, AND CONSULTING—WITH REAL-WORLD PERSPECTIVE.

Data Analysis, Evaluation, and Recommendations Concerning Health Care Workforce Incentives in Oregon

Summary Final Report

Prepared for: Oregon Health Authority

Submitted by: The Lewin Group, Inc.

August 10, 2016

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I. Introduction

To meet the requirement of House Bill 3396 passed by Oregon legislature and to assess Oregon's current and projected health care workforce shortages, the Lewin Group was tasked to conduct an analysis of strategies to address these shortages, evaluate provider incentive programs to inform future funding decisions by the Oregon Legislative to ensure incentive programs are based on demonstrated effectiveness. The comprehensive study and recommendations will provide the Oregon Health Policy Board and the Legislature with information to ensure Oregon is supporting programs that are effective and cost-efficient in terms of recruiting and retaining qualified health care providers, particularly in rural and areas in high need of medical services.

Our analysis of the various incentive programs offered to Oregon providers began with an examination of the main characteristics of the health care market in Oregon. The Lewin Group analyzed the current size, distribution and composition of the health care workforce in Oregon, along with the size and mix of the patient population throughout the state and in rural and medically underserved areas that are served by providers participating in relevant incentive programs. The Lewin Group first set out to assess the demand for key health care providers across the geographic areas in Oregon, evaluate the shortages of these providers in rural and medical provider shortage areas currently and in the near future, and examine the current incentive programs for health care providers who serve in those rural and underserve areas.

These analyses encompassed three major focus areas: (1) the Oregon health care market; (2) the Oregon incentive programs (state and federally funded); and (3) an assessment of the available incentive programs. Based on previous rates of growth in the population of providers and on observed utilization patterns in the Oregon patient population, The Lewin Group constructed forecasts of the demand for and supply of providers over the period between 2016 and 2020. Next, in order to assess the provider incentive programs and to gain a thorough understanding of their breadth and outreach within the state, we provide an overview of the current programs and program participation rates. We also present historical trends and changes in the composition of providers who participate and providers who do not participate in federally and state funded incentive programs.

Using various proprietary and administrative data sets covering the 2011-2015 period, we find that all provider incentive programs we analyzed increase the number of FTE-years in rural areas. This work was performed under Task 2 of this project (Lewin, 2016(2)). We measured the impact of the incentive programs in two related ways. First, we considered a program "recruiting" effect, defined as the program's ability to attract providers into targeted areas who would not be there without the program. Second, we considered a "retention" effect, defined as the program's ability to induce providers to stay in targeted areas longer than they would in the absence of the program. We find empirical evidence that some programs have both a recruiting and retention effect, some have only a recruiting effect, while others are largely limited to a retention effect. Overall though, all programs are effective in increasing the number of FTE-years relative to the level without programs. This is consistent with findings from other studies (e.g., Holmes, 2005). Also, combining estimated program effects with the program costs, we calculate the cost of attracting an additional FTE-year in a rural area. This cost, also called the marginal cost, while it varies among programs, it is of the same order of magnitude across programs.

We currently estimate that about a third of the NHSC participating primary care physicians and about two thirds of the NHSC participating NP/PAs are providers who would not have served in rural areas in Oregon in the absence of that program. The estimates are robust to a number of alternative regression specifications and they reflect a substantial recruiting effect of the NHSC loan repayment program. Combining this estimate with conditional retention rates in HPSAs after program completion, we construct estimates of the additional cost of inducing a new FTE into a rural area of \$31,756. As we discuss in Lewin (2016(2)), the actual additional cost per one new FTE is undoubtedly even lower. Even so, our additional cost estimate points to a solid return to investment for the NHSC program in Oregon, which is mainly driven by the probability of providers to serve in HPSAs even after completion of their obligation, and by the fact that many of the NHSC participants serve in HPSAs only as a result of the program. Although this estimate applies only to NHSC, it is likely that the effect of the Oregon loan repayment programs is similar in magnitude to the effect of NHSC.

Despite a number of inherent (and insurmountable for the time being) limitations, the empirical results we obtained allow us to formulate a number of policy and program recommendations. The data limitations we faced in this project provided us with a unique opportunity to formulate a number of detailed recommendations on how these limitations may be successfully overcome in the future, with the ultimate goal of being able to inform solid program evaluation and policy-making.

II. The Oregon Health Market

The Lewin Group examined the Oregon population and its characteristics that are potential drivers of the demand for health care services and providers. Using Provider360 data, in Table II-1 we show the total number of health care providers that we observed in the state of Oregon during the 2014-2015 timeframe. In total, there are 72,766 health care providers, of which 11,567 are physicians. Approximately 60 percent of these physicians offer primary care services.¹ The estimated number of behavioral health providers is 5,434, while the number of dentists is 2,914. Physician assistants (PAs), nurse practitioners (NPs) and registered nurses (RNs) represent three of the largest categories of non-physician providers.

Table II-1: Number of Health Care Providers per Population, by Provider Type

Provider type	Oregon Providers	Providers per 1,000 Population	
		Oregon	United States
All Health Care Providers	72,766	18.33	14.79
Physicians	11,567	2.91	2.83
Primary Care Physicians (PCP)	6,981	1.76	1.71
Non-Primary Care Physicians	4,586	1.16	1.12
Behavioral Health Providers (BHP)	5,434	1.37	1.08
Dentists	2,914	0.73	0.63
Physician Assistants (PA)	1,466	0.37	0.32
Nurse Practitioners (NP)	2,305	0.58	0.56
Clinical Nurse Specialists (CNS)	64	0.02	0.02
Advanced Practice Midwives (APN)	219	0.06	0.02
Registered Nurses (RN)	38,832	9.78	9.66
Licensed Practical Nurses (LPN)	3,737	0.94	2.58
Nurse Anesthetists (NA)	343	0.09	0.15
Population (2014)	3,970,239	--	--

Note: The main source of data for this table is the 2015 Provider360 Data (owned by Optum Services Incorporation). The number of RNs in 2014 comes from the OHA Report "Oregon Health Professions: Occupational and County Profiles". The national-level numbers of RNs and LPNs that are used to construct the ratios in the last column are for the year of 2016 and come from the Kaiser Family Foundation.

After reviewing the current state of the health workforce in Oregon, we analyzed the patterns in the utilization of medical services by various segments of the population, using claims data from Oregon's 'All Payer All Claims' (APAC) data. With these elements, we constructed forecasts of the future demand for medical service of the Oregon population, as well as forecasts of the supply of providers over the period between 2016 and 2020.

¹ Primary care includes the following categories: family practice, general practice, internal medicine, OB-GYN, Pediatrics and selected categories of Psychiatry and Neurology. Behavioral health providers include psychologists, social workers, and marriage and family therapists.

Table II-2: Projected Demand and Supply for Oregon Providers by Provider Type

Provider Type	2015	2016	2017	2018	2019	2020
	Demand					
Primary Care Physicians	7,094	7,146	7,250	7,358	7,469	7,580
Specialty Care Physicians	4,689	4,736	4,823	4,906	4,995	5,088
Behavioral Health	5,487	5,484	5,521	5,549	5,587	5,618
Dentists	2,963	2,985	3,028	3,068	3,115	3,156
Physician Assistants	1,495	1,512	1,535	1,557	1,582	1,608
Nurse Practitioners	2,337	2,348	2,376	2,407	2,435	2,465
	Supply					
Primary Care Physicians	6,883	6,917	6,952	6,987	7,022	7,057
Specialty Care Physicians	4,505	4,631	4,761	4,894	5,031	5,172
Behavioral Health	5,291	5,317	5,344	5,371	5,398	5,425
Dentists	2,856	2,857	2,858	2,859	2,859	2,860
Physician Assistants	1,455	1,497	1,541	1,585	1,631	1,679
Nurse Practitioners	2,261	2,381	2,507	2,640	2,780	2,927

Comparing the projected demand and supply under various policy-relevant scenarios should provide insights into whether “gaps” are expected to emerge in given geographical areas, or for various provider types. Comparing the forecasts from Table II-2, we estimate that the state-level gap between demand and supply for primary care physicians will grow to about 500 providers by 2020. Similar gaps may be emerging for other categories, but note that in the cases of nurse practitioners and physicians assistants our forecasts indicate that the supply may be higher than the demand. However, it may be that the growth rates in the number of NPs and PAs are too large. The current growth rates may be capturing trends that are specific only for the last few years, dominated by the Affordable Care Act and other initiatives. In the future, the growth rates for these two categories may be smaller.

III. Provider Incentive Programs in Oregon

A. Participation in Incentive Programs

In this section we examine the extent of participation in the various provider incentive programs. Table III-1 shows the number of participants in each of the financial programs available over the period between 2010 and 2015. Overall, the total number of participants increased from 3,119 providers in 2010 to 3,338 providers in 2012 and then gradually declined to 3,224 participants by 2014. Much of the increase in 2012 is due to the increase in the number of participants in NHSC LRP. On the other hand, the number of participants in state funded programs such as RPTC and EMS-TC remained relatively stable. There has been a steady decline in the number of participants in the malpractice insurance subsidy program (RMPIS) during this period.

Table III-1: Participants in Provider Incentive Programs, by Year and Program

Programs	2010	2011	2012	2013	2014	2015
RPTC	2,137	2,164	2,203	2,214	2,216	104*
RMPIS	861	822	769	702	687	639
EMS-TC	557	565	572	562	520	269*
J1-VW	66	64	59	74	75	84
MPC-LRP	-	-	-	-	17	42
BH-LRP	-	-	-	-	-	14
SLRP	-	6	11	27	40	50
NHSC	127	185	321	257	262	346
NHSC LRP	122	179	222	240	237	316
NHSC SP	5	6	13	17	25	27
NHSC others	0	0	86	0	0	3
Total Participants	3,119	3,186	3,341	3,272	3,224	1,520*

Note: * indicates that the data on these programs for 2015 is incomplete.

In terms of the number of participants, RPTC is the largest program and the number of participants remained relatively stable at around 2,200 providers over our timeframe. This is consistent with our assessment that there have not been any substantial changes in the funding, scope or eligibility of this program. On the other hand, there has been a substantial increase in NHSC participation over recent years, most likely as a result of the injection of additional funding under the American Recovery and Reinvestment Act (ARRA) in 2009 and the Affordable Care Act (ACA) in 2011.² Although a few changes in terms of eligibility rules for RMPIS have been made in the recent past, it is unlikely that such changes may explain the gradual decline in the number of program participants. Further study is required to understand the specific cause of the decline in participation in this program, but it is possible that as

² Source: <https://aspe.hhs.gov/report/provider-retention-high-need-areas/american-recovery-and-reinvestment-act-arras-and-patient-protection-and-affordable-care-act-aca-funding-expansion>.

providers get employed with hospitals they drop from RMPIS since hospitals cover their insurance premium.

B. Retention Analysis of Incentive Programs

To be able to measure the benefits of the incentive programs considered in this study, we need to determine by how much the number of providers in targeted areas increases as a direct result of the program, as well as the extent to which time served in those areas increases due to the program. We call the first effect the *recruiting effect* of the program, and it measures the number of providers who would not have located in those areas without the program. The second effect is called the *retention effect*, and it reflects the amount of time a typical participating provider spends in a targeted area above what he or she would have in the absence of the program. In this section we focus on the retention analysis. While typically recruiting is viewed as preceding retention, in this report we examine the retention effects first, because that analysis yields a number of relevant program-specific descriptive statistics that are then used in the econometric analysis of the recruiting effects. We return to recruiting effects in the next chapter.

C. Recruitment Analysis of Incentive Programs

We conducted an analysis to evaluate the effectiveness of the various Oregon incentive programs in terms of their ability to attract providers to locate and practice in certain targeted underserved or rural areas. In return for receiving the incentive, the eligible provider must be located in or move to a geographical area designated by the program. These targeted areas are usually rural areas, or other areas where it is believed that the population is “underserved” because of too few providers of certain types in the vicinity.

To be effective, the program must induce some providers to locate in targeted areas that would not have otherwise chosen. Many providers do, of course, choose to practice in these areas and do not require an incentive to induce them to do so. However, those who would have located in the targeted areas without the incentive may, of course, apply for and receive the incentive, if they are otherwise qualified. Hence, the incentive payments to such a type of program participants are unnecessary payments (or “economic rent”, as it is typically referred to in the economics literature) in the sense that these participants would have been practicing in the targeted areas even without the incentive, and the payment of the incentive to these providers does not increase the supply of providers to the targeted area. Some providers, however, who would not have chosen to practice in the targeted areas may be induced to do so by the incentive. If so, they increase the supply of providers in the area. This is a major purpose of the programs, and this is what we call the *recruiting effect* of the incentive programs. From a policy perspective, the best outcome is to determine the optimal range of energy and resources that are needed to bring into rural areas those providers who are unlikely (or less likely) to go to those areas.

In Table VI.2 we present the estimates of the total effects of all the programs considered for both primary care physicians and NPs and PAs. We find that some programs have only a retention effect (RPTC, RMPIS in the case of primary care physicians), while the other programs have both a recruiting effect and a retention effect. In the cases of programs that generate both effects, the recruiting effect tends to be substantially larger than the retention effect. Most importantly, as shown by the rightmost column in Table III-2, in the case of all programs and for each provider

type, the programs have a positive impact on the number of FTE-years in rural areas. These are FTE-years that would not be supplied in those areas without the programs.

Table III-2: Recruiting, Retention and Total Program Effects by Provider Type

	Providers	Recruiting Effect (FTE-years)	Retention Effect (FTE-years)	Total Effect (FTE-years)
Primary Care Physicians				
RPTC	827	0	736	736
RMPIS	459	0	459	459
SLRP	26	39	13	52
BHLRP	--	--	--	--
MCPLRP	8	15	4	19
NHSC	64	99	32	131
NHSC & RPTC	30	58	18	76
NPs and PAs				
RPTC	632	90	510	600
RMPIS	78	54	57	111
SLRP	20	56	7	63
BHLRP	14	39	5	44
MCPLRP	15	43	5	48
NHSC	108	301	40	341
NHSC & RPTC	74	250	28	278

As mentioned above, due to the fact that participation into the state-funded loan repayment programs is limited, and in some cases the number of providers ending their obligation is very low, we could not identify any statistically significant effect of these programs. However, it does not mean that those effects are truly zero. In fact, given that those programs are similar in structure, administration, target population and generosity, it is likely that they have a similar effect as the NHSC LRP program. Therefore, the magnitude of the NHSC effect we estimate may serve as a benchmark or a range over which the true effect of the Oregon loan repayment programs may be.

Using the estimates from the previous section we can now estimate the cost of attracting an additional FTE in a rural area. In Table III-3 we also include the average cost, which is simply the amount of the award for an individual in a given year, as well the cumulative cost paid to one provider during the period that provider participates in one or more programs.

Table III-3 Additional Cost per New FTE by Program and Provider Type

	PC Physicians	NP/PAs
--	---------------	--------

	Average cost (\$)	Cumulative Cost (\$)	Marginal cost (\$)	Average cost (\$)	Cumulative cost (\$)	Marginal cost (\$)
RPTC	5,000	18,350	20,787	5,000	17,800	18,960
RMPIS	3,890	14,626	14,820	3,890	14,081	9,866
SLRP	23,386	60,804	30,402	23,386	65,000	19,303
BH LRP	20,000	52,000	31,756	20,000	52,000	16,471
MCP LRP	27,321	71,035	29,909	27,321	65,000	22,198
NHSC (No RPTC)	25,000	65,000	31,756	25,000	65,000	20,587
NHSC & RPTC	30,000	94,000	36,908	30,000	91,000	24,233

Note: The average costs for SLRP and MPC LRP are equal to the average awards observed in the data for a year of commitment. In the absence of data on the time in service, the cumulative costs of those programs were calculated by assuming a service period that is equal to the typical service period in NHSC LRP. Also, due to lack of data BH LRP average costs is equal to the maximum award under that program, and we approximate the marginal cost of BH LRP for PC physicians with the marginal cost of NHSC LRP for PC physicians.

The estimated additional cost per one new FTE is smaller for NHSC PA/NP participants than for NHSC primary care physicians. Also, the difference between the additional cost of providers who participated in both NHSC and RPTC and the NHSC participants who do not participate in RPTC is smaller for NHSC NP/PAs than for NHSC physicians. These are primarily due to the larger recruiting effect. In either case, the increase in the estimated additional costs due to participation in RPTC among additional providers is lower than the actual cumulative RPTC award per participant during the entire period they serve in the rural areas.

Comparing the RPTC and RMPIS programs, it appears that the RMPIS program is relatively more cost effective in increasing the provider years in rural areas. This difference is largely due to the higher recruiting effect of the RMPIS program, and it is particularly visible in the case of NP/PAs. Finally, all incentive programs appear to have lower additional costs for NP/PAs than for physicians. Nonetheless, the additional cost estimates are of the same order of magnitude for each program and for each program type.

IV. Program Recommendations

In our report for Task 2, we evaluated Oregon provider incentive programs based on two major, and related criteria: the ability to attract qualified providers into select, targeted areas that are considered underserved and the ability to retain qualified providers in these areas. In that report, we provided quantitative estimates of both a recruiting effect (attracting qualified providers into targeted areas in which they would not otherwise serve) and a retention effect.

Features Associated with Efficient, Cost-Effective Incentive Programs

The following are general propositions regarding characteristics or features associated with efficient, cost-effective incentive programs.

- A. **Targeted programs:** incentives that are “across-the-board” are likely to be less efficient than programs that attempt to target those outside of the underserved areas to provide services in select, targeted areas.
- B. **Budget control:** A program, for which explicit awards are allocated to qualified applicants based on the merit of the applicant, and for which one can terminate new awards when the budget for that time period is exhausted, offers greater budget control
- C. **Cash or Cash-like versus in-kind incentives:** incentives that represent general purchasing power to the recipient or awardee tend, for a given cost of providing the incentive, to have a greater value and greater incentive effect than incentives that are provided in-kind. Cash incentives, unless explicitly provided an exception in both state and federal legislation, would be treated as ordinary income and subject to state and federal income taxes, paid by the recipient. Even if the state were to exempt them from taxation, it is likely that they still would be subject to federal tax
- D. **Current (up front) versus deferred benefit incentives:** incentives that provide an immediate benefit will be more highly valued, in general, than otherwise equal incentives that are available only later in time. For example, providing an incentive that repays a loan that is due currently would, other things being equal, be more highly valued than, for example, a retirement benefit that is received only years in the future.
- E. **Costs incurred today versus incurred later:** program incentives for which costs are incurred at time periods substantially before any program benefits accrue, such as program incentives that fund medical school tuition, tend to be more costly than an equivalent incentive that is provided in the form of a loan repayment while the provider is practicing in the rural or underserved area and providing health care services.

D. Observations on Oregon Provider Incentive Programs

In this section, we briefly review and provide observations regarding the major Oregon provider incentive programs.

Rural Practitioner Tax Credit (RPTC): It is not likely to target, especially, those practitioners who would not have otherwise practiced in rural areas. In fact, a provision of the program allows the provider to apply for and receive up to three years of tax credits retroactively. Hence, for these providers, it would be difficult to argue that they would not have been practicing in the rural area without the RPTC. In addition, the RPTC does not target, within rural areas, those areas that are in greater need than others. Finally, because the program is open, passively, to all

who meet the eligibility requirements, the cost of the program may be difficult to control, at least in the short run, because it depends from year to year on how many eligible providers apply

Rural Medical Practitioners Insurance Subsidy Program (RMPIS): the incentive clearly has no impact on practitioners who are working within organizational relationships in which they do not, themselves, directly pay for medical liability insurance. This feature suggests that, perhaps, a pure cash stipend, independent of whom pays for medical liability insurance, may be more efficient.

Scholars for a Health Oregon Initiative (SHOI): The program is limited in that only OHSU students are eligible. Moreover, preference is given to applicants who are from rural areas. This “targeting” of the program may limit its effectiveness in that it may tend to select out a high proportion of students who would have served in rural and underserved areas anyway. The program is more costly than, for example, a loan repayment program in which costs are incurred as the provider is practicing in rural or underserved areas. Moreover, it may limit flexibility in that, if priorities change over a period of two or three years, resources are already committed to the students in the program.

Oregon State Partnership Loan Repayment Program (SLRP): the program allows one to select, to an extent, based on additional criteria such as where the provider will actually practice and which type of provider is added to the area. Because the number of awardees is selected from among qualified applications, the budget can be directly controlled by selecting fewer, or more, awardees, depending on the budget (B).

Medicaid Primary Care Loan Repayment Program (MPCLRP): This program targets specific providers and, in particular, ensures that they serve Medicaid patients (A). In other respects, it is similar to other loan repayment programs.

V. Policy Recommendations

In this section we articulate several policy recommendations that are aimed at increasing the effectiveness of the current incentive programs. More specifically, the focus is on increasing the number of providers that current programs attract and retain in rural and underserved areas.

Improving Recruiting

It is recommendable to increase the number of providers that are induced by the program and to the extent possible, reduce the program awards to providers who would serve in rural areas without the program. In what follows, we provide details on the potential ways in which the Oregon can achieve a greater return, in recruiting, retention, or both.

1. *A Bidding Mechanism*

One way to increase the effectiveness of such programs is to allow all qualified applicants to “bid” for awards, where the “bid” is a dimension which increases the FTE to the rural areas. This may be done by allowing applicants to offer additional years of obligated service. The number of years served in rural areas will increase relative to the current state. From a cost perspective, this increase will have a cost of zero if the bidding is set up in such a way that those who offer to serve additional years agree to receive no payments or additional loan payments for those additional years

2. *An Incentive “Package”*

It may be important to add program features that would be most valued by providers who are not currently serving in a targeted area, to induce them to move to such an area. For example, if program participation would result in a move from a non-qualified area to a target area, a moving expense stipend of a non-trivial amount could be offered. Other non-financial features that would be most valued by providers who are not currently serving in a targeted area may include support with spousal employment.

3. *Relax Job Requirement as Condition for a Loan Repayment Award*

In the case of some loan repayment programs, there is a requirement for providers to first obtain a job in an underserved area in order to be eligible for the program. It is advisable to relax the job requirement as a pre-condition for program application. In this way, the program will be more likely to act in a desired way, that is, induce providers to serve in rural areas.

4. *Increase Awareness on the Availability of Programs and Ease of Use*

Increasing awareness in general may be done through appropriate dissemination of information through relevant medical, dental, nursing, physician assistant and behavioral health undergraduate and graduate programs, through the use of social media, and other sources. Easy access to program information may help attract providers who would not have gone to rural areas in the absence of the program. Develop a truly “one-stop” website source with available information for all programs, eligibility requirements, application

procedures, and further contact points. It is advisable to make the application process as easy, understandable and low cost as possible.

5. *Multiple Program Participation - NHSC, RPTC and RPMIS*

Being able to participate in multiple programs has the effect of increasing the value of the “package” for providers. In this sense, if providers with negative preferences for rural areas are induced to serve there by being compensated for these negative preferences, having a combined total of benefits that is larger than the award of only one program may potentially increase the number of providers with negative preferences to serve in rural areas. Since these are the providers who would not serve in rural areas without incentives, allowing for multiple program participation can conceivably have the effect of increasing the recruiting effect.

6. *Increase Award Amounts*

Allowing for the award amounts to increase in value may have the result of suggesting to a larger number of providers with negative preferences that they consider the possibility of serving in those areas. A more generous award would increase the number of providers with negative preferences who are at the “margin”. Also, as above, if the number of providers at the margin (i.e., those who would not serve without incentives) dominates the number of providers who are ready to serve without incentives, then this recommendation may increase the recruiting effect.

7. *Increase Number of Loan Repayment Awards*

If feasible from a budgetary perspective, it may be efficacious to increase the number of loan repayment program slots. However, this initiative builds on the assumption that the “margin” is “dense” enough. In other words, there exists a sufficiently large pool of eligible applicants who can be induced to serve in rural areas by the availability of the award.³

8. *Different Award Amounts by Provider Type*

Loan repayment programs tend to have higher recruiting effects among NP/PAs than among primary care physicians. If there is a large number of NP/PAs who are at the margin (i.e., the density of the preferences distribution around the value of the award amount is high), then it may be worth increasing the award amount for those providers. That way the recruiting effect may be further increased.

³ If the density of the distribution of preferences is high around the value that is equal to the (negative of the) award amount, then an increase in the number of program slots would increase the “margin”. Conversely, if the density of the preferences distribution is low around the value of the award amount, then an increase in the number of program slots would not increase the number of applicants who would not have served without the award. It would instead increase the applications from providers who would serve in rural areas without incentives. If the latter effect is dominated by the former, then the recruiting effect would increase. This depends on how many providers are at the margin given the current distribution of preferences and the current value of the awards.

E. Improving Retention

The recruiting effect tends to dominate the retention effect for many programs. In this section we focus on recommendations that have the goal of increasing retention, or at least maintaining retention at the same level as before when recruiting is increased.

1. Support for Clinical Practices of Team-Based Care

Providers cannot form accurate ex-ante expectations on neither how their rural experience will unfold, nor how they will perceive that experience. In other words, serving in a rural area is an “experience” good for many providers. A change in perception may be caused by factors that pertain to the individual and may include: a high level of community support, well-trained supporting staff, or a positive working environment. To the extent that these characteristics can be changed by policy makers in substantial and systematic ways, the retention of providers in rural areas will increase relative to the programs’ current retention effects.

While we recognize that changing or adoption of team-based practices is not within the scope of the incentive programs, a beneficial by-product of team-based settings in rural areas may be to increase the effectiveness of incentive programs.

2. Increase Community Support

Other ways in which perceptions of participants may change in positive ways include the availability of amenities like good schools for their children, support in finding job opportunities for spouses or partners, or access to cultural events and opportunities. As before, these elements are not directly actionable within the scope of the incentive programs; nonetheless, if they are achieved as a result of other state- or local-level programs or initiatives, they can contribute to the increasing of provider retention in rural areas.

3. Combine Benefits

The expected years in rural years is larger for NHSC participants who participate in the RPTC program, than it is for those who only participate in NHSC. To the extent that this option is feasible from a budgetary perspective, it may be useful to recommend combining those benefits once a NHSC participant is approaching the end of their service obligation.

4. Include Obligation for Some Programs

To the extent possible, it may be useful to consider including an obligation to serve for a year or more in the case of programs like RPTC and RMPIS. The introduction of an obligation period for the programs that do not have one can increase the retention effect across all categories of program participants.

5. Retain Former Obligor in the State

Negrusa, Ghosh and Warner (2014) found that once NHSC participants complete their obligation, many of them move away from the location where they served, but many tend to move to other similar areas. To further increase the retention effect, it may therefore be important to try to retain within the state these former obligors (from NHSC as well as from

the state loan repayment programs). Preventing them to move to other states will have the effect of increasing the amount of services supplied to rural locations in Oregon.

6. Increase the Number of Limited-Funded Awards

This measure would increase the number of loan repayment participants and to the extent that the new participants are similar to those who would have received the awards without this proposed expansion in the number of awards, the number of FTE-years in rural areas would increase. This is merely the result of having more program participants who generate a higher volume of FTE-years. This assumes that the new participating providers who are similar to the ones already participating are sufficiently numerous.

VI. Recommendations on Data Collection

The work we performed with the administrative data received from OHA for this project helped us have a detailed understanding of the advantages and limitations of these data. While the APAC data, as well as the individual-level data on provider participation in the various programs offer unique opportunities for analysis and evaluation, there are a number of shortcomings which, if addressed in the future, may provide much more comprehensive insights into the drivers of program participation, provider retention and program effectiveness that would be valuable for improving programs in the future.

A. Collect Information on All Program Applicants

To better inform decision-makers on the efficiency and cost-effectiveness of these programs, it is paramount to collect longitudinal data on all program applicants, including those not offered awards.

B. Collect Additional Provider-level Information

Some of the characteristics that are correlated with the providers' decision to locate to a rural area, such as rural upbringing, race/ethnicity, marital status, spousal employment status, family size, compensation package, or level of community support, may potentially be obtained through more systematic data collection efforts.

C. Field a Provider Survey

Even with more focused administrative efforts to collect additional individual-level provider information, a number of relevant characteristics would remain undocumented. A potential solution would be to field a comprehensive survey on program applicants, including those not offered awards in order to determine:

- i. key factors that drive their decision to locate and stay in rural/underserve areas;
- ii. the importance of program's financial incentives versus other factors in their decision to apply for programs and remain in target areas
- iii. level of difficulty associated with the application process
- iv. experience with clinical practices in target areas
- v. level of community support and its role in the location decision
- vi. experience with service in target areas
- vii. other socio-demographic characteristics that are difficult to obtain through administrative efforts (e.g., spousal employment status, or family size).

Another survey of potential use would be a survey of providers who serve in target areas, but did not apply for the incentive programs. This data would allow for the identification of the:

- i. availability and accessibility of information related to programs
- ii. perception about the level of financial incentives

- iii. perception of whether additional benefits, such as relocation bonuses, or better community support, would make them more likely to apply for incentive programs.

D. Collect Data on Tele-Medicine

Currently there is no systematic way to collect data on the amount of services that providers supply in the form of tele-medicine throughout the state. Such information would be valuable in order to accurately determine the volume of services provided in rural areas, and the degree to which telemedicine can substitute for providers who practice in a specific area.

E. Identify Providers in APAC Data

As APAC data includes the universe of medical claims in the state, identifying providers in APAC data would allow for a clear tracking of the volume, nature of services supplied and populations served in target areas by providers in general, and by participating providers in particular. As of now, it is difficult to identify individual providers in APAC data, as in most cases only identifiers of practices or health care facilities are being reported.

F. Create a Unique Provider Identifier

Additional research and evaluation of incentive programs would be greatly enhanced if it were possible to construct a common provider unique identifier that would allow researcher to determine multiple program participation over time in a consistent fashion. Currently there is no standardized ID used across programs to track multiple program participation.

G. Create a Comprehensive Provider Dataset

With the help of a unique provider identifier, it would be possible to track all providers in the state longitudinally in a centralized fashion and record the year of entry in the program(s), location of the place of service in every year, main services provided, along with the provider's age, gender, marital status, provider type, discipline, specialty, size of practice and so on.

This comprehensive database, linked to APAC data, may be then used for workforce policy, and it would help with the tracking and monitoring of migration patterns over time and could open the door to evaluations of how public health improved as a result of the providers induced by programs, in the form of: number of lives saved, decrease in preventable hospitalizations and emergency department visits, or decrease in incidence/prevalence of various diseases.

VII. Conclusions

We find evidence that is consistent with the assertion that the state programs appear to contribute to an increase in the retention of providers in rural areas, as reflected by the differences in retention in rural areas between program participants and non-participating providers. At this point we cannot rule out the possibility that those differences are in part due to the selection of some providers in the RPTC program.

We find evidence of a pronounced imbalance in the distribution of providers across rural versus urban areas within the state. Less than one fifth of physicians serve in rural areas, while the fraction of PAs and NPs serving in rural areas is lower than one third. Also, there is a notable heterogeneity across counties in terms of provider-to-population ratios for physicians, behavioral health providers, dentists and non-physicians, with the more rural counties having lower provider-to-population ratios. This pronounced imbalance in the distribution of medical providers across rural and urban areas in Oregon emphasizes the important role provider incentive programs may have in attracting providers in rural and underserved areas.

In addition to the current maldistribution of providers, Oregon may face an even more acute lack of medical services in the future, as the fraction of the population that is more likely to be insured through Medicaid and less likely to have employer-provided insurance is projected to increase. Also, these categories of the population are much more likely to be under the federal poverty line (FPL) or in the lower FPL categories, and although declining as a result of the ACA, their un-insurance rates may still be relatively large. Our analyses of the APAC data indicate that if current population trends continue over the next years, the number of visits demanded will continue to increase. Comparing these projections of the demand for providers with our provider supply forecasts indicate that some gaps between demand and supply are likely to emerge in the future. Under certain scenarios, these gaps may prove to be substantial.

Appendix B: Listening Sessions Summary Memo



August 12th, 2016

MEMO

To: Interested Parties
Subject: HB 3396 RURAL LISTENING SESSIONS

Introduction

In July 2015, the Oregon Health Policy Board adopted a [charter](#) directing the Health Care Workforce Committee (HCWF) to deliver to the Health Policy Board a study and report on the efficacy of Oregon's provider incentives and recommendations on improvements to the current incentives—a direction born out of [HB 3396](#), passed by the 2015 Legislative Assembly.

Oregon's Health Care Workforce Committee has served as the primary forum for stakeholder engagement for HB 3396. In relation to HB 3396, the committee's roles were to:

- Support selection of The Lewin Group and assist with stakeholder engagement;
- Provide key input in determining criteria for evaluating the effectiveness of incentive programs;
- Review progress over time and provide direction to the Lewin Group and OHA staff; and,
- Review incentive provider study and companion report to Health Policy Board.

Based on direction from the Health Care Workforce Committee in spring of 2016, in conjunction with guidance from the 3396 Steering Group, the Oregon Health Authority in collaboration with the Oregon Association of Health and Hospital Systems (OAHHS), Oregon Medical Association (OMA), and the Oregon Office of Rural Health (ORH) facilitated a series of [listening sessions](#) around the state. The five sessions were held as follows:

- St. Charles – Prineville, Monday, June 20, 6-8pm
- St. Anthony Hospital – Pendleton, Tuesday, June 21, 6-8pm
- Mercy Medical Center- Roseburg, Monday, June 27, 6-8pm
- Good Samaritan Hospital – Lebanon, Tuesday, June 28, 6-8pm
- Columbia Memorial Hospital – Astoria, Wednesday, June 29, 6-8pm

Background

The purpose of the listening sessions was to hear from providers, community leaders, clinic administrators, public health officials and other stakeholders about the following:

- How do Oregon's current provider incentive programs impact rural communities with respect to recruiting health care professionals?
- What types of provider incentive programs help address workforce shortages in rural communities?

- How is the ability to recruit and retain providers by specialty (primary care, behavioral, and oral health providers) affected by different incentive programs in rural communities?
- What types of new incentives could Oregon develop to recruit providers to rural communities or to retain providers who are already working rural communities?
- Receive feedback on what are the unmet needs among rural communities and what else should be explored in terms of ensuring an adequate primary care work force.

In June, more than 100 Oregonians participated either in-person or remotely through webinars that were hosted at each site location (See appendix A for list of organizations). OHA staff, members of the Health Care Workforce, and members of the 3396 Steering Group attended all five listening sessions. Summarized below is a breakdown of attendees by various categories, which ranged from 12 to more than 60 attendees per listening session:

- 24 out of Oregon’s 36 counties were represented;
- 13 of the state’s 16 coordinated care organizations (CCOs) participated;
- Organizations: local area school districts, rural health centers, federally qualified health centers, private clinics, local hospitals and health systems, county health departments, area universities, health care professionals, and a migrant health center; and
- Health care professionals: physicians, hospital executives, nurse practitioners, residents, behavioral health professionals, and other interested health allied professionals.

Key Findings from Rural Listening Sessions

Each listening session was scheduled for two hours in the evening at local, community hospitals and were open to area providers. Common themes were compiled, written up and are summarized below. Although the various communities varied in size, composition, available local resources, and needs, a number of thematic areas were identified as key to informing recommendations.

Interestingly, participants across the listening sessions identified the need for both short and long-term solutions to address workforce issues in rural communities. Participants recognized that developing and ensuring an adequate primary care workforce requires a multi-prong strategy that should include investing state resources in “grow your own” pipeline solutions, compared to a number of existing programs that target recruitment, retention, or both. Furthermore, it was apparent that communities would likely benefit from incentive programs, state or local, if combined with federally funded programs that could offer a “comprehensive” package. The underlying issue is rural communities being able to offer a competitive package that simultaneously addresses both recruitment and retention needs, together, rather than separately, on an *ad hoc* basis.

Recommendations from the sessions included:

- A. Continue to fund and support existing incentive programs in Oregon for the immediate future, *and do not reduce the existing state funding level* for such support. Federal funding available through provider incentives is inadequate to

- address the existing needs among rural communities in terms of recruitment and retention, particularly with an aging primary care provider workforce in the state.
- B. Consider modifying aspects of various current programs, such as service obligations for Oregon funded loan repayment programs (from 2-3 years to 5 years) and how providers and clinics are able to learn about programs and their availability.
 - C. Identify and fund programs that train local residents to increase the supply of health care professionals from rural areas. (Put an emphasis on a “grow your own” strategy in Oregon.)
 - D. Support development of new programs including tax credits for preceptors¹ to help incentivize and offset costs incurred by health care providers willing to train new health care professionals (e.g. teaching health centers).
 - E. Address the reality that funding for existing programs does not necessarily reflect current economic realities for either providers in rural Oregon or rural communities in which they practice. Available funding for certain programs is limited and potentially does not provide sufficient amount (e.g. incentive) for rural communities to recruit and be competitive with their urban counterparts.
 - F. Support communities to move beyond competition for the same pool of local area providers (e.g. hospital vs. independent practice) and expand the opportunity for collaboration.
 - G. Simplify and streamline the application, administration and renewal processes for state and federal incentive programs. Consider moving to a single point-of-entry for provider incentives.

Key Themes from Individual Listening Sessions

As described above, a number of themes emerged across the listening sessions. Summarized below are key issues raised at the individual listening sessions.

Prineville

- your own.”
Need more primary care residency programs and slots for residents in rural
- Oregon
Retirement options needed, particularly for health provides not affiliated with or
- We need to do a better job of “grow

“If loan repayment is it, you will simply have a revolving door—no retention...and it’s more than compensation. It’s family, quality of life and having a rewarding career...”

Rural Provider

employed by a hospital or health system.

-
- Benefit from larger packages/solutions beyond “loan repayment.”
 - Compensation important; however, fit in the community important as well.

¹ Preceptors refer to experienced nurses, physicians or other health care professional who guides and teaches others, often students or recent graduates of health professional programs.

- Need to distinguish between short-term and long-term solutions; need both in rural Oregon.

Pendleton

“There is a very aging workforce primary care docs, which is only going to exacerbate the shortage we’re already facing...”
Hospital Executive

- Pharmacists are missing from eligibility for *among* many programs yet there’s a need.
- Loan repayment amounts are too low; tax credits too low. Better than nothing but need larger amounts to provide a larger enticement for providers.

-
- Need for more training, rural rotations, and residency slots.
 - Workforce is aging; there’s a crisis that is almost here in rural Oregon.
 - J-1 Visa Program is working; tax credit helpful (although low); need to expand Oregon’s student loan repayment program (SLRP).

Roseburg

- Resources available through federally funded incentive programs are not enough. We need an “Oregon solution to an Oregon problem; can’t rely on the federal government.”
- Preceptors and mentoring is costly for both providers and health care organizations that host placements.
- Too much uncertainty with whether the incentive programs will continue to provide awards over multiple year periods.
- Offer a new kind of scholarship program for people willing to go rural.
- Lots of burn-out in rural practices, particularly since working in rural communities often requires on call, treating a more extensive range of health conditions, and inadequate access to specialty services.
- Recruitment and retention a full-time job for employers.

“If we didn’t have J-1 we wouldn’t be in business...J-1 is a lifesaver!”
Rural Practitioner and Clinic Owner

Lebanon

- Not enough residency slots—need to invest significantly more in Graduate Medical Education (GME) in Oregon.
- tax credit very important to rural providers.
- Compensation a larger challenge in rural Oregon.
- Incentive programs should be available to all, regardless of institution (i.e. public vs. private).
- Within local communities, bidding wars for local health care providers is a real problem.
- Retirement an issue.

“The real question is what’s the impact if we don’t invest in these incentive programs...”
Rural Provider, 30+ Years in Medicine

Astoria

-
- Inadequate housing in the community for

“Administrative simplification of the programs would be a huge value-add.”

Rural Hospital Executive

year period.

- training or locating doctors.
- Significant lack of behavioral health providers.
- Federal HPSA (Health Professional Shortage Areas) scores are too volatile.
- Allow individuals to request longer-term service commitments than the usual 2-3
- Provide paid continuing education for those in the incentive programs to deal with burnout and help inspire providers.

Summary of Listening Sessions

Based on the level of interest expressed by participants and the amount of feedback provided across the five listening sessions there continues to be an unmet need in rural communities across Oregon in terms of ensuring an adequate primary care workforce. Participants frequently mentioned the need for an “Oregon solution.” Such a solution requires both short and long-term changes to the state’s existing provider incentive programs. Each community was clear in the importance of being able to recruit and retain providers, both from the standpoint of ensuring quality access to health care, but also as an economic investment in their community. Concurrently, there is the growing need for primary care services in rural communities as a result of an aging population and existing providers’ entering retirement in the coming years.

The overwhelming sentiment expressed by participants was that Oregon’s existing programs have and continue to serve as vital and needed tools for rural communities to recruit and retain a vital primary care workforce.

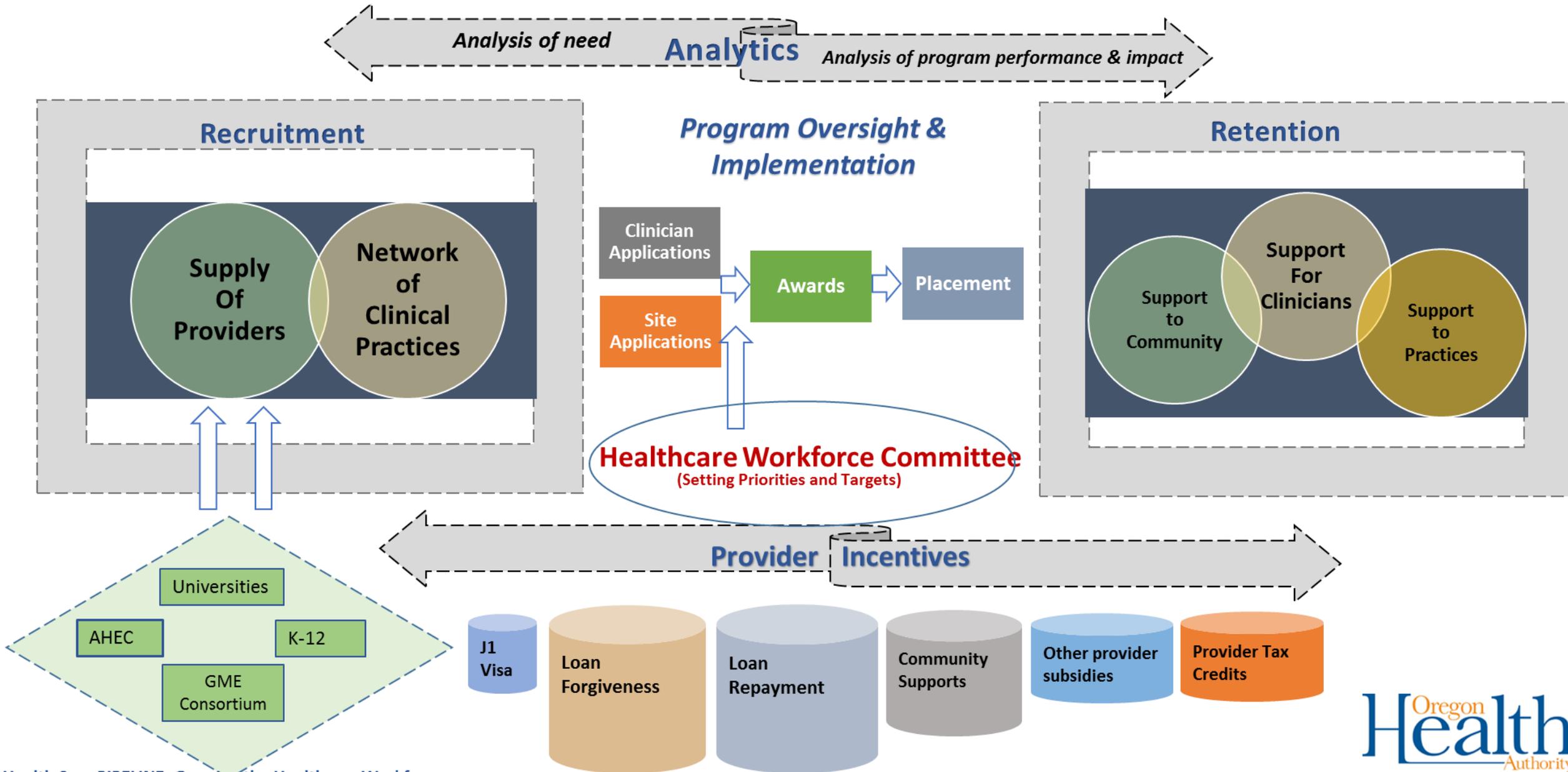
Appendix A: List of Organizations represented by Attendees

Asante Health Sytem
Asher Community Health
Astoria School District
University of Oregon Community Education Program (CEP)
CHI Mercy Health, Mercy Medical Center
College of Osteopathic Medicine of Pacific Northwest
Coastal Family Health Care
Community Health Centers of Benton and Linn Counties
Columbia Memorial Hospital
Community Services NW
Deschutes Rim Clinic
Eastern Oregon IPA
Evergreen Family Medicine
Family Tree Medical Clinic
Grants Pacific Clinic
Good Shepherd Health System
Harney District Hospital
Jackson County
Lane County Board of Commissioners
Lifeways
Mosaic Medical
Murray Drug Inc
Northeast Oregon Network (NEON)
Northwest Regional Primary Care Association, North Bend Medical Center
Oregon Association of Hospital and Health Systems (OAHHS)
Osteopathic Association of Oregon
Oregon Health and Science University (OHSU)
Oregon Medical Association
Osteopathic Physicians and Surgeons of Oregon (OPSO)
Oregon Western University
Pacific University
Prime Med Medical Clinic
Providence Health Systems
Rinehart Clinic
Salem Health
Samaritan Health Services
Sky Lakes Medical Center

South River Community Health Center
St Alphonsus Medical Center
St. Anthony Hospital
St Charles Hospital
Trillium Community Health Plan
True Health Medicine
Umpqua Community Health
Western University - COMP Northwest
Weston Eye Center
Woodburn Pediatric Clinic

Appendix C: Conceptual Framework for Oregon healthcare Service Collaborative on Analytics, Recruitment & Retention (OSCARR)

A potential "transformed view"-- Oregon healthcare Service Collaborative on Analytics, Recruitment & Retention (OSCARR)



Appendix D: Discussion Guide Matrix for Committee

DISCUSSION DOCUMENT FOR HB 3396

OHA Staff created this document as a tool to support the Workforce Committee in its discussion of the Lewin Group’s report and the feedback from the Listening Session to be able to respond directly to the specific requirements of HB 3396. Although the Committee categorizes its recommendations slightly differently than outlined in the original legislation, the matrix below shows how the Committee’s deliberations and eventual recommendations match up with the charge from the Legislature.

Introduction

Oregon House Bill 3396 (2015) directs the Oregon Health Policy Board to study and evaluate the effectiveness of the financial incentives offered by the state to recruit and retain providers in “rural and medically underserved areas” and make recommendations to the Legislature by September 2016. Specifically, the Oregon Legislature tasked the Health Policy Board with addressing the following (see section 3 of 3396):

1. Continuation, restructuring, consolidation or repeal of existing incentives;
2. Priority for directing the incentives offered by Health Care Provider Incentive Fund; and
3. Establishment of new financial incentive programs.

Key Resources and Evidence: Discussion Tool

In response to HB 3396, the Oregon Health Authority contracted with the Lewin Group, LLC to assess Oregon’s existing provider incentive programs including program effectiveness among both federal and state funded programs, and to develop policy recommendations. As the request of the Oregon Health Workforce Committee, and supported by the HB 3396 Steering Group, the OHA convened five regional meetings across Oregon to solicit input on the state’s current provider incentive programs and request feedback on Lewin’s preliminary analyses.

In response to feedback and guidance from the HB 3396 Steering Group, and to help ensure the Health Care Workforce Committee and the Health Policy Board are able to address the requirements listed above, OHA staff compiled a discussion tool. The tool is designed to compare findings from the Lewin study with input shared during the rural listening session. The tool also outlines a number of key considerations as well as identifies notable data limitations. Lastly, in response to direction from the Health Policy Board (July 15th meeting), the tool identifies potential strategies, both short and long-term, for consideration.

Based on Lewin’s analysis and recommendations, feedback received during the rural listening sessions in June, expertise provided by the 3396 Steering Group and direction from the Health Care Workforce Committee—a substantial amount of information have been compiled to help inform the decision-making process led by the Health Policy Board in addressing section 3 of 3396.

DISCUSSION DOCUMENT FOR HB 3396

Discussion Tool

The discussion tool or framework can help inform policy makers regarding how to leverage state resources in more effective ways to “attract and retain qualified health care professionals in areas of greatest need.”¹ The tool may also help to answer several critical questions:

- Under what circumstances should providers receive more than one incentive simultaneously?
- As a state, how can Oregon accurately measure the efficacy of the programs and continue to track their effects?
- Could/should existing programs be restructured to increase their efficacy and the return on investment of funds allocated to them?

¹ Senator Steiner Hayward (July 15, 2016): [Comments](#) to the Oregon Health Policy Board regarding HB 3396, Provider Incentives and SB 440, Standardized Metrics.

DISCUSSION DOCUMENT FOR HB 3396

Table 1: Potential Changes to Existing Programs

		Lewin Analysis and Results	Listening Session Feedback	Key Considerations	Short vs. Long Term Strategies (e.g. ≤1 year vs. >18 months)	Potential Recommendations (from Lewin and Listening Sessions)
Oregon Funded Provider Incentive Programs	Continuation	<ul style="list-style-type: none"> Programs appear to have similar, positive impact on recruitment and retention of health care providers. 	<ul style="list-style-type: none"> Additional financial support needed; particularly GME/residency slots Tax credit a valuable retention tool 	<ul style="list-style-type: none"> What are the implications if existing state funded programs are working, but insufficient in recruiting providers in areas with most unmet need? How long is a reasonable period for an area to be without a primary care provider (effectiveness)? 	<p><u>Short Term:</u></p> <ul style="list-style-type: none"> Several incremental changes to the programs could be incorporated based on Lewin findings Prioritize state funding to target more “grow your own” programs <p><u>Long Term:</u></p> <ul style="list-style-type: none"> Develop systematic data collection, monitoring and evaluation program at the state level 	<ul style="list-style-type: none"> Invest more in programs— either individually or overall. Allow Multiple Program Participation —RPTC and RMPIS Build in systematic data collection, monitoring and evaluation efforts for each program offered.
	Consolidation	<ul style="list-style-type: none"> Analysis indicates additional impact when RPTC and RMPIS are combined. 	<ul style="list-style-type: none"> Interest in “bundling” funding across different programs to create a more lucrative compensation package 	<ul style="list-style-type: none"> HB 3396 repeals and replaces (i.e. “consolidates” state funded programs except SHO1). HCWF may recommend keeping existing programs with targeted populations/areas; alternatively, advise that existing funding go into single fund. Target programs in packages relative to “growing the supply,” “attracting,” and “retaining.” 	<p><u>Long Term:</u></p> <ul style="list-style-type: none"> Develop a single, online, integrated application and renewal process for all state funded programs. Develop systematic data collection, monitoring and evaluation program at the state level 	<ul style="list-style-type: none"> Develop a single, online, integrated application and renewal process for all state funded programs. Build in systematic data collection, monitoring and evaluation efforts for each program offered.
	Restructuring	<ul style="list-style-type: none"> Administrative simplification; create a user-friendly system for clinicians and employers learn, apply, and renewal 	<ul style="list-style-type: none"> Consider larger tax credits for physicians to improve retention effect Redesign programs to be user friendly 	<ul style="list-style-type: none"> See cell above. Single online recruitment and retention “hub;” common application for sites and one for clinicians. Modify the amount of awards, i.e. reduce or increase in size 	<p><u>Short Term:</u></p> <ul style="list-style-type: none"> Changes to tax credit program could be immediate; would need to assess impact from changes, long-terms in terms of recruitment. Stability of programs could be addressed potentially in the 	<ul style="list-style-type: none"> Increase Award Amounts Increase Number of Loan Repayment Awards Different Award Amounts by Provider Type A Bidding Mechanism An Incentive “Package”

DISCUSSION DOCUMENT FOR HB 3396

	<p>eligibility for programs.</p> <ul style="list-style-type: none"> • Redesign tax credit a program to look more like others—provide credits to those who apply (commit) in advance for the certificate. 	<ul style="list-style-type: none"> • Increase stability of programs; assurance of award over multiple years per awardee; do not subject to changes in HPSA scores 		<p>short-term; would require ongoing evaluation</p> <p><u>Long Term:</u></p> <ul style="list-style-type: none"> • Develop a single, online, integrated application and renewal process for all state funded programs. 	<ul style="list-style-type: none"> • Relax Job Requirement as Condition for a Loan Repayment Award • Include Obligation for Some Programs • Increase the Number of Limited-Funded Awards Support for Clinical Practices of Team-Based Care • Increase Community Support • Combine Benefits • <i>Increase Awareness on the Availability of Programs and User-Friendliness—One-Stop Hub</i> • Retain Former Obligor in the State by including this in service obligation.
Repeal	<ul style="list-style-type: none"> • No indication any incentive program “should be” repealed. Results indicate several programs more effective with retention; other more cost effective for recruitment by provider. 	<ul style="list-style-type: none"> • Potentially, modify rural tax credit and allocate any new state revenue to fund Oregon incentive programs. 	<ul style="list-style-type: none"> • Are there any existing Oregon programs that should be repealed in favor of others (e.g. program effectiveness)? • Note that all Oregon funded programs are slated to be repealed in 2017 under HB 3396—legislature could introduce changes in 2017 session to undo this or not. 	<p><u>Long term:</u></p> <ul style="list-style-type: none"> • Assess any efficiencies from consolidation or restructuring Oregon programs. 	<ul style="list-style-type: none"> • Allow HB 3396 to be fully implemented, repealing all programs and providing the opportunity to make adjustments within a “new” system.

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Table 2: Priority for Distributing Funds for Oregon Incentive Programs

	Lewin Analysis and Results	Listening Session Feedback	Key Considerations	Short vs. Long Term Strategies (e.g. 18 months vs. 3+ years)	Potential Recommendations (from Lewin and Listening Sessions)
Priority for distributing funds	<ul style="list-style-type: none"> Lewin’s analysis provides cost per awardee by individual program Lewin’s analysis provides general data about the costs per FTE for recruiting and retention oriented programs. Lewin’s analysis provides limited data beyond county level in terms of available workforce 	<ul style="list-style-type: none"> Students at for-profit and state-supported schools should have equal access to program funds 	Consider “set-asides” in categories that could include: <ul style="list-style-type: none"> Rural and Non-Rural Physical, Mental, Dental 	<u>Short or Long Term:</u> <ul style="list-style-type: none"> Develop priority for distributing funding by provider type, community need, and program effectiveness Develop monitoring plan to assess any changes implemented around priority for distributing funds in 2017-19 biennium. Bidding system Larger awards to those willing to serve additional years (e.g. > 3+ years) Tie award to size of student debt 	<ul style="list-style-type: none"> Develop priority for distributing funding by provider type, community need, and program effectiveness Consider a bidding system, with larger awards to those willing to serve additional years (e.g. > 3+ years) Tie award to size of student debt

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Table 3: Potential New Programs

HB 3396 requirements	Lewin Analysis and Results	Listening Sessions	Key Considerations	Short vs. Long Term Action Items (18 months vs. 3+ years)	Potential Recommendations (from Lewin and Listening Sessions)
Financial Assistance Programs for students in state-run and private educational programs	N/A	<ul style="list-style-type: none"> Do not discriminate by type of school. 	<ul style="list-style-type: none"> Both OHSU and COMP-NW students are eligible for PCLF; issue concerns the legislature’s \$1.5 million for OHSU to create the SHOI program. Does HCWF wish to comment? Is it a matter of making the same investment for a similar program at another school? Does this apply to the NCM also? 		<ul style="list-style-type: none"> Offer SHOI for COMP-NW students or expand and revise the program so it is available from Admissions Offices at both schools.
Loans, grants to hospitals and teaching health centers for residency programs	N/A	<ul style="list-style-type: none"> Extensive feedback about residency programs at each listening session. 	<ul style="list-style-type: none"> Teaching health centers (THC) not specifically addressed during the listening sessions. Virginia Garcia does work with a THC in Pennsylvania for students and it seems successful. 		<ul style="list-style-type: none"> Support additional funding/current funding for GME Consortium to be directed at THCs
Loans or grants for hospitals at risk of closure	N/A	<ul style="list-style-type: none"> Hospital representatives participated in every listening session; notion of a grant or a loan was not a key point of discussion. 	<ul style="list-style-type: none"> Issue not addressed during the listening sessions. 		
Direct subsidies or bonus payments to providers	<ul style="list-style-type: none"> Discussion of marginal cost per FTE/Year is relevant for overall compensation package. 	<ul style="list-style-type: none"> Feedback during sessions about spending additional award dollars for providers serving in areas 	<ul style="list-style-type: none"> Issue of how much to spend on which providers is a key concept; not a matter of “whether,” but “which” providers need or will get more resource to practice in a targeted area. Potentially tie 		

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		that cannot otherwise find a provider.	bonus payment to continued service.		
Retirement plans	<ul style="list-style-type: none"> • N/A 	<ul style="list-style-type: none"> • Issue was raised in two of the five listening sessions 	<ul style="list-style-type: none"> • In several communities, the lack of retirement plans described as a considerable issue. Opportunity to change laws on Special Districts or for State to directly fund. 		
Changes to tax credit	<ul style="list-style-type: none"> • Several recommendations including making the credit a program like others that require an up-front commitment to serve for a period before qualifying. 	<ul style="list-style-type: none"> • One session heard participants say that perhaps it was time to eliminate the credit, while others said keep and increase. 	<ul style="list-style-type: none"> • 1) Recommend keeping credit, 2) Change credit amounts by profession, 3) Adjust amounts based on loan amounts, or 4) Increase or change for those further from urban areas? 		<ul style="list-style-type: none"> • Offer tax credit for preceptors— up to X number of students or prospective for X number of years. (Either replace some existing credit amount or offer new credit.)
Opportunities to secure non-state matching funds	<ul style="list-style-type: none"> • Lewin acknowledges Oregon in its use of leveraging federal financial incentives. 	<ul style="list-style-type: none"> • No specific program or mechanism identified as a way to secure non-state matching funds. 	<ul style="list-style-type: none"> • Future ability to draw down federal financial supports likely tied to HPSA scores; an out-of-the-box approach might be for Oregon to seek a separate waiver with HRSA • Consider seeking a federal waiver from HRSA to waiver program requirements and allocate federal money to target federal funds based on Oregon’s priorities and need. • Pending federal changes to measurement of shortage designation starting in 2018 could result in less overall federal funding for Oregon. 		<ul style="list-style-type: none"> • Pursue proposal to HRSA to take federal money now going to Oregon clinicians in the federal program to be directed by Oregon.

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Table 4: Other Considerations

	Lewin Analysis and Results	Listening Session Feedback	Key Considerations	Short vs. Long Term Strategies (e.g. 18 months vs. 3+ years)	Potential Recommendations (from Lewin and Listening Sessions)
Data Issues					<ul style="list-style-type: none"> • Collect Information on All Program Applicants • Collect Additional Provider-level Information • Field a Provider Survey • Collect Data on Tele-Medicine • Identify Providers in APAC Data • Create a Unique Provider Identifier • Create a Comprehensive Provider Dataset

Committee Deliverable: Policy changes needed to overcome barriers to behavioral and physical health integration faced by providers

The HCWF Committee's Behavioral Health Integration subcommittee will use this list of identified barriers to further understand the challenges facing clinics interested in integrating behavioral health and primary care services. A set of policy solutions to address some of the barriers will be developed for review by the Oregon Health Policy Board in November 2016.

Question for Committee Members: Which of the following policy barriers should the HCWF Committee address? Which are most appropriate, timely, and related to workforce-specific challenges?

1. **Network adequacy** (focus area: not enough mental health providers), including turnover of workforce
2. **Communication and collaboration issues**, including clarifying roles and responsibilities (power differentials) and cultural/historical issues and biases
3. **Provider education** (when to refer, type of services that each can provide), including lack of follow-up by other provider
4. **Billing** (not compensated for integrated care)
5. **Lack of space for co-location**
6. **Challenges sharing records**, which can include IT incompatibility, EMR issues and privacy/confidentiality concerns
7. **Lack of time** (to see more patients, for huddles, etc.), including scheduling (long wait times)
8. **Insurance challenges** (authorizations, network)
9. **Funding issues** (cost of BH provider, charges to clients, low or no reimbursement)

July 6, 2016

- I. High Demand, High Wage Health Care Occupations
- II. Healthcare Long Term Job Growth
- III. Health Sciences Programs of Study
 - a. Secondary to Post-Secondary Affiliation
- IV. Health Sciences Funding for Schools
 - a. Federal (Carl Perkins)
 - b. CTE Revitalization Grants
 - c. STEM Grants
 - d. Career Pathway Funding
- V. CTE 21st Century
 - a. STEM
 - b. Other Partners

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Health Care Will Lead Long-Term Job Growth in Oregon

by Gail Krumenauer

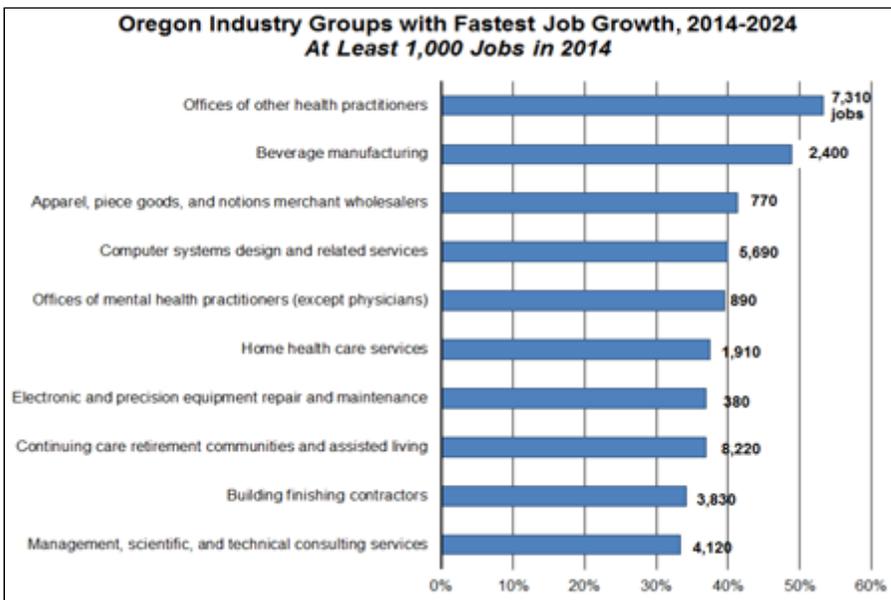
June 13, 2016

Oregon's total employment will grow by 260,200 jobs between 2014 and 2024. The 14 percent increase in employment includes private-sector gains of 233,300 jobs, growth of 11,400 jobs in government, and an additional 15,500 self-employed Oregonians.

Big Industries Add the Most Jobs

Oregon's largest

Industry	2014	2024	Change	% Change
Health care and social assistance	213,500	259,800	46,300	22%
Professional and business services	218,800	264,500	45,700	21%
Trade, transportation, and utilities	324,200	360,400	36,200	11%
Leisure and hospitality	182,600	218,400	35,800	20%
Manufacturing	179,100	200,200	21,100	12%
Construction	79,400	97,000	17,600	22%
Local government	177,000	186,600	9,600	5%
Financial activities	93,100	102,200	9,100	10%
Other services	67,500	76,300	8,800	13%
Natural resources and mining	55,300	61,400	6,100	11%
Private educational services	34,100	38,800	4,700	14%
State government	83,400	86,200	2,800	3%
Information	30,800	32,800	2,000	6%
Federal government	27,300	26,300	-1,000	-4%



industries are generally expected to add the most jobs over the decade. Health care and social assistance will add 46,300 jobs, the most of any sector statewide. It's followed closely by professional and business services with 45,700 additional jobs in 2024. There may be little surprise seeing health care and professional and business services among the top industries adding jobs. After all, they are two of

the largest industries in the state. But in addition to their size, these are also two of the three fastest-growing industries.

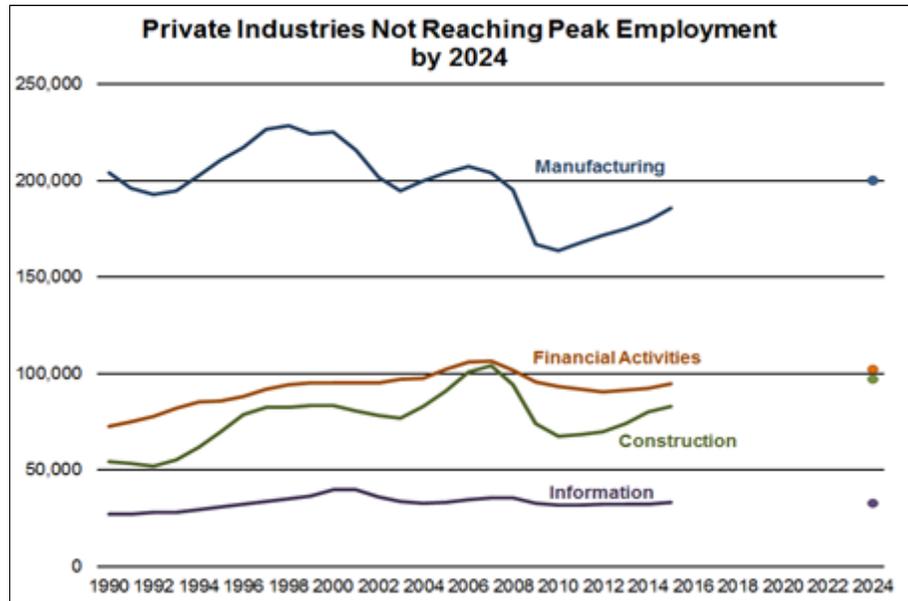
Fast growth in health care (22%) can be attributed to the growth and aging of the state's population. Within health care, independent health care practitioners (such as chiropractors, physical and speech therapists) and offices of other specialists (29%) and nursing and residential care facilities (27%) are

expected to grow much faster than hospitals (9%).

Professional and business services growth (21%) will be driven by gains in professional and technical services such as computer systems design (40%) and management of companies and enterprises (27%). Management of companies and enterprises includes the state's corporate offices.

Buildup in Construction

The other fastest-growing industry in Oregon is not among the biggest. Fueled by demand from both population and economic growth, and with low residential and commercial vacancy rates (particularly in Portland), construction jobs should ramp up considerably (22%) by 2024.



Within construction, building finishing

contractors are projected to add 3,800 jobs, a gain of 34 percent. This includes contractors for drywall and insulation, flooring, and finish carpentry. Employment at other specialty trade contractors – such as building demolition crews, earth movers, foundation diggers, and some types of paving work – should increase by 30 percent. Residential building construction growth is also projected to rise by 30 percent over the decade.

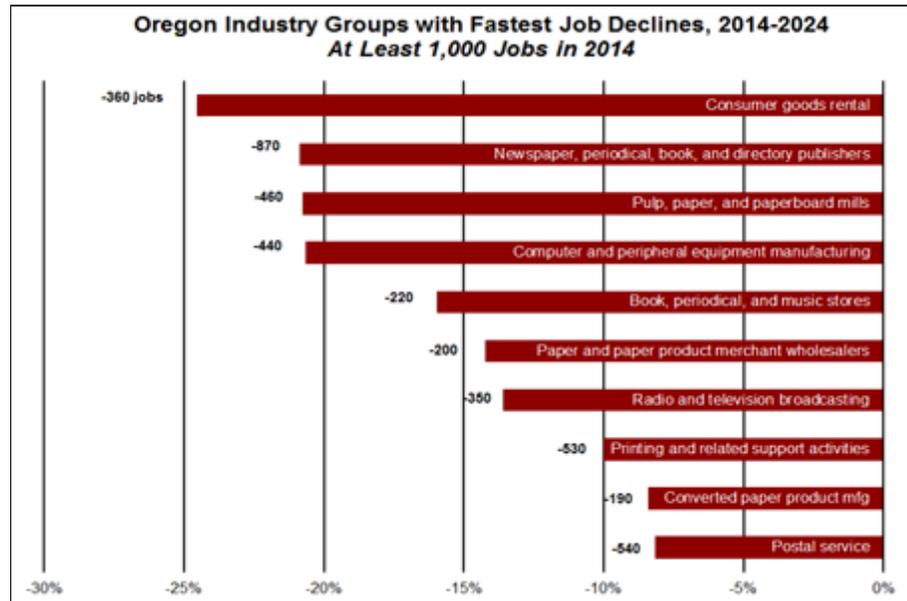
Peak Employment

Despite rapid growth, projected construction employment of 97,000 jobs in 2024 falls short of the industry's peak employment (104,200 in 2007). A few other sectors will not hit peak employment levels either.

Manufacturing employment should grow by 9 percent to 200,200 jobs. That's well below 228,500 in 1998, and slightly short of the most recent peak in 2006 (207,500 jobs). Growth of 10 percent in financial activities results in 102,200 jobs, below its height of 106,400 in 2007. The information sector's addition of 2,000 jobs between 2014 and 2024 results in industry employment of 32,800. Information last peaked in 2001 at 39,700 jobs.

Slow-Growing and Declining Industries

Projections show slow growth or decline in all broad areas of government. Federal government declines should continue (-4%), largely due to federal postal employment losses. State government growth (3%) will be driven primarily by state-owned hospitals, and local government gains are expected to total 5 percent.



An interesting mix of components make up Oregon's information sector, the slowest-growing of the broad private industries. On one hand, information includes the fast-growing software publishing industry, and rising employment in motion picture and video industries. On the other hand, information also includes some industry groups in long-term or rapid decline that's projected to continue to 2024. Among these are newspaper, book, and periodical publishers (-21%); and radio and television broadcasting (-14%).

Several other industry groups with the biggest projected losses relate to the production and distribution of various paper-related products. These include pulp, paper, and paperboard mills (-21%); paper and paper product merchant wholesalers (-14%); printing and related support activities (-10%); and converted paper product manufacturing (-8%).

All Industries Need Workers

Whether growing rapidly or showing a net loss of jobs by 2024, all broad industries provide employment opportunities to Oregonians. The demand is clear in some industries. Together health care, professional and business services, and construction will account for nearly half of all new jobs in the state. Even slower growing sectors and declining industries still offer job opportunities though, as they need to replace retiring workers or others leaving the industry. More information about Oregon's long-term employment projections can be found on the Publications page of QualityInfo.org.

Oregon High Wage and High Demand Health Care Occupations

April, 2016

Standard Occupational Classification Code and Title		2015 Median Wage	Typical Entry Level Education	Competitive Education
31-9099	Healthcare Support Workers, All Other	\$18.04	High school diploma or equivalent	Postsecondary training (non-degree)
43-9041	Insurance Claims and Policy Processing Clerks	\$17.69	High school diploma or equivalent	Postsecondary training (non-degree)
21-1011	Substance Abuse and Behavioral Disorder Counselors	\$19.81	High school diploma or equivalent	Master's degree
31-9091	Dental Assistants	\$19.02	Postsecondary training (non-degree)	Postsecondary training (non-degree)
29-2099	Health Technologists and Technicians, All Other	\$21.46	Postsecondary training (non-degree)	Postsecondary training (non-degree)
29-2061	Licensed Practical and Licensed Vocational Nurses	\$23.20	Postsecondary training (non-degree)	Postsecondary training (non-degree)
31-9011	Massage Therapists	\$24.97	Postsecondary training (non-degree)	Postsecondary training (non-degree)
29-2012	Medical and Clinical Laboratory Technicians	\$19.83	Postsecondary training (non-degree)	Associate's degree
29-2071	Medical Records and Health Information Technicians	\$19.47	Postsecondary training (non-degree)	Associate's degree
31-9094	Medical Transcriptionists	\$18.66	Postsecondary training (non-degree)	Associate's degree
29-2055	Surgical Technologists	\$23.55	Postsecondary training (non-degree)	Associate's degree
29-2021	Dental Hygienists	\$36.86	Associate's degree	Bachelor's degree
29-9099	Healthcare Practitioners and Technical Workers, All Other	\$30.52	Associate's degree	Associate's degree
31-2021	Physical Therapist Assistants	\$25.84	Associate's degree	Associate's degree
29-2034	Radiologic Technologists	\$31.54	Associate's degree	Bachelor's degree
29-1141	Registered Nurses	\$40.22	Associate's degree	Bachelor's degree
29-1126	Respiratory Therapists	\$30.63	Associate's degree	Bachelor's degree
21-1021	Child, Family, and School Social Workers	\$21.27	Bachelor's degree	Master's Degree
19-2041	Environmental Scientists and Specialists, Including Health	\$34.42	Bachelor's degree	Master's degree
21-1091	Health Educators	\$27.13	Bachelor's degree	Master's Degree
21-1022	Healthcare Social Workers	\$29.28	Bachelor's degree	Master's degree
29-2011	Medical and Clinical Laboratory Technologists	\$32.49	Bachelor's degree	Bachelor's degree
11-9111	Medical and Health Services Managers	NA	Bachelor's degree	Master's degree
29-9011	Occupational Health and Safety Specialists	\$31.07	Bachelor's degree	Bachelor's degree
21-1029	Social Workers, All Other	\$23.15	Bachelor's degree	Master's Degree
21-1023	Mental Health and Substance Abuse Social Workers	\$20.03	Master's degree	Master's Degree
21-1014	Mental Health Counselors	\$24.25	Master's degree	Master's Degree
29-1171	Nurse Practitioners	\$52.35	Master's degree	Master's degree
29-1122	Occupational Therapists	\$39.21	Master's degree	Doctoral or professional degree
29-1071	Physician Assistants	\$49.02	Master's degree	Master's degree
29-1127	Speech-Language Pathologists	\$34.84	Master's degree	Doctoral or professional degree
29-1021	Dentists, General	NA	Doctoral or professional degree	Doctoral or professional degree
19-1042	Medical Scientists, Except Epidemiologists	\$30.02	Doctoral or professional degree	Doctoral or professional degree
29-1051	Pharmacists	\$60.79	Doctoral or professional degree	Doctoral or professional degree
29-1123	Physical Therapists	\$38.41	Doctoral or professional degree	Doctoral or professional degree
29-1060	Physicians and Surgeons	NA	Doctoral or professional degree	Doctoral or professional degree
29-1131	Veterinarians	\$36.91	Doctoral or professional degree	Doctoral or professional degree

In 2007, the Oregon Employment Department, in collaboration with the Oregon Workforce Investment Board (OWIB), Oregon Department of Education, and other partners, developed definitions for high-wage, high-skill, and high-demand occupations as follows:

High-wage Occupations

Occupations paying more than the all-industry, all-ownership median wage for statewide or a particular region.

High-demand Occupations

Occupations having more than the median number of total (growth plus replacement) openings for statewide or a particular region.

High-skill Occupations

Occupations with a minimum educational requirement of postsecondary training or higher

AND

Occupations with long-term on-the-job training or related work experience as a minimum educational requirement, and postsecondary training or above as a competitive educational requirement.

Region	Institution	Credits to Complete	Program Title	Status
Portland Public Schools	Grant High School	0.5	Health Science	In Development
Portland Public Schools	Wilson High School	1	Health Science	In Development
Linn, Benton	Lebanon High School	1	Health Science	POS
Lane	Cottage Grove High School	1	Health Science	POS
Grant, Harney, Malheur	Nyssa High School	1	Health Science	In Development
Grant, Harney, Malheur	Ontario High School	1	Health Science	In Development
Grant, Harney, Malheur	Vale High School	1	Health Science	In Development
Tillamook	Neah-Kah-Nie High School	1.5	Health Science	POS
Tillamook	Tillamook High School	1.5	Health Science	POS
Clatsop, Western Columbia	Astoria Senior High School	2	Health Science	POS
Clatsop, Western Columbia	Clatskanie Middle/High School	2	Health Science	POS
Clatsop, Western Columbia	Knappa High School	2	Health Science	POS
Clatsop, Western Columbia	Warrenton High School	2	Health Science	POS
Clatsop, Western Columbia	Warrenton High School	2	Health Science	POS
Tillamook	Nestucca High School	2	Health Science	POS
Washington, Eastern Columbia	Forest Grove High School	2	Health Science	POS
Washington, Eastern Columbia	Glencoe High School	2	Health Science	POS
Washington, Eastern Columbia	Health and Science School	2	Health Science	In Development
Multnomah	David Douglas High School	2	Health Science	POS
Multnomah	Parkrose High School	2	Health Science	POS
Marion, Polk, Yamhill and Lincoln	John F Kennedy High School	2	EMT Training	POS
Marion, Polk, Yamhill and Lincoln	Silverton High School	2	Health Science	POS
Marion, Polk, Yamhill and Lincoln	Wellness, Business and Sports School	2	Health Science	POS
Salem Keizer Schools	Sprague High School	2	Health Science	POS
Linn, Benton	Philomath High School	2	Health Science	POS
Linn, Benton	West Albany High School	2	Health Science	POS
Coos, Curry	Brookings-Harbor High School	2	Health Science	In Development
Jackson, Josephine, Klamath	Mazama High School	2	Health Science	POS
Hood River, Jefferson	Condon High School	2	Health Science	POS
Hood River, Jefferson	Crook County High School	2	Health Science	POS
Hood River, Jefferson	Fossil Charter School	2	Health Science	POS
Hood River, Jefferson	Mitchell School	2	Health Science	POS
Hood River, Jefferson	Sherman Junior/Senior High School	2	Health Science	POS
Hood River, Jefferson	Sisters High School	2	Health Science	POS
Hood River, Jefferson	Spray School	2	Health Science	POS
Clackamas	Sandy High School	2	Health Science	POS
Salem Keizer Schools	North Salem High School	2.5	Health Science	POS
Lane	Siuslaw High School	2.5	Health Science	POS
Washington, Eastern Columbia	Century High School	3	Health Science	POS
Washington, Eastern Columbia	Liberty High School	3	Health Science	POS
Marion, Polk, Yamhill and Lincoln	McMinnville High School	3	Health Science	POS
Salem Keizer Schools	West Salem High School	3	Health Science	POS
Lane	Churchill High School	3.5	Health Science	POS
Washington, Eastern Columbia	Beaverton High School	4	Health Science	POS
Multnomah	Center for Advanced Learning	4	Health Science	POS
Portland Public Schools	Madison High School	4	Health Science	POS
Salem Keizer Schools	McKay High School	4.5	Health Science	POS
Portland Public Schools	Benson Polytechnic High School	5.5	Health Science	POS
Clackamas	Sabin-Schellenberg Professional-Technical Center	6	Health Science	POS

