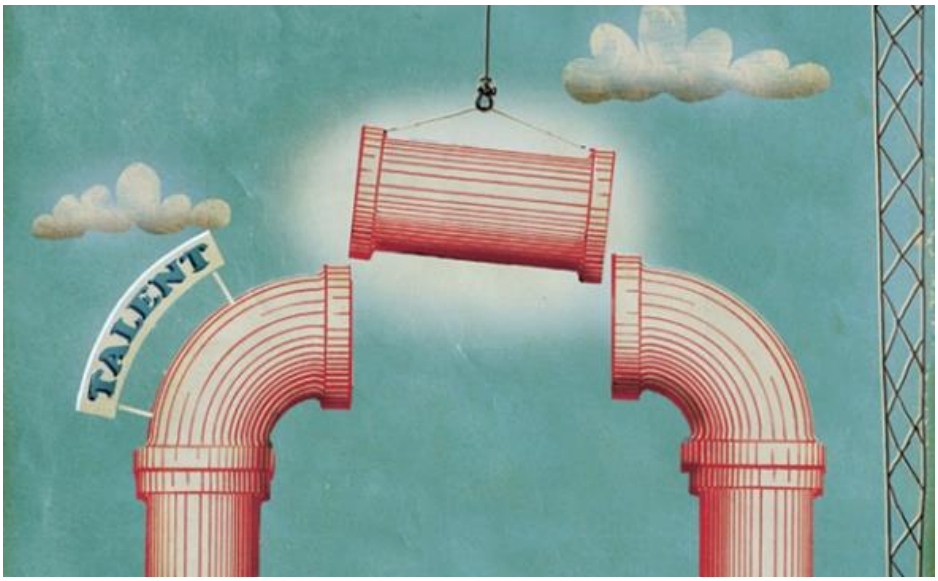


Prescription for Partnership: Addressing Idaho's Healthcare Worker Shortage through Education and Training Innovations

A report by the Training and Education Work Group of the

Idaho Healthcare Workforce Collaborative

June 2024

With support from the Blue Cross of Idaho Foundation for Health

Prescription for Partnership: Addressing Idaho's Healthcare Worker Shortage through Education and Training Innovations

Contents

INTRODUCTION & CALL TO ACTION

Idaho, like the rest of the nation, is facing an unambiguous shortage of healthcare workers, particularly in crucial areas such as nursing, behavioral health, and primary care. Factors such as high relocation rates among healthcare professionals, an aging workforce, and the resulting burnout further contribute to this challenge at the state level. To address these issues, government, education, and healthcare stakeholders from across Idaho, with support from the Blue Cross of Idaho Foundation for Health, have created a healthcare worker shortage advisory group to identify potential solutions. The advisory group is organized into three key workgroups: Public Policy, Attract and Retain, and Education and Training. This research report from the Education and Training workgroup (see Appendix A for member details) focuses on solutions to the healthcare worker shortage that can be implemented specifically within the healthcare education and training pipeline. In particular, the healthcare education and training pipeline faces challenges related to capacity constraints that inhibit more students from getting the requisite clinical experience to earn their degree.

This report examines the current state of the healthcare worker shortage in Idaho. It details the requirements and impact of two specific solution sets to this pipeline challenge that can be implemented or expanded statewide and have the greatest impact of all identified solutions**: 1) clinical site/preceptor flexibility** and **2) apprenticeship models**. These two solution sets are designed to address the capacity challenges within the education and training pipeline affecting both the input of prospective students and the output of qualified healthcare workers to strengthen the healthcare workforce and improve the quality of healthcare provided to Idaho's residents.

Clinical site/preceptor flexibility is a set of solutions that can be implemented by higher education institutions and clinical sites to increase capacity for clinical training. Though often a required element of healthcare education, clinical training is limited by the availability of qualified clinical supervisors (a.k.a. preceptors) and locations. Flexibility regarding who can serve as preceptors and when/where training can occur (e.g., Dedicated Education Units, variations of which are detailed in this report) requires minimal upfront investment and can significantly mitigate the impact of this bottleneck on the number of graduates of healthcare programs.

Apprenticeship models are longer-term solutions that require more financial investment and coordination between institutions and healthcare providers to implement across Idaho. Apprenticeship models such as work-study (students simultaneously work at a healthcare employer and study to advance in their roles) and fund-return (healthcare employers provide scholarships to students in return for employment agreements) create flexible, funded pathways into high-demand healthcare careers through employer partnerships with higher education institutions that can be established for a variety of clinical roles and levels.

Both sets of solutions require investment and coordination from higher education institutions (and, therefore, government) and healthcare providers. Systematic, ongoing partnerships between education and industry are needed to support state-wide implementation or expansion in both solution sets and are crucial for success. Therefore, this report will discuss the context and process through which these solution sets were chosen and suggested methods of operationalizing each solution set. Together, clinical site/preceptor flexibility in the near term and apprenticeship models in the long term can significantly and positively impact the number and quality of available healthcare workers in Idaho and, ultimately, the healthcare needs of its residents.

CONTEXT: IDAHO'S HEALTHCARE WORKER SHORTAGE

The healthcare workforce in Idaho is confronting a pronounced and worsening shortage, particularly in nursing, behavioral health, and primary care. This pressing issue is starkly illustrated by Idaho's ranking as 43rd in the nation for number of employed registered nurses per thousand population at 7.83, significantly below the national average of 11.7. In behavioral health, the state holds the lowest number of psychiatrists per 100,000 residents, approximately 6.1 compared to the U.S. average of 16.6. Additionally, every county in Idaho has a behavioral health provider shortage[1]. In primary care, the shortage extends to physicians with Idaho ranking last and having the lowest number of physicians per 10,000 residents at around 19.0 compared to the national average of 28.2[2].

Compounding the workforce shortage are several state-specific factors that inhibit the growth and stability of the healthcare sector: relocation and provider age. First, high relocation rates among healthcare professionals pose a significant challenge. Twenty-five percent of practicing registered nurses in Idaho expect to move out of Idaho within the next decade, a statistic that is even higher among younger nurses. Second, the state's healthcare practitioners are aging and retiring. The average age of physicians and psychiatrists, for example, is 52 and 53 years old, respectively. Additionally, one-third of Idaho's nurses are expected to retire within the next few years, threatening to exacerbate the existing shortages. In fact, the number of licensed registered nurses was lower in 2020 than in 2018, contributing to a significant nursing vacancy of approximately 2,000 positions[3]. These two factors contribute further to the acute healthcare workforce shortage in Idaho, which creates a cyclical set of challenges affecting Idaho's healthcare education and training pipeline.

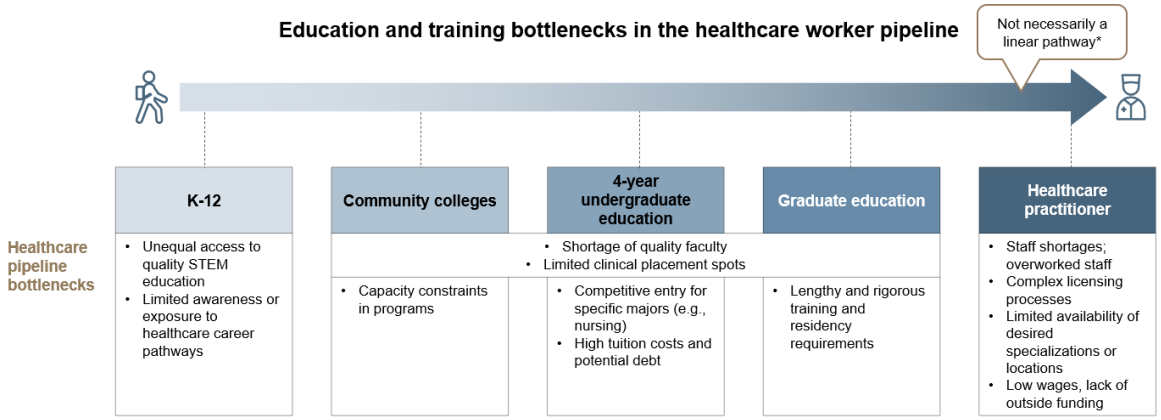
THE STATE'S EDUCATION TO TRAINING HEALTHCARE PIPELINE

[1] Idaho Behavioral Health Alliance 2022 Report
[2] U.S. Bureau of Labor Statistics
[3] Idaho Department of Labor

A key area in which to focus efforts to maintain and expand the Idaho healthcare workforce is the primary source of workers: Idaho's healthcare education and training pipeline. The pipeline encompasses a comprehensive range of education opportunities designed to introduce and advance individuals in healthcare professions from primary education through to professional practice. Opportunities begin as early as the K-12 level with STEM courses and dual enrollment in health professions programs; students can also obtain specialized certificates in various, entry-level healthcare fields. Degree programs in healthcare are available at every level from associate and bachelor's degrees through master's and doctorates, and with the addition of hands-on training and optional research opportunities, these ensure thorough preparation for clinical practice.

Nationally, the path through this educational pipeline is fraught with barriers that hinder the effective training and retention of healthcare professionals (see Figure 1).

Figure 1:



At the earliest levels, there is unequal access to quality STEM education and a general lack of awareness about the multitude of healthcare career options nationwide, which limits early engagement[4]. Community colleges and undergraduate programs frequently face capacity constraints and experience a chronic shortage of quality faculty, which, combined with limited clinical placement spots[5], severely restricts the number of students who can progress through healthcare training programs. Furthermore, competitive entry requirements for specific majors such as nursing coupled with the high cost of tuition and potential debt, pose additional financial and logistical barriers[6]. At the graduate and professional levels, the challenges persist with shortages of faculty and clinical spots continuing to impede the training of specialized healthcare workers. Additionally, learners already in the healthcare profession

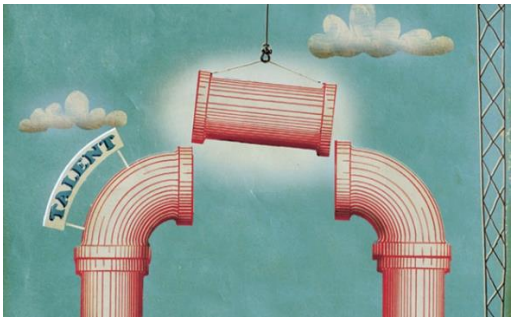
[4] National Science Foundation. (2020). STEM education for the future: 2020 visioning report. https://www.nsf.gov/edu/Materials/STEM%20Education%20for%20the%20Future%20-%202020%20Visioning%20Report.pdf

[5] Washington Center for Nursing. (n.d.). A break in the workforce pipeline: Nursing program capacity challenges. Retrieved from https://www.wcnursing.org/a-break-in-the-workforce-pipeline-nursing-program-capacity-challenges%EF%BF%BC/

[6] Shields, R. K., Suneja, M., Shields, B. E., Tofte, J. N., & Dudley-Javoroski, S. (2023). Healthcare educational debt in the United States: unequal economic impact within interprofessional team members. BMC medical education, 23(1), 666. https://doi.org/10.1186/s12909-023-04634-1

face issues such as complex licensing processes[7], low wages, and limited opportunities for upskilling or reskilling in desired specializations, further inhibiting opportunities for aspiring healthcare practitioners. These national barriers, existing at various intensities within Idaho as well, necessitate targeted interventions to ensure a steady flow of competent healthcare professionals into the workforce.

FACTORS THAT AFFECT THE EDUCATION-TO-TRAINING HEALTHCARE PIPELINE



"Our number one issue is capacity. It's about the capacity of faculty to deliver quality education, and the capacity of clinical providers to deliver quality training. It all comes down to your people."

– University Dean

Through in-depth conversations with leadership at higher education institutions and healthcare providers (see Appendix A for information on interviewees), we have identified the top barriers within Idaho's healthcare worker training pipeline that affect the input of prospective students and the output of qualified healthcare workers. It is important to note that all institutions/healthcare providers do not face all these barriers, nor do they face them to the same degree of severity. However, most of these are challenging for most of the institutions and providers we spoke with to some significant extent.

Here are the top barriers affecting the input of prospective students *into* the healthcare education and training pipeline:

1. *Awareness and interest:* Limited student awareness of and interest in available healthcare career paths, programs, and how to enroll limits their intent and ability to enroll.
2. *Affordability:* Students either cannot afford to enroll in programs or believe these programs do not have a clear return on investment given their cost.
3. *Role transition support:* Those already working in healthcare roles are not given financial and logistical support to transition into more advanced roles through appropriate training/degree programs.

Here are the top barriers affecting the output of qualified healthcare workers *from* the healthcare education and training pipeline:

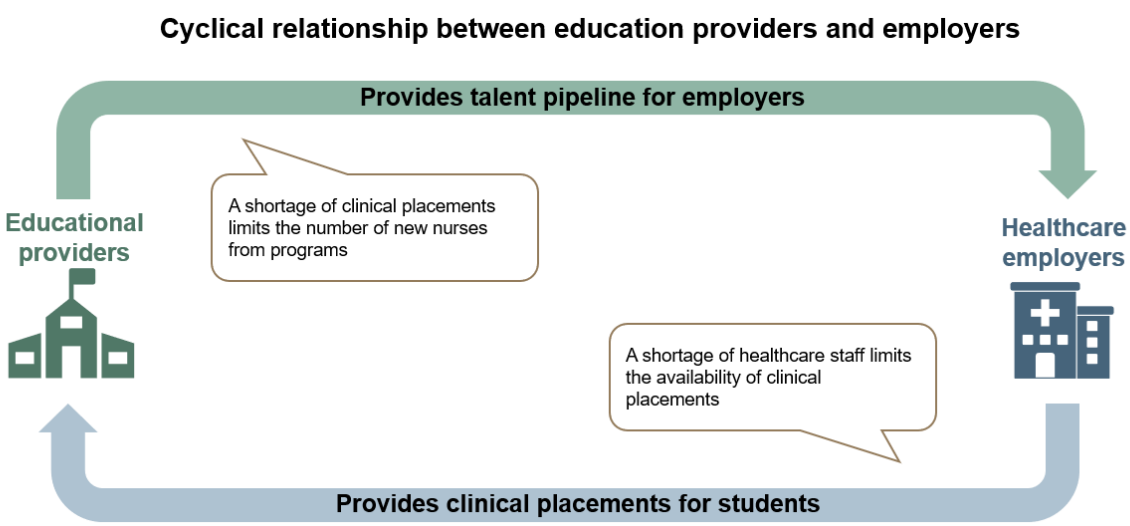
4. *Faculty and preceptors:* Insufficient faculty and/or preceptors (qualified clinical supervisors) lacking resources to take on duties to oversee clinical rotations needed to obtain a degree.

[7] OpenLoop. (n.d.). Licensing 101. Retrieved from https://openloophealth.com/blog/licensing-101

5. *Clinical training spots:* Insufficient number healthcare employers partnering with academic institutions to offer clinical placements and/or placements are not in geographically desirable areas.
6. *Program flexibility:* Institutions lack the infrastructure to offer programs in flexible ways to meet learner needs.

Addressing these multifaceted challenges is essential for enhancing the pipeline, yet this effort is complicated by a 'chicken-and-egg' problem inherent within the system (see Figure 2).

Figure 2:



The shortage of faculty, preceptors, and clinical sites leads to limited clinical training spots, which restricts the number of students who can be admitted and trained. Lower enrollment in healthcare programs then exacerbates the lack of qualified healthcare professionals ready to enter the workforce, creating a cycle that continually impedes the growth and effectiveness of the healthcare training pipeline. In addition, the shortage adds pressure to the schedules and responsibilities of existing healthcare workers, exacerbating the effects of burnout and further reducing the workforce. Thus, resolving these interconnected issues is crucial for stabilizing and expanding the capacity of healthcare education and training in Idaho.

EFFECTIVE SOLUTIONS TO IMPROVE PIPELINE ISSUES

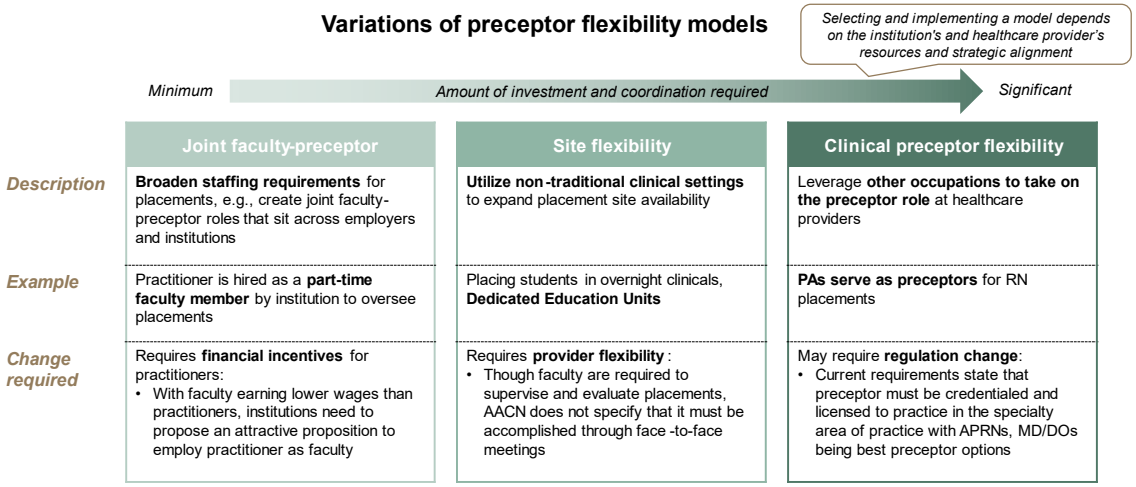
"Partnerships are the key to solving this, and we realized we can't sit here and complain if we're not willing to train the future. We wanted to be part of the solution and participate in a way that will help increase the labor supply, which helps everyone." – CEO of large Idaho hospital system

To address the challenges in Idaho's healthcare education and training pipeline, ten potential solutions were examined involving cross-institution partnerships, employer partnerships, and standalone approaches (see Appendix C for comprehensive list of solutions). These strategies encompassed diverse models such as faculty/course sharing, developing a talent pipeline from secondary schools, and utilizing simulation labs. A joint evaluation with Idaho-based healthcare and higher education experts of each solution's potential for impact and feasibility was conducted to select the solutions with the greatest potential for state-wide impact.

This led to the selection of two primary models aimed at optimizing the healthcare education pipeline: **clinical site/preceptor flexibility** and **apprenticeship models**. Clinical site/preceptor flexibility is intended for near-term implementation to quickly address the current limitations affecting the output of trained healthcare professionals. In contrast, apprenticeship models are designed for long-term implementation, focusing on increasing the input of students entering the healthcare education pipeline. This multi-pronged strategic approach ensures both immediate and future enhancements to the healthcare workforce development in Idaho.

First, the pivotal near-term recommendation focuses on **enhancing clinical site and preceptor flexibility**. This approach seeks to address critical bottlenecks such as faculty and preceptor (qualified clinical supervisor) shortages, limited clinical training spots, and rigid program structures. By expanding the criteria for who can serve as preceptors and when/where clinical training can occur, this solution significantly increases the capacity for training healthcare professionals. Variations of this strategy might include creating joint faculty-preceptor positions, offering greater flexibility in clinical site locations and times, and broadening the range of professionals who can qualify as clinical preceptors (see Figure 3).

Figure 3:



The implementation of these changes requires low upfront financial investment, but to be effective across the state, requires increasing coordination and partnerships between educational institutions and healthcare providers. Additionally, the availability of state funds through initiatives like Preceptor Incentive grants[8] can further incentivize participation and facilitate quick, statewide adoption.

The benefits of clinical site/preceptor flexibility for educational institutions include an expansion in the faculty available for clinical placements, a reduction in faculty workload, and an increase in the number of placement sites. Healthcare providers benefit from an expanded pool of preceptors available for clinical placements, enhanced quality and preparedness of workers, and a direct recruitment pipeline that helps fill job vacancies more efficiently and effectively.

Second, **apprenticeship models** present a robust and long-term solution to the enduring challenges of preserving the healthcare education and training pipeline. These models create flexible, funded pathways into high-demand healthcare careers through employer partnerships, effectively adding new career entry points. They are designed to address the lack of interest among potential students and insufficient support for role transitions. For example, current hospital employees interested in upskilling could take advantage of educational opportunities at partner institutions that flex around their work schedules and allow them to become eligible for advanced roles at the hospital (e.g., CNA to RN) or entirely new roles and career paths altogether (e.g., phlebotomist to RN). This is one variation on the apprenticeship model, known as a work-study arrangement; other variations on this solution might include fund-return guarantees, and comprehensive employee upskilling programs (see Figure 4).

Figure 4:

Variations of apprenticeship models

Minimum — *Amount of coordination required* — *Significant*

	Fund-return	Work-study	Employee upskilling
Description	Student **receives funding** for program in exchange for **guaranteed employment** after program completion	Employers train students to **work in entry-level role while studying** for more advanced degree; student receives funding and job guarantee, and institution receives clinical placement	Current healthcare **employee returns to school** part or full-time to advance within their occupation
Example	Institution connects MSW student with future employer who provides tuition assistance in exchange for employment for set number of years	Student is trained to work as phlebotomist while studying as RN; hospital funds BSN and provides clinical placement; may include employment requirement after graduation	RN at hospital attends NP program at partner institution while working part-time as RN; hospital provides clinical placement for NP program
Change required	**Coordinated funding** guarantees and agreements between students and employers regarding employment	Requires **established entry-level training** pathways and programs in employer settings (e.g., phlebotomy, medical assistance, nursing aide etc.)	Requires established partnership **agreements** between institutions and employers that may include blanket tuition discounting, **flexible scheduling**, employee referrals, and guaranteed clinical placements

[8] The Idaho Workforce Development Council, in partnership with the Blue Cross of Idaho Foundation for Health Inc., piloted an effort that made funds available to offset the extraordinary costs of utilizing a preceptorship training program. A maximum reimbursement of $1,000 per preceptor learning experience per student is available to eligible clinical supervisors who apply at https://wdc.idaho.gov/grants/.

Establishing these apprenticeships necessitates a deeper level of coordination and partnership between educational institutions and healthcare providers, alongside the management of funding solutions. Although more complex and requiring greater investment, these models promise substantial improvements in the training and availability of healthcare workers. The state has shown support by allocating funds for the startup costs of initial apprenticeship programs, demonstrating a commitment to these long-term educational enhancements.

For institutions, the apprenticeship solution set significantly expands the enrollment pipeline by reducing cost barriers and enhancing job security, making healthcare careers more accessible and appealing. It also incentivizes employers to provide more clinical placements. Healthcare providers benefit from a guaranteed talent pipeline, which is crucial for planning and sustainability. Additionally, the models support the upskilling and retention of existing employees, thereby improving staff morale, and reducing recruitment and training costs.

OPERATIONALIZING EDUCATION AND TRAINING SOLUTIONS ACROSS IDAHO

Implementing each solution set will require an understanding of the commitments required by institutions and healthcare provider partners, coordination efforts, and operational costs, which are detailed below. Though both clinical site/preceptor flexibility and apprenticeship models can be implemented in multiple disciplines and most healthcare programs, the following operational details and suggestions can be understood through the lens of early career nursing programs such as certified nursing assistant (CNA) diplomas, associate degrees in nursing (ASN), and bachelor's degrees in nursing (BSN) but not *only* nursing.

Clinical site/preceptor flexibility: Commitments required

Clinical site/preceptor flexibility in Idaho's healthcare education system offers targeted solutions to address specific operational needs. Three variations are described here — joint faculty-preceptor roles, site flexibility, and clinical preceptor flexibility — and each requires unique commitments from educational institutions and healthcare providers to ensure successful implementation.

Joint Faculty-Preceptor

Institutions' Commitments:

- Offer attractive financial incentives to employ practitioners as part-time faculty (which generally pays less than clinical settings), leveraging funding mechanisms such as Idaho state Preceptor Incentive grants[9].
- Provide orientation and training to ensure practitioner-faculty members are effective in their clinical and educational roles.
- Forecast graduate output to align with the number of joint faculty-preceptors needed, ensuring a balance between demand and supply.

Healthcare Providers' Commitments:

- Facilitate priority advance scheduling to allow practitioner-faculty members consistent days off for their teaching responsibilities.
- Support dual roles by integrating these responsibilities into the practitioners' overall job descriptions and performance evaluations.

Site Flexibility

Institutions' Commitments:

- Support the development and utilization of non-traditional clinical sites and times by providing necessary resources and infrastructure to uphold educational standards.
- Collaborate closely with clinical instructors to adapt supervision methods, potentially incorporating remote supervisory techniques where appropriate.

Healthcare Providers' Commitments:

- Adjust clinical placement requirements to incorporate non-traditional sites and times, such as Dedicated Education Units, ensuring they meet educational standards and provide meaningful learning experiences.
- Extend operational support to facilitate student placements in these alternative sites, ensuring logistical arrangements are managed efficiently.

Clinical Preceptor Flexibility

Institutions' Commitments:

- Advocate for and support regulation changes that allow a broader range of healthcare professionals to qualify as preceptors, which may include engaging with regulatory bodies and participating in lobbying efforts.
- Provide instructional support for non-traditional preceptors to ensure they are equipped to deliver a high standard of clinical supervision.

Healthcare Providers' Commitments:

- Encourage and support employees from various professional backgrounds to take on preceptor roles, which includes providing training and possibly compensatory adjustments.

[9] The Idaho Workforce Development Council, in partnership with the Blue Cross of Idaho Foundation for Health Inc., piloted an effort that made funds available to offset the extraordinary costs of utilizing a preceptorship training program. A maximum reimbursement of $1,000 per preceptor learning experience per student is available to eligible clinical supervisors who apply at https://wdc.idaho.gov/grants/.

- Actively participate in lobbying efforts and regulatory change processes by providing data, support, and testimonials that highlight the benefits of expanded preceptor eligibility.

Clinical site/preceptor flexibility: Coordination efforts

Coordination efforts between educational institutions and healthcare providers are crucial to the success of clinical site/preceptor flexibility initiatives. For the joint faculty-preceptor roles, site flexibility, and clinical preceptor flexibility to be effective, a partnership coordinator role may be established either within the institutions or healthcare providers, or jointly. This coordinator would oversee the onboarding of alternative clinical sites, manage the recruitment of joint faculty-preceptor roles, and support non-traditional preceptors in their new roles. Such coordination is vital for synchronizing the educational and operational needs with the logistical capabilities of healthcare providers.

Additionally, regular communication and planning sessions between educational institutions and healthcare providers are needed to ensure that graduate forecasts align with the availability of clinical placements, thus preventing bottlenecks and maximizing the efficiency of training processes. A high-level timeline for these coordination efforts typically spans 6 to 12 months from initial planning to full implementation, allowing time for setting up systems, training personnel, and establishing partnerships.

Clinical site/preceptor flexibility: Operational costs

Operational costs associated with these coordination efforts include professional hourly rates for preceptors/faculty, an optional coordinator role to facilitate relationships between providers and institutions, and potentially higher costs for setting up and supporting non-traditional clinical sites. State funding, such as the Preceptor Incentive Grants, plays a critical role in offsetting some of these expenses, particularly in incentivizing practitioners to take on faculty roles. Incremental costs might also arise from additional support required, such as providing instructional support via telephone or online tools for students and preceptors at remote or non-traditional sites.

Case study: Dedicated Education Units at St. Luke's/Boise State, Clinical site/preceptor Flexibility

Dedicated Education Units (DEUs) are one type of clinical site/preceptor flexibility solution that involves greater coordination efforts and costs but has been shown to be an effective model. DEUs are best set up between higher education programs and large hospital systems and are often facilitated by a clinical instructor from that institution. They also involve healthcare workers serving as consistent preceptors in a single section of a hospital setting throughout a group of students' clinical rotation. Though the clinical instructor is available on site, the preceptors provide majority of the hands-on training. The costs of DEUs go beyond the financial, adding to the responsibilities of existing healthcare workers who are often already overburdened. However, despite these costs, DEUs have demonstrated superior effectiveness in clinical education outcomes compared to traditional preceptor models. By using clinical staff members, such as experienced nurses, to serve as preceptors, it addresses challenges of preceptor shortages. Additionally, by turning hospital units into extended classrooms, DEUs can accommodate more students than traditional clinical rotations. Often, DEUs take advantage of night and weekend shifts that expand the number of students who can complete clinical requisites. These benefits have led to a higher student satisfaction rate with their clinical experience and lower coordination and training workload for hospital staff. Most importantly, DEUs increase clinical placement capacity, thereby increasing the

number of qualified graduates who can then join the healthcare workforce and mitigate that key pipeline bottleneck, becoming a worthwhile investment in the long-term enhancement of healthcare training[10].

One example of this in Idaho is the DEUs set up by St. Luke's hospital system in partnership with Boise State University, which make the clinical placement experience more manageable and effective for students and instructors. St. Luke's takes on the placement of nursing students in their DEUs, and provides staff nurses as clinical instructors, while Boise State provides faculty to oversee rotations and support application of theory to clinical practice. St. Luke's also provides the incentives for staff nurses and a coordinator to manage the institutional relationship, and Boise State provides teacher training and financial incentives for the faculty who support the coordinators and students. Students are split into two shifts (less than 12 hours each) of five students, increasing student self-efficacy and keeping facilitation manageable for faculty and staff.

Apprenticeship models: Commitments required

Apprenticeship models in Idaho's healthcare education system offer a structured pathway to cultivate healthcare professionals through practical, workplace-integrated learning. This model adapts to the various stages of a student's educational and career journey, featuring three primary variations: work-study, fund-return, and employee upskilling. Each approach is designed to integrate students more seamlessly into the healthcare workforce by aligning their educational achievements with real-world work experiences.

Work-Study

Institutions' Commitments:

- Collaborate with employers to provide initial training in entry-level fields such as phlebotomy, medical assistance, and nursing aide prior to main program enrollment.
- Establish entry-level training pathways that include clinical placements within employer settings.

Healthcare Providers' Commitments:

- Train students in specific entry-level roles while they study for a more advanced degree, providing tuition assistance and guaranteed clinical placements.
- Offer guaranteed employment upon graduation, ensuring a seamless transition from education to employment.

Fund-Return

Institutions' Commitments:

- Connect students in the enrollment pipeline with partnering employers who offer post-graduation employment.
- Facilitate funding guarantees and agreements between students and employers, ensuring clear expectations of employment and tuition assistance.

[10] Bittner, N.P., Campbell, E. and Gunning, T. (2020) 'Impact of a dedicated education unit experience on Critical Thinking Development in nursing students', Nurse Educator, 46(6), pp. 386–388.

Healthcare Providers' Commitments:

- Provide tuition assistance and clinical placements for students, aligning educational outcomes with guaranteed employment opportunities post-graduation.
- Establish coordinated funding agreements that assure students of employment after completing their education.

Employee Upskilling

Institutions' Commitments:

- Act as the preferred education partner for employers, creating customized upskilling programs to meet specific employer needs.
- Offer tuition discounts for employees of partner organizations, enhancing accessibility and incentive for career advancement.

Healthcare Providers' Commitments:

- Refer employees seeking to advance within their occupation to the institutional partner.
- Offer scheduling flexibility to allow employees to find time for program completion.
- Offer tuition assistance and ensure the availability of clinical placements for employees engaged in upskilling programs.

Apprenticeship models: Coordination efforts

Effective coordination of apprenticeship models within Idaho's healthcare education system is foundational for aligning and standardizing the commitments of educational institutions and healthcare providers. A partnership coordinator is critical in this framework, tasked with facilitating the relationship between students, educational bodies, and healthcare employers. This coordinator ensures the proper functioning of the two-way referral pipeline, which supports students' transitions from academic environments to employment settings. Furthermore, they are responsible for overseeing the creation and maintenance of standardized funding agreements, which are essential for the sustainability of tuition assistance and employment commitments. Additionally, the coordinator oversees the implementation of tuition discounting and clinical placement guarantees, which are integral to the success of the apprenticeship models. The setup and ongoing adjustment of these elements typically require a timeline of 12 to 18 months to fully integrate into existing systems and practices.

Apprenticeship models: Operational costs

The operational and implementation costs associated with the apprenticeship models include several key financial commitments necessary for their success. The cost of the partnership coordinator, a full-time equivalent (FTE) position, represents a sizable portion of the initial outlay. This is complemented by upfront investments needed to establish joint ventures (e.g., a third-party non-profit) between educational institutions and healthcare providers, which are crucial for the seamless integration of the apprenticeship pathways. Ongoing expenses include program marketing costs, which are vital for attracting a continuous influx of participants into these programs. Additionally, scholarship funding forms a substantial part of the financial structure, initially supported by philanthropic or government

funders (e.g., Idaho LAUNCH funding[11]), and later transitioned to employer funding to ensure long-term viability.

For healthcare providers, the implementation costs are multifaceted: they not only cover scholarship funding to support student tuition but include marketing expenses to promote the programs and the necessary upfront investment to develop and maintain the joint ventures. These costs are critical to fostering a robust educational and employment infrastructure that supports the growth and development of Idaho's healthcare workforce.

Case study: Idaho Healthcare Institute, Apprenticeship models

The Idaho Healthcare Institute (IHI) creates apprenticeship programs that fund students to enter and advance within high-demand occupations through work-study opportunities. This non-profit intermediary is the result of a partnership between the College of Eastern Idaho and two healthcare providers, Idaho Falls Community Hospital and Mountain View Hospital. The IHI, established and funded initially by the healthcare providers, markets programs to potential students, coordinates work-study apprenticeship programs between the institution and providers, and distributes the necessary funding. While the providers take on these costs in return for skilled talent, CEI works with the students' schedule to deliver the necessary courses and is ultimately benefited by a greater enrollment pipeline and access to clinical placements for their students.

PROJECTED IMPACT AND CALL TO ACTION

The impact of implementing clinical site/preceptor flexibility and apprenticeship models statewide can be measured and evaluated through quantitative direct and indirect methods (see Appendix B for specific examples of metrics).

One way of estimating the impact these solutions can have on the healthcare workforce is by estimating the number of potential new employees they would support if implemented in the near term. For example, Registered Nurses are a critical role struggling with a shortage of qualified candidates; one estimate suggests that Idaho has 7.8 registered nurses with a bachelor's degree per 1,000 residents. Expanding the number of BSN recipients by 30% through clinical site/preceptor flexibility, apprenticeship models, and other education and training solutions could push the RN workforce closer

[11] Idaho LAUNCH is a grant program that provides students a one-time opportunity to have 80% of the tuition and fees at an eligible institution covered, up to a maximum amount of $8,000. LAUNCH funding can cover costs of apprenticeship models with more information found here: https://nextsteps.idaho.gov/launch.

to the national average of 9.2 registered nurses per 1,000 residents over the next 5-7 years[12]. Implementing these two solution models (and/or others) statewide can directly enhance the number and quality of healthcare professionals available in Idaho and fill the workforce gap adversely impacting the state's overall healthcare system.

The two solution sets detailed in this report, clinical site/preceptor flexibility and apprenticeship models, aim to tackle key education and training barriers of faculty/preceptor shortages and limited clinical training spots. Implementing these solutions statewide — potentially first in nursing and then in other high demand occupations — can significantly enhance the healthcare education and training pipeline and thereby increase the number of qualified healthcare graduates to ensure a steady flow of healthcare professionals into the workforce.

To accomplish statewide implementation of the two proposed solutions, institutions, healthcare providers, and Idaho state-level stakeholders should consider these next steps:

Institutions can:

1. Commit to formalized partnerships with healthcare providers to develop an action plan related to clinical site/preceptor flexibility and/or apprenticeship models.
2. Invest in methods of forecasting enrollment and estimating conferrals to assist providers in understanding the extent of investments required to sustain partnerships.

Healthcare providers can:

1. Commit to more formalized partnerships with more institutions to develop an action plan related to clinical site/preceptor flexibility and/or apprenticeship models.
2. Support these partnerships with necessary ongoing investments and designate coordinators to facilitate communication and transparency.

Idaho state-level stakeholders can:

1. Fund an expansion of Preceptor Incentive grants to help equalize clinical and faculty salaries.
2. Fund an expansion of the Idaho Healthcare Institute or a similar third-party, non-profit intermediary to support institution-provider partnerships.
3. Coordinate planning for partnerships with the 'Attract & Retain' and 'Public Policy' healthcare work groups.
4. Support the efforts of and collaborate further with the Workforce Development Council to implement statewide solutions.

These next steps in the action plan to implement statewide healthcare education and training solutions will strengthen the overall healthcare system, improve patient care, and contribute to the well-being of communities across the state. Addressing the healthcare worker shortage is a multifaceted challenge, but collaborative efforts and innovative solutions will go a long way toward Idaho building a sustainable healthcare workforce for the future.

[12] These estimates assume 1.8% annual state population growth, 96% job placement rate and 5% retirement/relocation rate for BSNs in Idaho as detailed by the Idaho Nursing Workforce Center and based on 2022 data

APPENDIX A: INTERVIEWEE LIST

Idaho educational leaders:

- Dean/Associate Dean/Vice President, multiple college and university health science divisions
- Director, community college health science program
- President, private health science/medical institution
- State level academic administrator

Idaho Healthcare providers and state-level stakeholders:

- Executive Director, state-level workforce organization
- Executive Director, health foundation in Idaho
- President/CEO, non-profit education advocacy organization
- President/CEO, hospital association
- Vice President of Talent Acquisition Operations and Strategy, healthcare provider
- CEO, healthcare provider
- Senior Vice President of HR, hospital system
- Director of HR, hospital system

National Subject Matter Experts:

- EVP of Workforce Transformation, National 2-year non-profit institution
- VP of Research and Development, National 2-year non-profit institution
- Chief Innovation Officer and Executive Director, National 4-year non-profit institution
- Vice President of Partnerships, Workforce solutions provider
- Director of Policy and Strategic Initiatives, National higher education non-profit organization
- Senior Research Analyst, National higher education non-profit organization

APPENDIX B: MEASUREMENT AND EVALUATION CONSIDERATIONS

The impact of implementing both clinical site/preceptor flexibility and apprenticeship models statewide can be evaluated through quantitative direct and indirect methods. Metrics for measuring the impact of clinical site/preceptor flexibility solutions include:

- Pre- and post-program competency assessments enable institutions to measure the growth in students' skills through tests or simulations
- Monitoring persistence rates for students, faculty, and preceptors can help institutions gauge satisfaction and engagement levels, which are indicative of the program's effectiveness
- Conducting cost-benefit analyses allows for the comparison of program costs with its benefits, such as improved clinical outcomes and reduced turnover rates, providing a clear picture of cost effectiveness

Metrics for measuring the impact of apprenticeship models include:

- Tracking program yield rates and enrollment, as well as retention and completion rates within the programs

- Tracking the number of graduates working in Idaho post-graduation (after 1 year, 5 years, etc.), the average cost of attendance, the burden of post-graduation debt, and the average wage increase post-program to evaluate return on investment

Beyond direct metrics, success can also be measured indirectly by improvements in patient care outcomes, community health statistics, and broader economic impacts such as reduced unemployment rates among trained professionals. Enhanced public perception of institutions and healthcare facilities as leaders in education and community health initiatives can also be a significant indicator of success.

APPENDIX C: SOLUTIONS EVALUATED

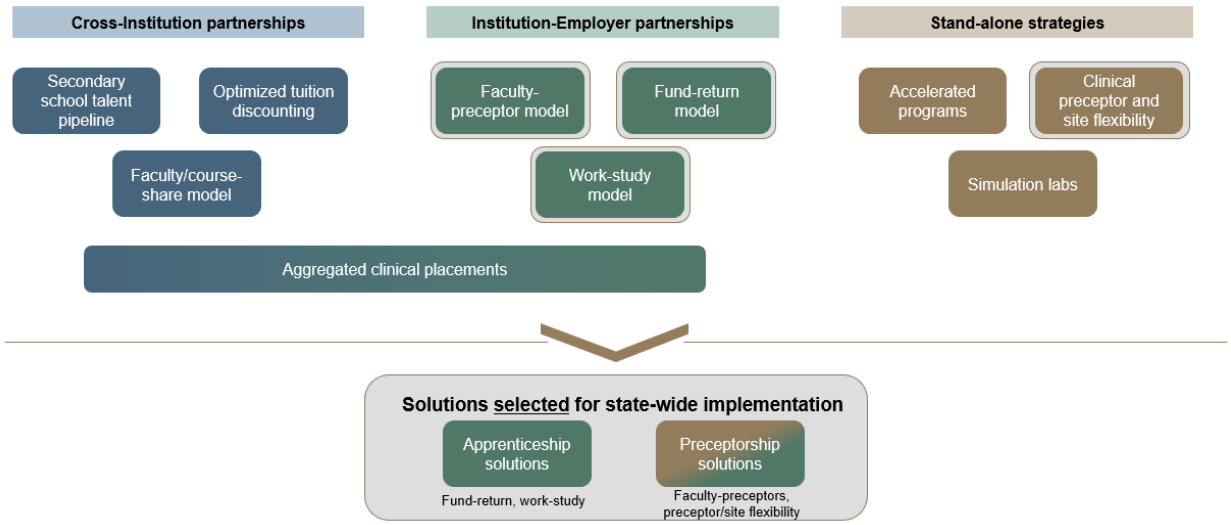
To address the challenges in Idaho's healthcare education and training pipeline, ten potential solutions, listed below in Figure 5, were examined involving cross-institution partnerships, employer partnerships, and standalone approaches.

Figure 5:

	Approach	Description	Examples
Cross-institution partnerships	**Faculty/course share model**	*Institutions share faculty and/or online didactic courses to expand available seats*	Open Medical Institute, IL Area Health Education Center
	Secondary school talent pipeline	*Establish partnerships between institutions and secondary schools to grow student awareness, expand pipeline, and offer entry-level programs*	Bloomberg Philanthropies Initiative
	Optimized tuition discounting	*Redirect tuition discounts across the state from programs with high-demand and low-need to low-demand programs with high need to foster demand*	University of Providence, GMercyU & St Luke's University Health Network
	Aggregated clinical placements	*Create centralized entity for assigning clinical placement spots to institutions*	Hawaii Clinical Placement Collaborative, California CCPS
Employer partnerships	**Faculty-preceptor model**	*Create joint faculty-preceptor roles that sit across employers and institutions; may range from employer preceptors serving as faculty to an established DEU*	Colorado Rural Health Center
	Fund-return model	*Student receives funding for program (entry-level or upskilling) in exchange for guaranteed employment after completion.*	Illinois Nursing Education Scholarship Program
	Work-study model	*Employers train students to work in entry-level roles while studying for more advanced degree; student receives funding and job guarantee, and institution receives clinical placement.*	Mercy Medical & Mount Mercy University - Iowa, Berkshire Community College
Stand-alone strategies	**Simulation labs**	*Create simulation labs that allow students to receive clinical credit, creating more preceptor slots*	NJ Atlantic Health System, Nebraska Medicine/UN Medical Center Omaha
	Accelerated programs	*Created shorter, accelerated programs in key disciplines improve ROI and foster demand (e.g., ABSN)*	Southern New Hampshire University, St. Joseph's College of Maine
	Clinical preceptor and site flexibility	*Utilize preceptors in other, advanced practice occupations and non-traditional clinical settings to expand clinical placement availability*	Georgetown University

Clinical site/preceptor flexibility and apprenticeship models emerged as the top models to implement through a selection and consolidation of top solutions (see Figure 6).

Figure 6:



APPENDIX D: EDUCATION AND TRAINING WORK GROUP MEMBERS

TJ Bliss – Chief Academic Officer, Idaho State Board of Education (Chair)

Angela Sackett – Dean of Health and Human Services, College of Eastern Idaho

Erlene Pickett – Associate Dean of Nursing & Health Professions, North Idaho College

Matthew Nolan – Program Director of Radiography Technology, North Idaho College

Jayson Lloyd – Dean of Health Sciences and Human Services, College of Southern Idaho

Rex Force – Vice President for Health Sciences and Senior Vice Provost, Idaho State University

Tim Dunnagan – Former Dean of College of Health Sciences, Boise State University

Joelle Powers – Dean of College of Health Sciences, Boise State University

Aaron von Lindern – Dean of School of Health, College of Western Idaho

Krista Harwick – Associate Dean of the School of Professional Studies, Lewis-Clark State College

Jeff Seegmiller – Regional Dean and Director of WWAMI Medical Education Program, University of Idaho

Kevin Wilson – Dean and Chief Academic Officer, Idaho College of Osteopathic Medicine

Rod Gramer – President and Chief Executive Officer, Idaho Business for Education