

Expanding Registered Apprenticeships in Healthcare

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The mission of the Healthforce Center is to equip health care organizations with the workforce knowledge and leadership skills to effect positive change.

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Executive Summary

Apprenticeship training has a long history in the United States but opportunities generally have been concentrated in skilled trades related to building and construction. The benefits of Registered Apprenticeship (RA) training – programs that have formal standards and are regulated by both state and federal agencies – are well documented. Participants have higher employment participation rates and enjoy higher lifetime earnings; the state experiences reduced public outlays for unemployment insurance and public assistance; and employers report that RA programs contribute to improved employee performance, productivity, and overall morale.

In recent years, RAs have been promoted as a way to address workforce development needs in industries that have not historically engaged in apprenticeship training, including healthcare. Current data indicate that healthcare-related apprenticeship training accounts for a very small proportion of overall apprenticeship activity. However, current unemployment rates in the healthcare industry are very low, particularly for hospitals, while the Bureau of Labor Statistics projects substantial occupational growth in the healthcare and social assistance sector over the next decade. Strong demand for labor will present opportunities for new RA programs for healthcare occupations.

Although RA programs have a limited presence in the healthcare industry, the basic framework of the RA model is reflected in current healthcare training and education programs. Health professions education includes a significant amount of hands-on learning concurrent with classroom-based learning; health professions students work closely with preceptors during their supervised clinical experiences; and, at least for physicians (and to a lesser extent registered nurses) there is a period of apprenticeship-like training in the form of a residency that precedes regular employment in the profession. Given these similarities, healthcare would seem to be a natural fit for apprenticeship programs.

This paper presents findings from a series of interviews with key informants who were asked to share their views on the perceived value of RA programs, as well as challenges and opportunities associated with RA programs in healthcare. The study participants included sponsors of RA programs (both employers and workforce intermediaries), representatives of labor unions, representatives of educational institutions that provide RA programs' related technical instruction (RTI), and workforce development specialists.

Value of Registered Apprenticeship

Key informants described the value of RA programs in terms of its robust, structured process, which provides employers the opportunity to methodically identify workforce needs and develop strategies to address them. They also cited the ability of RA programs to integrate practical experience, mentorship, and formal academic learning as an important value add. Key informants viewed the RA model as a more holistic approach to workforce development and better suited to producing a “work ready” employee compared with the conventional approach of degree-based education combined with some practical training. They also emphasized that RA was a way to define professional standards and create opportunities for career advancement in segments of the healthcare workforce where these things are lacking, and noted that RA programs contribute to improved recruitment of new employees and improved staff retention rates.

Key informants also emphasized that RA programs can be an effective way to promote upward economic mobility, as they represent an opportunity for workers to upgrade their skills and move into higher paying jobs. Moreover, apprenticeship programs allow for greater flexibility in design, which means they can

accommodate a wide range of learning styles and reduce common barriers that adult learners face when considering pursuit of additional education, such as family obligations or the opportunity cost of reduced work hours while attending school. RA programs can also intentionally promote workforce diversity and provide opportunities for underrepresented groups to enter the workforce.

RA programs in healthcare: Barriers and facilitators

Numerous potential barriers to the wider adoption of RA programs in the healthcare industry were reported. These included the shifting of training costs from employees to employers that benefit from a system where the cost of workforce development is largely externalized, and the potential disruption to revenue streams (in the form of tuition and fees) that flow to the postsecondary education institutions that supply health professions education and training. The RA model also challenges the widespread “culture of professionalization” in the healthcare industry. Because apprenticeship training is historically associated with the building and construction trades, many healthcare professionals view it as appropriate only for “blue collar” occupations. Key informants described a view held by constituencies representing licensed health professions that require a significant level of education and clinical training, where apprenticeship training was seen as degrading to the profession. However, key informants emphasized that this perception of RA has been changing as more examples of successful RA programs in healthcare emerge and the industry develops a better understanding of the rigor and standards embedded in RA training.

Sustainable funding was also cited as an important challenge to the expansion of RAs into healthcare. Most of the programs described by key informants relied on a mix of grant funding, public investments made by federal and state agencies, and employer contributions in the form of employee benefit programs negotiated through collective bargaining. Key informants acknowledged that the union-related education and training funds that provide tuition support for the related technical instruction component of RAs only pertain to a small fraction of the overall healthcare workforce. In addition to these challenges, key informants acknowledged that there is simply a lack of awareness throughout the healthcare industry of how RA programs are structured and function. One key informant admitted that, prior to becoming involved with the development of a program, her view of RAs was that they were just another form of on-the-job training. In fact, apprentices in that program had to meet the same rigorous standards required of any student pursuing entry into the profession through a tuition-based, academic degree program.

In the context of facilitating adoption of RAs within the healthcare industry, key informants insisted that investing in the right occupations was critical. Though some held the view that any and all occupations were good candidates for RA, most regarded occupations that were at either end of the skills continuum, or occupations that require much more than one year of training and related education, as generally not ideal candidates for an RA program. This view was framed by the recognition that employers typically need to address workforce needs within a short timeframe, and the system of apprenticeship training is not well integrated with degree-granting postsecondary educational institutions. There was a consistent view among key informants that the technologist and technician occupations typically served by 1-2 year certificate programs or associate degree programs represent the best opportunity for RA programs in healthcare. These were viewed as good-paying jobs, often with a logical career ladder or professional development pathway, and a technical orientation that lends itself to practical, on-the-job learning.

Opportunities for RA in healthcare

Opportunities to create new RA programs in the healthcare industry will be driven, foremost, by employer demand. Said one key informant, “There simply has to be unmet need. Trying to pitch apprenticeship to an employer who doesn’t have an immediate workforce development need will go nowhere.” Assuming employer demand, key informants identified several scenarios conducive to apprenticeship training.

The skillset is defined by on-the-job experience to the extent that it is more efficient for the employer to invest in the training. A key informant described an RA program to cross-train medical coders to work across different hospital departments. The training needs of the employer were so specific and oriented to practical, on-the-job experience, the employer was best suited to invest in developing the training. Community health workers (CHW) are another example where, often, the competencies and scope of work are defined by the needs of the employer. Although the related technical instruction for a CHW apprenticeship program frequently is provided in a community college setting, the curriculum can be adapted to develop specific skills needed by employers.

A new federal or state standard for the occupation is implemented and the employer’s incumbent workforce must meet that new standard. A key informant described the development of an RA program to train medical assistants (MA) following the enactment of state legislation requiring MAs to be certified in order to work at full scope of practice. Rather than risk the disruption of services resulting from MA staff either cutting back hours to attend school, or choosing not to pursue certification, the employer developed an RA program to meet the new standard.

The employer needs to define standards and competencies for a new occupational role within its organization. A key informant described the development of an RA program that grew out of a strategic need to increase employee retention rates. The program has trained incumbent workers to fill a new supervisory role that provides support to frontline employees in an effort to reduce staff turnover. Because the role was specific to the organization, there was no “ready-to-go” training curriculum or standard competencies; these had to be designed.

The institutional system that trains new entrants to the workforce cannot meet demand. A key informant described the development of an RA program to train medical laboratory technicians (MLT), motivated by a lack of qualified candidates to fill open positions. A major factor contributing to recruitment challenges was a lack of training capacity in the regional labor market. The employer partnered with the one community college-based MLT program in its market to adapt the curriculum and training to an in-house RA program. In circumstances where the supply of training is inadequate to meet the demand for labor, the RA model offers potential economies of scale by providing an opportunity for multiple employers to invest in the training program.

Recommendations

The following recommendations are based on the findings from the key informant interviews.

Encourage rigorous evaluation of RA programs

There must be an evidence base to make the business case to healthcare employers, either to encourage the development of an RA program or to continue investing in one already in operation. The documentation measures required of RA programs are important, but they are also basic (e.g. tracking the number of training hours, recording academic performance, recording the required wage increase, demonstration of expected competencies). Beyond developing competence, goals of the RA program should be tied to specific empirical measures to better inform program evaluation. The benefits of RA programs cannot be assumed, they have to be quantified to demonstrate the return to employer investment and, where possible, to healthcare outcomes.

Develop champions in industry, education, and state government

Adoption of RAs in the healthcare sector requires support at many different levels, but critically in industry (both labor and management), in education, and at high levels of government. Advocates must develop an evidence-based campaign to educate leaders within the healthcare industry, postsecondary education institutions, and state government about RA programs in order to create champions who will advance the case for expanding apprenticeship training in healthcare.

Strengthen support for workforce intermediaries

Workforce intermediaries can play a critical role in expanding apprenticeships in the healthcare industry. They are an effective way to foster collaboration among the different stakeholders that engage in apprenticeship training, including employers, unions, educational providers, labor-management partnerships, and other community-based organizations. These entities also provide direct assistance for RA activities, such as helping employers identify the right candidates for apprenticeship training, offering technical support for RA program development and administration, and identifying funding sources to support RA programs. In addition, they can help support efforts to promote RA among healthcare employers and educators. Policy makers should consider strategies to incentivize funding (both public and private sources) to support the work of intermediary organizations.

Provide support for program planning

Successful RA programs require a substantial investment of time and effort at the planning stage. Employer sponsors may have little to no experience with RAs and the factors that need to be considered are numerous. Among others, they may include the development of competencies and defining the training and didactic curriculum to achieve those competencies, collaborating with other stakeholder groups that have vested interests in health professions education, and definition of metrics for program evaluation and establishment of data collection systems. These activities need to be supported with dedicated grant funding. The planning and development process would also benefit from a dedicated resource for sharing best practices, such as a peer network to facilitate connections among employers and other stakeholders interested in developing an RA program.

Strengthen the integration of apprenticeship and higher education

Health professions education and training is predominantly degree and certificate-based and overwhelmingly provided by postsecondary education institutions. However, apprenticeship training is not well integrated with these institutions. The Center on Education & Skills (CESNA) at New America outlined the challenges presented by this lack of integration and proposed strategies to address them.

Create standard definitions of the student-apprentice and degree-apprenticeship to make apprentices visible in the postsecondary setting and facilitate the process of integrating the on-the-job training and mentorship components of the apprenticeship model with the general education and field-specific knowledge requirements of academic degree programs.

Direct the fee-based revenues collected by the Department of Labor through the H-1B visa program toward the expansion of RA training in new industries, including healthcare. Allow federal Work-Study programs to cover student-apprentices' tuition and fees and allow apprenticeship programs to qualify for state financial aid programs.

Amend the National Apprenticeship Act to expand the definition of a registration agency to include state education agencies (with whom colleges and universities are familiar) to streamline the administrative process of RA program approval for educational institutions.

Engage relevant stakeholders in a process to design competency-based curricula for on-the-job learning as well as principles of quality assurance that could serve a multi-employer, multi-institution platform. In addition, create a multi-year discretionary grant program within the Higher Education Act that would support the creation of degree-apprenticeship programs.

Introduction

The use of apprenticeship training has been a part of America's labor history dating back to its founding, deriving from the tradesmen and artisan guilds of Europe. Legislation recognizing a structured system of apprenticeship in the US dates back to the early 20th century and in the years preceding World War II, both federal and state agencies tasked with organizing the policies and procedures for registering apprenticeship programs were in place. The functions of these apprenticeship agencies and the standards for apprenticeship programs were codified by the passage of the National Apprenticeship Law in 1937.

The principal components of the Registered Apprenticeship (RA) program include on-the-job training with mentorship, related classroom instruction, a defined wage increase gained through participation, and a formal certificate of completion. In addition to ensuring that employers have a well-trained workforce with the right mix of skills, RA programs are seen as an effective way of promoting workforce diversity, both in terms of racial and ethnic identity and socio-economic status.¹ Available evidence indicates that completion of an RA program results in higher employment participation rates and a significant lifetime earnings benefit.^{2,3} The evidence also indicates that public investment in apprenticeship training has a net positive return to society through reduced outlays for unemployment insurance and public assistance programs, and increased income tax revenues.^{4,5} Employers who have sponsored successful RA programs have reported overall satisfaction with the experience, citing its benefits to employee performance, productivity, and morale.⁶ There is bipartisan support among federal legislators for continuing and expanding investment in apprenticeship training,⁷ and at least some evidence that the American public shares this view.⁸

Historically, apprenticeship training has been the domain of skilled trades related to the building and construction industry. Federal data indicates that in recent years, apprentices in RA programs related to building and construction have accounted for approximately half of all active apprentices.⁹ Over the past decade, the federal Office of Apprenticeship has promoted the use of Registered Apprenticeship (RA) programs to train healthcare workers.¹⁰ In recent years, the Department of Labor (DOL) has invested hundreds of millions dollars to expand the number of apprenticeship programs and diversify the set of industries that utilize RA programs. These investments include grants awarded through the American Apprenticeship Initiative, grants made to national industry intermediaries and national equity partners, state expansion grants, and state accelerator grants.¹¹

¹ Lerman, R. Expanding Apprenticeship – A Way to Enhance to Skills and Careers. Urban Institute. October 2010.

² Reed, D. et. al. *An Effectiveness Assessment and Cost-Benefit Analysis of Registered Apprenticeship in 10 States*. Mathematica Policy Research. July 2012.

³ W.E. Upjohn Institute for Employment Research. Net Impact and Benefit-Cost Estimates of the Workforce Development System in Washington State. December 2016. Available here: <http://www.wtb.wa.gov/Documents/FinalUpjohnReportDec2016.pdf>

⁴ Reed, D. et. al. *An Effectiveness Assessment and Cost-Benefit Analysis of Registered Apprenticeship in 10 States*. Mathematica Policy Research. July 2012.

⁵ State of Washington Workforce Training & Education Coordinating Board. *2015 Workforce Training Results for Apprenticeship Programs*. Available here: <http://www.wtb.wa.gov/Documents/Apprenticeship2015.pdf>

⁶ Lerman, R.I., Easter, L. and Chambers, K. *The Benefits and Challenges of Registered Apprenticeship: The Sponsors' Perspective*. Urban Institute. March 2009.

⁷ <https://www.urban.org/urban-wire/bipartisan-support-emerges-expanding-apprenticeships>

⁸ https://na-production.s3.amazonaws.com/documents/report.New_America.omnibus.F.2017.08.17.pdf

⁹ https://doleta.gov/oa/data_statistics.cfm

¹⁰ https://www.doleta.gov/oa/pdf/apprenticeship_build_healthcare_paths.pdf

¹¹ See <https://www.doleta.gov/oa/grants.cfm#PartnershipsInvestments>

In June 2017, the Trump Administration issued an executive order focused on apprenticeship training featuring a new model called the Industry-Recognized Apprenticeship Program (IRAP). A task force was formed to “identify strategies and proposals to promote apprenticeships, especially in sectors where apprenticeship programs are insufficient”, including healthcare. It is worth noting that this task force, headed by the Secretaries of Labor, Education, and Commerce, did not include any representatives specifically from the healthcare industry among its 20 members. In May 2018, the task force released its final recommendations¹² regarding IRAPs and in July 2018, the DOL issued a Training and Employment Notice (TEN)¹³ outlining policies and procedures for prospective “third-party certifiers” who will have responsibility for ensuring program standards and quality. More specific guidelines and regulations related to the IRAP system are expected to be released over the coming months and year.

The IRAP system is expected to encourage the integration of apprenticeship training with postsecondary education, the building up of an evidence base to encourage apprenticeship program evaluation and research, and the development of competency-based training programs as opposed to programs that have a length-of-time orientation (something that is already occurring within the RA system). However, IRAP programs will not be required to implement wage progression rules for apprentices, a component which is at the core of RAs. Rather, IRAP program sponsors will be required only to pay the applicable minimum wage (or federally-approved stipend, if applicable) and to “make clear to apprentices what wages they will be paid and under what circumstances wages will increase.”

IRAPs will also expand the number and types of entities that are allowed to function as apprenticeship program registration agents (IRAP uses the term “certifier”), a change that has been recommended be made to the RA system. However, experts have raised concerns about the “third-party certification” process and the possibility of inconsistent quality standards and conflicts of interest.¹⁴ As the recently released DOL notice states, the department does not favor “designating a single industry oversight body or requiring agreement and uniformity of standards as a condition of becoming a certifier.”¹⁵

¹² See <https://www.dol.gov/apprenticeship/docs/task-force-apprenticeship-expansion-report.pdf>

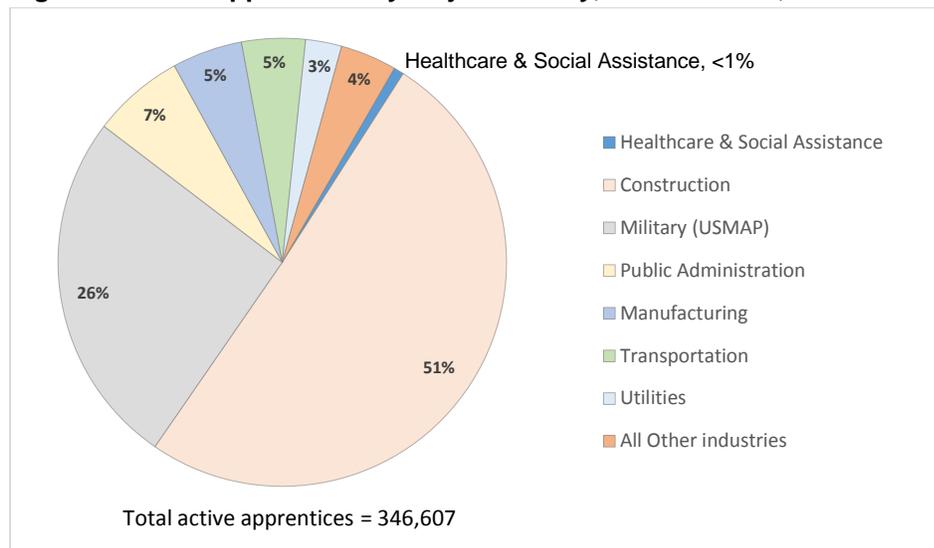
¹³ See https://wdr.doleta.gov/directives/corr_doc.cfm?DOCN=5367

¹⁴ For example, see this blog post at New America: <https://www.newamerica.org/education-policy/edcentral/first-reactions-apprenticeship-task-force/>

¹⁵ See https://wdr.doleta.gov/directives/corr_doc.cfm?DOCN=5367

Available data suggest that a focused effort to promote RA as a model for workforce development in healthcare is needed. As with all industry sectors outside of building and construction, healthcare-related apprenticeship training remains a small proportion of the overall volume of apprenticeship activity. The total number of active apprentices in healthcare and social assistance RA programs has grown faster than average in recent years,¹⁶ but as Figure 1 demonstrates, in 2017, less than 1 percent of all active apprentices were engaged in healthcare-related training.^{17,18}

Figure 1. Active apprentices by major industry, United States, 2017



Source: U.S. Department of Labor, Employment and Training Administration

Current unemployment rates in the healthcare industry¹⁹ are substantially lower than the national average and, in particular, hospitals have the lowest unemployment rate of any major industry.²⁰ Moreover, the Bureau of Labor Statistics projects that the healthcare and social assistance industry sector will create approximately 3.8 million job openings over the next decade,²¹ driven by strong growth among occupations that provide direct healthcare and social services.²² These indicators of strong demand for labor raise the question of whether education and training capacity will be sufficient to meet future demand for healthcare workers.

¹⁶ Between 2015 and 2017, the total number of active apprentices in healthcare and social assistance-related RA programs grew from 1,903 to 2,549, which is approximately 34 percent growth. The average growth rate for this period was 25 percent.

¹⁷ These data describe RA programs that report data using the Registered Apprenticeship Data Information System (RAPIDS). Only 34 of 50 states are represented. The distribution of active apprentices by industry in the 16 non-represented states is unknown.

¹⁸ The United States Military Apprenticeship Program (USMAP) also reports data in aggregate, obscuring the extent to which apprentices are being trained in healthcare and social assistance RA programs. A 2015 Urban Institute report noted that nursing assistant, medical assistant (administrative), and emergency medical technician were among the top 20 RA programs in terms of volume, accounting for a combined 6,000 apprentices. This is more than double to the number of civilian apprentices in all healthcare and social assistance-related RA programs reported for fiscal year 2017.

¹⁹ "Unemployed persons by industry, class of worker, and sex", Current Population Survey, U.S. Bureau of Labor Statistics, June 2018.

²⁰ Radio and television broadcasting and cable subscription programming (NAICS code 515) has a lower current unemployment rate but as an industry employs approximately 5 percent as many workers as do hospitals.

²¹ "Employment by major industry sector, 2006, 2016 and projected 2026", Employment Projections program, U.S. Bureau of Labor Statistics.

²² "Employment by major occupational group, 2016 and projected 2026", Employment Projections program, U.S. Bureau of Labor Statistics.

Some of the fastest-growing occupations²³ within the healthcare workforce²⁴ represent opportunities for employers to meet their demand for labor through RA programs. These include both direct care and technical occupations such as physical and occupational therapy assistants and aides, medical assistants, phlebotomists, diagnostic medical sonographers, substance and behavioral disorder counselors, and community health workers. Other occupations, although not growing as rapidly, are expected to generate a substantial number of job openings simply due to the size of the workforce. The need to fill open positions for registered nurses, licensed practical and vocational nurses, pharmacy technicians, clinical laboratory technologists and technicians, dental hygienists and assistants, and emergency medical technicians and paramedics also could be opportunities for employers to utilize RA programs.

This paper examines some of the perceived challenges and opportunities associated with using RAs for healthcare workforce development. The findings presented constitute the perceptions and opinions of the study participants, who included sponsors of RA programs (both employers and workforce intermediaries), representatives of labor unions, representatives of educational institutions that provide RA programs' related technical instruction (RTI), and workforce development specialists.

Methods

This study was conducted over the course of six months between November 2017 and May 2018. The participants were recruited using a snowball sampling method. Initial recruitment was conducted using a list of potential key informants supplied to UCSF by the Healthcare Career Advancement Program (H-CAP), a national labor/management organization that promotes innovation in healthcare workforce development. Key informants who were successfully recruited were asked to recommend other potential interview participants. Each participant was given a copy of the interview guide in advance of the scheduled interview. The interviews were approximately 60 minutes in length and were recorded.

Profile of participants

The UCSF study team interviewed 24 key informants in total. The participants represented healthcare employers that have sponsored RA programs, intermediary groups that have organized RA programs (e.g. 1199SEIU Training & Upgrading Fund), labor unions, educational providers that have delivered RTI, state labor departments or workforce development agencies, and other workforce development specialists with expertise in apprenticeship training. The healthcare employer sponsors represented different care delivery settings, including large health systems (both public and private), a multisite, integrated primary care clinic system, a small group of clinics operating with a Federally Qualified Health Center designation, and a provider of home care services. The RA programs described by key informants trained workers in eighteen different healthcare occupations, including frontline direct care workers, technicians and technologists, behavioral health counselors, community health workers, and both licensed practical/vocational nurses and registered nurses.

²³ "Employment by major occupational group, 2016 and projected 2026", Employment Projections program, U.S. Bureau of Labor Statistics.

²⁴ Broadly defined, and with some exceptions, the healthcare workforce includes the following occupational groups: "Counselors, social workers, and other community and social services specialists" (SOC 21-1000); "Healthcare practitioners and technical occupations" (SOC 29-0000); "Healthcare support occupations" (SOC 31-0000)

Key Findings

Value of Registered Apprenticeships

Key informants were asked to share their perspectives on the value of apprenticeship training. Their responses reflect value judgements that apply both to healthcare industry and RA programs broadly.

Structure and Integration

Key informants cited the highly structured development process of RA programs as one of the principal sources of its value as an approach to workforce development. The RA model provides a framework for designing curricula and defining competencies that meet or exceed existing occupational standards. It encourages employers to identify their needs and how they can be met in a deliberate manner, and it can contribute to a sense of shared ownership and incentives among employers and employees. One of the key informants, describing the experience of her own organization, commented, “We’re realizing how important it is for us to become workforce development specialists, and we’ve learned a ton about our needs and how to develop our staff to meet them; this RA program is much more robust than anything we’ve done before in terms of training.”

The intentional integration of practical training, mentorship, and academic learning was also emphasized as an important source of value in the apprenticeship model. Mentorship, in particular, is important not only for the ways in which it benefits the apprentice but the organization as well. One key informant remarked that the experience of mentorship can expose individuals “to a new way of perceiving their workplace. The different processes and policies that impact how things are done...things that may have been taken for granted are experienced from a different perspective and that can have a lot of value for the organization.”

Key informants felt that the combined effect of the components that define RA programs produce a more competent employee, compared with the approach used by many health professions education programs. Said one key informant, “In a typical community college or trade school program, students spend most of the time in the classroom, or maybe they have access to a laboratory where practical experience can be simulated. But the actual clinical experiences are limited and sporadic, and they often take place at different clinical sites, so there’s little continuity.” In contrast, apprentices are immediately engaged in practical training, working with the same model of care, the same patient population, the same work systems and processes, the same protocols and policies, and are continuously exposed to the organization’s workplace culture for the duration of the apprenticeship.

Equity and Diversity

Every key informant interviewed for this study described the value of RA programs in terms of their ability to promote equity and workforce diversity. Apprenticeship programs allow for greater flexibility in design, which means they can accommodate a wide range of learning styles. RA programs can obviate common barriers that adult learners face when considering pursuit of additional education, such as child care responsibilities, lost or reduced earnings, or transportation issues. Because apprenticeship training has an applied learning orientation, it can be effective for persons who might otherwise struggle in a traditional academic environment. It is also clear from available data that the healthcare workforce becomes less racially and ethnically diverse as educational requirements (and earnings) increase. Said one key informant, “Apprenticeship programs can provide a pathway to a good, middle class job for a pool of labor that might never have that opportunity otherwise.” Key informants acknowledged that the “social value” of RA

programs may not always be a priority for an employer. However, as one key informant pointed out, “Some hospitals and clinics serve a culturally diverse population; the RA model represents an opportunity to develop a workforce that can provide culturally sensitive care.”

THE LOS ANGELES EMERGENCY MEDICAL TECHNICIAN PROGRAM (L.A. EMT) promotes equity and inclusion in the South Los Angeles workforce. The RA program is the result of a partnership between the L.A. County Fire Department, the Second Supervisorial District of L.A. County, McCormick Ambulance, and the Worker Education and Resource Center (a workforce intermediary). Its aim is to provide an entry-level opportunity in a field with a strong career pathway, as well as promote workforce diversity.

The program was designed to serve young adults of color from South L.A., where residents experience significant economic hardship, violence, and high rates of high school dropout, all of which increase the likelihood of future unemployment. The partners recognized the need to create an opportunity for young adults from the community to participate in a “brotherhood” that serves the community and gain the skills needed for this high demand profession.

An association of black firefighters in the L.A. County Fire Department, known as the Stentorians, served as role models and mentors to the young African American and Latino men who participated in the program. They also provided pre-apprenticeship training designed to prepare the initial cohorts for the academic, physical, and mental rigors of working in emergency medical services. In addition, the participants performed community service, and received trauma-informed support services, as well as financial literacy and leadership development training.

The experience of the RA program has been transformative for apprentices, such as Jason Jones who is now a full-time employee at McCormick Ambulance. “My life has changed, I am on a career path now. Before starting with the apprenticeship, I was just doing a job. I realize that I can actually become a firefighter. I can change my community. My family members are very proud of me. I recently passed the CPAT, the Candidates Physical Ability Test.” The CPAT certification gives Jason the ability to qualify to be a firefighter. ■

Professional Mobility

Completion of a registered apprenticeship program confers a nationally recognized credential. For unlicensed occupations, this credential signals to employers that the person has demonstrated competence that meets an industry-defined standard. In other words, the credential is portable. RA programs can also help define distinct occupational roles in segments of the workforce that offer limited opportunities for advancement. A key informant representing an RA program related to direct home care commented, “One of the reasons we chose to develop our training as an RA program was to help professionalize the direct home care workforce, to help define roles and competencies for different scopes of work, and take a step in the direction of creating upward mobility. If our program could help create an industry standard, it would be really exciting.”

Recruitment & Retention

Key informants cited improved employee retention as another benefit of RA programs. In fact, employee retention may be the objective of apprenticeship training. One of the programs referenced in the interviews was designed for a supervisory position whose role is specifically to improve employee retention rates. This

key informant noted that, “In long-term care or home care settings, it’s difficult to recruit for supervisory and management positions, so training up our own workforce through apprenticeship programs is more efficient.”

Interviewees noted that an RA program often has other positive consequences for the employer including reduced absenteeism among employees interested in participating in the RA program, improved recruitment of new employees who value the potential opportunity to upgrade their skills and education, and generalized benefits to the organizational culture in the form of employee satisfaction and loyalty. Finally, key informants emphasized that the “grow-your-own” approach of apprenticeships also can have value for employers in the sense that the institutional knowledge of incumbent workers is retained. As one employer noted “We’re promoting our own, and that makes us feel good, but we’re also getting employees who we know are well prepared because they already know the system, they know how we do things here.”

RA programs in healthcare: Barriers and facilitators

Key informants were asked to identify existing barriers to wider adoption of apprenticeship training in the healthcare industry, as well as conditions that facilitate RA program development and operation.

Professional Bias

Experts interviewed for the study cited the “culture of professionalization” in the healthcare workforce as an important barrier to wider adoption of the RA model. Those interviewed indicated that because apprenticeship training is historically associated with the building and construction trades, healthcare employers, educators, and professionals view it as appropriate only for “blue collar” occupations. Said one expert, “The idea of being trained using a model adapted from the trades is anathema to people who see themselves as clinical professionals.” Key informants with experience developing RA programs for licensed health professions that require a significant level of education and clinical training reported encountering resistance from key stakeholders who regarded apprenticeship training as degrading to the profession. “For decades, the trend in healthcare workforce has been toward greater professionalization. For some, maybe for most, the idea of apprenticeship training as the standard for entry into the profession is viewed as step backward”, commented one participant.

Those interviewed reported a perception among key constituencies that apprenticeship was a type of “backdoor” into the health professions. One of the experts interviewed, who had been engaged in developing an apprenticeship program to train licensed practical/vocational nurses (LPN/LVN) to become registered nurses (RN) commented, “We heard from more than one person that they [the apprentices] were not qualified, because if they were they would already be an RN or they’d apply to a regular program just like everyone else.” Overcoming the perception that RA programs do not have the necessary rigor – that they are a lesser form of education and training – is key to gaining wider acceptance of the role they can play in healthcare workforce development.

Many of the experts interviewed suggested that RAs suffered from a “language issue”. The terms that define the model (“apprenticeship”, “mentor”, and “on-the-job training”) connote specific associations with “blue-collar” occupations in the building and construction trades. But as one key informant commented, “if you substitute ‘residency’ for ‘apprenticeship’, ‘preceptor’ for ‘mentor’, and ‘clinical rotations’ for ‘on-the-job training’, we’re actually speaking the same language.” The terms of art used to describe RAs may contribute to preconceived notions that function as a barrier to its acceptance in healthcare as a legitimate form of workforce education and training.

Licensing/certification & regulation

Experts viewed the requirement of licensure or certification for entry into practice as both an opportunity and a barrier to the RA model. An advantage of required licensure or certification is that the necessary related technical instruction is well defined; there is a clear road-map for the development of a curriculum and demonstration of competence. Recently, the National Center for Competency Testing (NCCT), which provides national certification exams for several healthcare occupations, announced that graduates of RA programs are now eligible exam candidates.²⁵ One key informant commented, “Licensure or certification requirements can help reinforce the fact that RA programs train apprentices to the highest possible standard.” In general, however, the impact of required licensure, in particular, was seen as a source of operational challenges, given the barriers established by existing stakeholders such as licensing boards, accreditation agencies, and the educational institutions that are vested in maintaining control over the supply of education and training.

The cost (money, time, and effort) of ensuring that an RA program meets the standards for licensure are potentially high. One of the experts interviewed referenced a program to train RNs, which involved a significant investment of time and effort to develop, in part because of institutional resistance from nearly all of the key stakeholders whose consent was needed. The academic standards in RN education are high and the RA program incurred significant monetary costs related to apprentices needing to complete remedial and prerequisite coursework. The body of knowledge, both theoretical and applied, that RNs must master is substantial and so the RA program was structured to allow apprentices to work just 20 hours per week to provide sufficient time off for related instruction. However, apprentices were paid for a full 40-hour work week and this cost was borne by the employer.

One of the defining features of RA is its focus on “learn by doing”. For licensed health professions, though, the student/apprentice is not able to perform certain essential activities without a license, making it difficult for the apprentice to learn by actually doing. One key informant referenced an effort to develop an RA program to train licensed practical/vocational nurses (LPN/LVN) in which this tension was highlighted. In the state where the proposed program was to occur, medication administration requires professional licensure. As a result, the RA program developers attempted without success to obtain a waiver from the state that would allow apprentices, strictly within the context of the RA program, to practice medication administration by doing it, rather than simply watching it be done. An unanticipated consequence of this process was concern expressed by the union representing LPN/LVNs (which was supportive of the apprenticeship program) that the waiver would set a precedent of allowing unlicensed individuals to perform duties normally restricted to licensed professionals. Said this key informant, “This was a big concern for the union who, rightly, wanted to protect the status of their members. So their argument was along the lines of ‘if we allow unlicensed apprentices to do things that only licensed professionals are allowed to do, what’s the point of licensure?’”

The lack of licensure or certification requirements in an occupation also may present challenges to the adoption of RA training programs. One of the experts interviewed suggested that the absence of such requirements can create ambiguity around scope of practice and required competencies, asking “What’s the incentive for an employer to define a set of standards and competencies when none are required?” In contrast, others saw the absence of licensure or certification standards as an opportunity. Said one expert,

²⁵ See <https://www.ncctinc.com/news>. NCCT offers certification exams for the following healthcare occupations: medical assistant, surgical technologist, ECG technician, phlebotomy technician, insurance and coding specialist, and patient care technician.

“RA programs can help define the scope of practice and set expectations for what it means to practice at the top of the field in these occupations.”

Lack of awareness among healthcare employers

Many of the experts interviewed cited a lack of awareness of the RA model among healthcare employers as a barrier to its adoption by the industry. Despite the fact that the components of apprenticeship training are very similar to those embedded in health professions education, the RA model is perceived as being organized around a different set of principles. Said one key informant, “I’m always surprised by how many people in healthcare have a misconception of RA programs.”

One of the key informants who helped develop an LPN/LVN to RN apprenticeship program described being reflexively opposed to the idea before getting involved. She reflected, “When I heard about this idea of an apprenticeship program for RNs, I said ‘you can’t just bring someone in and have an RN train her and then this person can go work as an RN.’ I was actually offended when I heard about this program.” In her view, apprenticeship training was simply on-the-job training, unconnected with the rigorous, evidence-based academic preparation that RNs receive in traditional nursing education programs. She went on to describe the process of getting the RA program operational, referencing the fact that the program “does not compromise” on the standards that are required for any student who completes pre-license education. In her words, the apprentices “still have to meet the same qualifications, meet the same standards, and go through the same academic process as any student in any nursing program, anywhere in the state would have to do.” These sentiments are indicative of the misconception that RA programs are a lesser form of education and training.

THE RELATIONSHIPS THAT EXIST BETWEEN healthcare employers and the postsecondary education institutions that place their students with the employer to complete externships and clinical rotations are, in many cases, long-standing. One of the key informants interviewed who has been engaged in efforts to disseminate a very successful RA program commented, “We are competing with the community and technical colleges and forcing the hospitals and clinics to make a decision about which approach will work best for their organization.” ■

Sustainable funding

Key informants acknowledged that sustainable funding is a persistent challenge to wider adoption of RA programs in healthcare. RA programs generally rely on a mix of four principal sources of financial support, described below. Although not a source of funding, key informants emphasized the important role that workforce intermediary groups – including labor-management partnerships – play in securing access to these different sources of financial support.

Employers – The most direct way in which employers support RA programs is through payment of wages, including the defined wage increases that are an essential part of RAs. However, employers also provide financial support through contributions to employee benefit programs, such as education and training funds that are negotiated through collective bargaining and made available to union members. These monies go to support the RA program’s RTI.

States – In some states, the general education fund provides at least partial support for the cost of RTI delivered through the community and technical college system. In addition, some states use a tax credit or deduction to incentivize employer sponsorship of an RA program.

Grants – Nearly all of the key informants described RA programs that depended on some level of support from grant funding. Typically, these grants are awarded by federal and state agencies specifically for workforce development. In some cases the grant funding covers the cost of apprentices' wages while in others it supports the cost of RTI; frequently, grant funding is used to support initial RA program development activities and ongoing administration.

Apprentices – In some instances, apprentices themselves may bear the cost of RTI.

Secure funding to pay the apprentice wages, to provide mentor pay, cover the cost of labor backfill, and pay for related instruction is a critical need for ensuring the success of RA programs. Key informants acknowledged that a union environment, in general, was more conducive to RAs because of the leverage that workers have in the contract negotiation process and their ability to secure sustainable, long-term employer investments in employee education and training. These employer investments are frequently the source of support for the RTI component of RA programs. The challenge of securing employer sponsorship for an RA program in a non-union environment is likely to be greater; there may be limited availability of employer-provided funds to support employee training, and less flexibility regarding how employees may use those funds if they exist. One of the key informants noted, "Employee training programs are almost always in the first wave of spending cuts whenever employers need to reduce costs." Another key informant remarked that many of occupations targeted by RA programs provide non-reimbursable services, for example community health workers (CHW), suggesting that the lack of reimbursement makes it more difficult for employers to quantify the investment in training to evaluate its potential return.

Reliance on grant funding was described as a potentially limiting factor, given the generally prescriptive orientation of grants. For example, several of the RA programs described by key informants were funded by grants that target a specific occupation, or a specific population for job training in that occupation. The grant monies could not be used to recruit apprentices more broadly, nor could they be used to expand into other occupations. Several of the key informants commented that grant funding is rarely sufficient to cover the cost of RTI that earns the apprentice transferable academic credit. The reliance on grant funding also can be precarious, as the priorities of grant-making entities, including federal and state agencies, can shift over time. Said one expert, "The challenge is always trying to find sources of grant funding whose goals align with the outcomes you're trying to achieve."

Financial incentives

Related to the issue of sustainable funding, key informants consistently described the financial interests of both postsecondary education institutions and healthcare employers as a potential barrier to the wider adoption of RA programs in the healthcare industry. In a conventional approach to education and training, the cost is borne by the individual seeking entry into the profession. This occurs in the form of tuition and fees paid to the postsecondary institution and through the volunteering of labor to the clinical sites that provide opportunities to obtain practical, clinical training.

The degree to which the RA model shifts the cost burden from the individual to the employer can vary, depending on how the apprenticeship program is organized. At a minimum, the individual trainee is no longer providing volunteer labor since a required component of the RA model is that apprentices are paid during on-the-job training. The employer or sponsor may also bear a significant portion of the cost of RTI. In addition, the RA model has the potential to disrupt the stream of revenue that flows to community and technical colleges through lost (or reduced) tuition and fees.

One approach to incentivizing employers to adopt the apprenticeship model of workforce development is the use of employer tax credits. The state of South Carolina has rapidly grown its apprenticeship system and expanded into industries beyond the building and construction trades, including healthcare, in part by making a tax credit²⁶ available to participating employers. The state of New York enacted legislation in 2017 to establish the Empire State Apprenticeship Program (ESAP), which includes an employer tax credit meant to incentivize employer investment in apprenticeship training. The ESAP also provides an enhanced credit to encourage employers to hire youth from disadvantaged backgrounds into apprenticeship positions.²⁷

Similarly, state-level public investments to support RTI offered through community and technical colleges are needed to ensure that these institutions aren't penalized for participating in RA programs. Community and technical colleges typically receive state budget allocations based on FTE student enrollments. In some states, community colleges may receive only partial funding for apprentices who are enrolled as part of an RA program. For example, in Washington state apprentices enrolled in a community college for the RTI receive a 50 percent tuition waiver, which generates a loss for the colleges. Some states have a formal budgetary process to partially compensate colleges for the lost tuition dollars, while other states do not. New York state recently announced a \$3 million investment in the State University of New York (SUNY) system to partner with healthcare and advanced manufacturing employers to create new RA and pre-apprenticeship positions whose RTI will be delivered at SUNY campuses. The funding will support not only the tuition and fees associated with RTI, but as well, activities related to public outreach, coordination of employer relations, and curriculum development.

SECURING THE FINANCIAL COMMITMENT of an employer to develop an RA program is a big challenge, perhaps nowhere more so than the Long Term Care (LTC) industry. Operating margins for many types of LTC facilities are small and have been in decline for several years. One key informant described his experience engaging a large LTC employer who had shown great interest in developing an RA program that would train certified nursing assistants (CNA) in areas of behavioral health, resulting in a specialized role for CNAs. Pre-program development entailed months of planning meetings and presentations, in all a significant investment of time and effort. Despite employer interest and acknowledged need for the specialized role, the potential sponsor decided the RA program – which would create new positions – would cause labor costs to be too high and put too much pressure on overall operating costs. ■

Competency versus length-of-time

Several key informants noted that the length-of-time orientation of RA programs was a possible barrier to their wider adoption in healthcare, where education and training is increasingly oriented around the demonstration of specific competencies. There is an existing process that allows RA programs to utilize a competency-based model of training, but there is some associated administrative burden for the sponsor who must secure approval from either the Department of Labor or State Apprenticeship Agency (whichever is the Registration Agency).²⁸ This process assumes that a sponsor has already developed a competency-based curriculum and training program. If there is not an existing curriculum that can be adapted the

²⁶ The tax credit is available for up to four years per apprentice.

²⁷ A description of the program, including criteria for the disadvantaged youth enhanced tax credit available here: <https://www.uwbec.org/content/AAI%20WNY/NYS%20-%20Empire%20State%20Apprenticeship%20Tax%20Credit%20Program.pdf>

²⁸ The Industry-Recognized Apprenticeship program (IRAP) has emphasized the value of competency-based education and training. It isn't known how that will affect the time-based orientation of RAs.

sponsor would need to develop one, which is potentially a resource-intensive undertaking. In an acknowledgement of the importance of competency-based education in healthcare, the Healthcare Career Advancement Program (H-CAP) has compiled sample competency-based curricula for more than two dozen healthcare occupations.²⁹ In addition, the DOL maintains a web-based clearinghouse with example competency models (though only for a small number of occupations).³⁰

Program development and administration

Key informants viewed RA program development and administration as a source of potential barriers to wider adoption within healthcare. The following list includes factors that contribute to operational challenges generally, as well as specifically for healthcare-related RA programs:

- Complexity of training
- Regulatory environment
- Stakeholder engagement/support
- Number of different stakeholder-partners (coordination/communication)
- Size of the apprenticeship cohort
- Workplace rules stemming from collective bargaining agreements
- Employer familiarity with RA programs
- Employer readiness to provide mentor support
- Extent to which apprentices need remedial preparation or to complete prerequisite coursework
- Flexibility within the state apprenticeship system – including an efficient approval process
- Employers having a robust employee-related information system in place
- Availability of a well-defined set of competencies that can be adapted to the employers' needs

The complexity of training and the regulatory environment are arguably the most significant sources of operational challenge, and, in important ways, mediate many of the other contributing factors. For example, there are substantial differences in the complexity of work performed by an RN compared with a community health worker or another unlicensed occupation, and the level of investment required of an employer to develop and administer an RA program will reflect these differences. An apprenticeship program to train RNs is more likely to require apprentices to complete pre-requisite coursework and to complete RTI in a classroom-based setting (versus content delivered online). Thus, its development may involve greater levels of engagement with other stakeholders and necessitate collaboration with multiple partners. Because registered nursing is a licensed profession, an RA program may face regulatory issues that would not impact an RA program for an unlicensed occupation (or a conventional nursing education program). Addressing any regulatory issues is likely to involve a substantial investment of time and effort for both the employer and any partners.

²⁹ See <https://www.hcapinc.org/page/national-library>

³⁰ See <https://www.careeronestop.org/CompetencyModel/competency-models/industry-cluster.aspx?industry=4>

Other administrative challenges related to RA programs described by key informants included employers not having in place work processes that support the role of mentors – supporting the staff who mentor the apprentices is just as crucial as supporting the apprentices themselves. RA programs have formal reporting requirements, which can be a challenge for employers who have inadequate systems for efficiently tracking apprentice-related activities. A proactive state-level apprenticeship agency whose representatives take a hands-on approach to working with employers can relieve some of the administrative burden inherent to RA program development and administration, but some states' agencies are more highly engaged than others.

THE EXPERIENCE OF AN EMPLOYER-SPONSOR for an LPN/LVN to RN apprenticeship program serves to highlight how these different factors combine to create administrative challenges. The employer had no previous experience with RAs and the impetus for the program originated with an outside multi-stakeholder group who brought the concept to the employer. As a result, multiple interests were represented in the development of the program and its administration, leading to communication and coordination challenges. While the RA program was still in the conceptual stage, its advocates encountered significant resistance from different organizations representing the RN profession.

The RA program recruited from multiple hospital sites, which meant securing the support of multiple leadership teams. The program was designed to allow the LVN apprentices to work a half-time schedule at their home hospital while attending classes. This required a significant level of coordination and planning related to work schedules, release time, backfilling hours, and class schedules in order to minimize the burden of working while attending classes for the apprentices, and minimize the disruption to hospital operations. The LVN apprentices are union-represented and so there were specific policies stemming from the collective bargaining agreement that had to be taken into consideration.

The experiences of the first cohort of apprentices revealed unanticipated challenges, including the need to complete remedial coursework. In addition, some apprentices failed either prerequisite courses, required courses, or both. Neither the cost of remedial work – including the hiring of tutors and other academic support staff – nor the additional cost associated with needing to re-take either prerequisite or required courses was accounted for in the RA program budget or timeline.

There were many “lessons learned” that will inform decisions as the RA program continues to train new RNs. However, two factors were cited as critical to helping the program meet its goals. One was designating a staff role to support apprentices throughout the training (dealing with scheduling issues, ensuring that apprentices were actually attending class, being available to help apprentices sort out problems related to child care or other family issues). A second was the active support of union representatives. In fact, the key informant noted that although the labor-management relationship can sometimes be antagonistic, “it’s been really rewarding to work side-by-side with the union on behalf of our employees and members” to provide the apprenticeship program. ■

Organized Labor

The role of labor unions was identified as a critical factor with respect to successfully developing and sustaining RA programs under the current system. Said one key informant, “Apprenticeship training is most likely to happen and be successful in a context where there is a strong voice for workers.” The union representation gives workers some leverage with respect to employer workforce investment decisions through the collective bargaining process, which also ensures that funding for skills-training and education is sustained. In particular, the 1199SEIU Training and Upgrading Fund representatives were viewed as well-suited to organize RA programs, as one interviewee commented, “They know both employers and labor, they know how to work with adult learners and know the local colleges and training providers, and most importantly, they have the experience in operating RA programs.” The lack of union representation (and dedicated training funds) was emphasized as an important challenge to wider adoption of RA, “The labor-management partnership that provides the foundation for successful RA programs exists in a very specific context; it isn’t easy to transfer the model to another context”, noted one of the key informants.

Collaboration

The success and sustainability of a registered apprenticeship program depends on a variety of factors, but three of the most critical are high quality didactic and practical training experiences that ensure participants develop the needed competencies, efficient means of meeting the administrative requirements of operating the program, and sources of funding to support the program’s operation. The knowledge bases required to ensure these critical components are in place may not be among the core competencies of an organization interested in developing a registered apprenticeship. Key informants stressed the value of collaborating with experienced entities – in particular workforce intermediaries – that can provide a needed resource, whether it be helping to secure grant funding, facilitating a relationship with an educational provider or curriculum designer, or sharing administrative knowledge specific to registered apprenticeships. As one interviewee put it, “This kind of work takes a village to be successful.”

Investing in the right occupations

There were a few key informants who felt that all healthcare occupations were good candidates for an RA program. But most held a less expansive view of the role for RA programs in healthcare, given scarce resources and the fact that employers generally want to address their workforce needs in a relatively short timeframe. These key informants suggested that occupations at either end of the continuum of required skills and occupations that require much more than one year of training and related education are generally not good candidates for apprenticeship training.

Registered nursing was frequently referenced as the upper limit of skills-training and education for healthcare-related RA programs. Support occupations including medical assistants, dental assistants, sterile supply technicians, physical or occupational therapy assistants, or advanced, specialized roles for unlicensed assistants/aides (for example, an advanced role for a nursing assistant or home health aide specializing in behavioral health) were identified as being at the lower limit. (Key informants stressed the importance of leveraging RA programs to create career ladder opportunities for frontline healthcare workers.) Also noted as good candidates were occupations that provide social and behavioral health services, often in a community-based setting, such as community health worker (CHW), substance abuse counselor, or behavioral health technician.

There was a consistent view among key informants that the technologist and technician occupations typically served by 1-2 year certificate programs or associate degree programs represent the best opportunity for wider adoption of RAs in healthcare³¹. For many of these occupations there are opportunities for RA programs to reinforce logical career ladders – for example, emergency medical technician (EMT) to paramedic; medical laboratory technician (MLT) to clinical laboratory scientist (CLS); the entry-level x-ray technician to radiologic technologist or diagnostic medical sonographer, which can lead to further specialization within the diagnostic imaging technologies (e.g. computed tomography (CT) or magnetic resonance imaging (MRI)). The common thread among these occupations is their technical orientation lends itself to practical, on-the-job training.

Several of the key informants felt strongly that the role of apprenticeship training should be a pathway to a solidly middle class job. For this reason, RA programs designed to train entry-level, frontline direct care workers (e.g. home health aide, nursing assistant) were seen as lower priorities. One key informant remarked, “It’s a waste of resources to design an RA program that simply creates an opportunity to earn a poverty wage.” These frontline healthcare occupations, particularly in LTC, were viewed as “easy targets” because employers are often willing to invest in an RA program in an effort to reduce staff turnover and develop a consistent training model. The programs are also naturally weighted to on-the-job training versus related instruction, making them generally less expensive to develop and operate. Direct care occupations are an important source of employment opportunity, as demand for services and workforce replacement needs combine to create large numbers of job openings. But critics of RA programs directed at this segment of the healthcare workforce emphasized that the programs should be focused on creating upward professional mobility, suggesting that the RA model is sometimes being leveraged for “what isn’t really a workforce training issue, but rather a low wage issue.” Given these tensions, stakeholders must consider carefully the goals of apprenticeship training for frontline healthcare workers.

Opportunities for RA in healthcare

Key informants described several scenarios that create opportunities for RA programs in healthcare. The common theme is that these opportunities arise out of a specific employer need; in other words, apprenticeship in healthcare is driven by employer demand. Said one key informant, “There simply has to be unmet need. Trying to pitch apprenticeship to an employer who doesn’t have an immediate workforce development need will go nowhere.”

The skillset is defined by on-the-job experience to the extent that it is more efficient for the employer to invest in the training. One of the key informants interviewed referenced an RA program to cross-train medical coders employed in an inpatient hospital setting to work effectively across different departments and units. Previously, these medical coders had worked only with the coding structure specific to their home department. The hospital was incurring significant labor costs because of its reliance on contract workers in understaffed departments. In this case, the training needs of the employer were so specific and oriented to practical, on-the-job experience, the investment had to come from the employer. The RA program provided a chance to build in competencies that ensured staff were trained to highest occupational standard and the apprenticeship is now embedded in the onboarding training for new employees.

³¹ For reference, see occupations identified by the Standard Occupation Classification code 29-2000, “Health Technologists and Technicians” (https://www.bls.gov/soc/2018/major_groups.htm#29-0000).

Community health workers (CHW) are another example where, often, the competencies and scope of work are defined by the needs of the employer. CHWs are increasingly utilized by hospitals, clinics, and public health departments but their roles and responsibilities vary depending on the setting in which they work. For example, some CHWs function as care coordinators as part of a clinical team, some work as patient navigators to help patients connect with both clinical and social services, some work in the community doing home visits, and some function as patient educators. Although the related technical instruction for a CHW apprenticeship program frequently is provided in a community college setting, the curriculum can be adapted to develop specific skills needed by employers.

A new state or federal standard for the occupation is implemented and the employer's incumbent workforce that must meet the new standard. A key informant described the development of an RA program to train medical assistants (MA) following the enactment of state legislation requiring MAs to be certified in order to work at full scope of practice. The organization that sponsored the RA program is a system of integrated, primary care clinics with a large incumbent MA workforce that is critical to clinic operations. Rather than risk the disruption of services resulting from MA staff either cutting back hours to attend school, or choosing not to pursue certification, the clinic system developed an apprenticeship based on the same standards and competencies required for accredited MA programs. The program has expanded beyond the clinic system that sponsored it to include other organizations and now serves over 30 different employers.

The employer needs to define standards for a new occupational role within its organization. One of the key informants who represented a home health services organization described an apprenticeship program the organization developed to meet a strategic need to increase employee retention rates. The apprenticeship trained incumbent workers to fill a supervisory role that provides support to frontline employees in an effort to reduce staff turnover. An initial attempt to train incumbents for this new position was unsuccessful and the organization realized it needed to invest in a more robust program. Because the role was specific to the organization, there was no “ready-to-go” training curriculum or standard competencies; these had to be designed. According to the key informant, the RA standards provided a framework for accomplishing this, “What I’ve loved about developing the program is the process and the structure, I think it lends a lot of gravity to the training experience.”

The institutional system that supplies new entrants to the workforce for an occupation cannot meet demand. A key informant representing a large health system whose organization developed an RA program to train medical laboratory technicians (MLT) reported that the program was motivated by a lack of qualified candidates to fill open positions. A major factor contributing to recruitment challenges was a lack of training capacity in the regional labor market; there is only one community college-based MLT program in the region. The health system partnered with the community college to adapt the curriculum to an apprenticeship model. The decision to develop the program as a formal RA was based on a desire to ensure that it had credibility outside of the organization since the health system plans to offer the training more broadly. In circumstances where the supply of training is inadequate to meet the demand for labor, the RA model offers potential economies of scale by providing an opportunity for multiple employers to invest in the training program.

Recommendations

Encourage rigorous evaluation of RA programs

There must be an evidence base to make the business case to healthcare employers, either to encourage the development of an RA program or to continue investing in one already in operation. The documentation measures required of RA programs are important, but they are also basic (e.g. tracking the number of training hours, recording academic performance, recording the required wage increase, demonstrating expected competencies). Beyond developing competence, goals of the RA program should be tied to specific empirical measures to better inform program evaluation.

Many of the key informants describe the value of RA programs in terms of their ability to improve employee recruitment and retention and drive down associated costs, or increase employee satisfaction and engender employee loyalty. These benefits cannot be assumed, they have to be quantified to demonstrate the return on employer investment. For example, one of the key informants connected to a program that trained CHWs identified several data elements that are collected, each tied directly to program objectives. They included:

- Tracking change in missed appointments
- Medication adherence
- Time-dependent communications with patients
- Coordinating referrals to related (non-clinical) services

Develop champions in industry, education, and state government

Adoption of RAs in the healthcare sector requires support at many different levels, but critically in industry (both labor and management), in educational institutions, and at high levels of government. Overcoming the many challenges described by key informants – in particular the perception that RA programs are insufficiently rigorous – will require vigorous support from individuals “who have standing” within these different arenas. Advocates must develop an evidence-based campaign to educate leaders within the healthcare industry, postsecondary education institutions, and state government about RA programs in order to create champions who will advance the case for expanding apprenticeship training in healthcare.

Strengthen support for workforce intermediaries

Workforce intermediaries can play a critical role in expanding apprenticeships in the healthcare industry. They are an effective way to foster collaboration among the different stakeholders that engage in apprenticeship training, including employers, educational providers, labor-management partnerships, and other community-based organizations. These entities also provide direct assistance for RA activities, such as helping employers identify the right candidates for apprenticeship training, offering technical support for RA program development and administration, and identifying funding sources to support RA programs. In addition, they can help support efforts to promote RA among healthcare employers and educators. Policy makers should consider strategies to incentivize funding (both public and private sources) to support the work of intermediary organizations.

Provide support for program planning

Successful RA programs require a substantial investment of time and effort at the planning stage. Sponsors may have little to no experience with RAs and the factors that need to be considered are numerous. Among others, they may include the development of competencies and defining the training and didactic curriculum to achieve those competencies, collaborating with other stakeholder groups that have vested interests in health professions education, negotiating workplace rules related to a collective bargaining agreement, evaluating the preparedness of potential program participants, and defining metrics for program evaluation and establishing data collection systems. These activities need to be supported with dedicated grant funding. The planning and development process would also benefit from a dedicated resource for sharing best practices. The Department of Labor and State Apprenticeship Agencies could feature profiles of successful healthcare-related RA programs that focus on the challenges and lessons learned, and these agencies could sponsor the development of a peer network to facilitate connections among employers and other stakeholders interested in developing an RA program.

Strengthen the integration of apprenticeship and higher education

Health professions education and training is predominantly degree and certificate-based and overwhelmingly provided by postsecondary education institutions. However, apprenticeship training is not well integrated with these institutions. In order for RA programs to become widely used by healthcare employers, apprenticeship training must become integrated with postsecondary education. There are several challenges to doing so and these challenges, along with strategies to address them, were succinctly described in a recent publication³² authored by the Center on Education & Skills at New America (CESNA). They can be summarized as follows:

Student-apprentices are not visible within postsecondary institutions and opportunities to earn credit that leads to a degree are rare. To address these challenges, CESNA proposed standard definitions for both student-apprentices and degree-apprenticeships and the incorporation of these definitions into federal data collection systems and relevant legislation. Defining the structure of degree-apprenticeships would help colleges and universities thoughtfully integrate the on-the-job training and mentorship components of the apprenticeship model with the general education and field-specific knowledge requirements of academic degree programs. Defining student-apprentices so that they are visible within the postsecondary education system would help policy-makers incentivize colleges and universities to award credit and create degree pathways for apprenticeship programs, target financial aid or other supports to apprentices, and evaluate the effectiveness of apprenticeship training.

Apprenticeship training for both employers and educational institutions is expensive. CESNA recommended permanently directing the fee-based revenues collected by the Department of Labor through the H-1B visa program toward the expansion of RA training into new industries, including healthcare. The cost of related technical instruction could be covered by existing federal and state student aid programs, with some modification to eligibility rules. For example, allowing the Federal Work-Study program to cover student-apprentices' tuition and fees and allowing apprenticeship programs to qualify for state financial aid programs.

³² McCarthy, M. Palmer, I. Prebil, M. "Connecting Apprenticeship and Higher Education: Eight Recommendations", New America, December 2017.

The apprentice program startup process is burdensome for colleges and universities. In addition to seeking approval from relevant education agencies to launch a new degree offering (in the form of a degree-apprenticeship), the college or university needs to register the program with a state or federal apprenticeship agency, a process which is likely to be unfamiliar and time consuming. CESNA recommended amending the National Apprenticeship Act to expand the definition of a registration agency to include state education agencies (with whom colleges and universities are familiar) to streamline the administrative process for educational institutions.

It is difficult for educational institutions to award academic credit for on-the-job learning. The challenges include the institution's ability to ensure the integrity of learning that occurs outside its four walls, the expense of evaluating proposed curricula and how they translate into credit, and economies of scale issues related to offering a program for a potentially small number of apprentices. CESNA proposed engaging relevant stakeholders in a process to design competency-based curricula for on-the-job learning, as well as principles of quality assurance that could serve a multi-employer, multi-institution platform. In addition, CESNA proposed the creation of a multi-year discretionary grant program within the Higher Education Act that would support the creation of degree-apprenticeship programs.

Conclusion

This paper presents findings from a series of interviews with key informants who were asked to share their views on the perceived value of RA programs as well as the challenges and opportunities associated with RA programs in healthcare. The study participants included sponsors of RA programs (both employers and workforce intermediaries), representatives of labor unions, representatives of educational institutions that provide RA programs' related technical instruction (RTI), and workforce development specialists.

Key informants described the value of RA programs in terms of its robust, structured process, which provides employers the opportunity to methodically identify workforce needs and develop strategies to address them. They also cited the importance of RA programs' ability to integrate practical experience, mentorship and formal academic learning, and noted that apprenticeship programs can help define professional standards and create opportunities for career advancement in segments of the healthcare workforce where these things are lacking. Key informants also highlighted the potential for apprenticeship training to promote workforce diversity and equity.

Potential barriers to the wider adoption of RA programs included the challenge of shifting training costs onto employers that benefit from a system where the cost of workforce development is largely externalized. RAs also represent a potential disruption to revenue streams (in the form of tuition and fees) that flow to the postsecondary education institutions that supply health professions education and training. The RA model is perceived by some in healthcare as degrading because of its historical association with "blue collar" occupations in the trades and anathema to healthcare's widespread "culture of professionalization". Sustainable funding was also cited as an important challenge to expanding apprenticeship training in healthcare, as was a lack of awareness throughout the healthcare industry of how RA programs are structured and function.

Key informants insisted that investing in the right occupations was critical to facilitating adoption of RA programs in healthcare. Occupations that are at either end of the skills continuum, or occupations that require much more than one year of training and related education may not be ideal candidates for RAs.

There was a consistent view among key informants that the technologist and technician occupations typically served by 1-2 year certificate programs or associate degree programs represent the best opportunity for RA programs in healthcare.

Opportunities to create new RA programs in the healthcare industry will be driven, foremost, by employer demand. Key informants outlined several conditions that are likely to be conducive to RA program development:

- The skillset is substantially defined by on-the-job experience
- An incumbent workforce must be trained to new federal or state standards
- An employer needs to define standards for a new occupational role within its organization
- The institutional system that trains new entrants to the workforce cannot meet demand

The primary recommendations for encouraging the adoption of RA programs by the healthcare industry are 1) build up the evidence base that can be used to make the business case to employers, and 2) use the evidence base to promote RAs and develop champions within the healthcare industry, health professions education programs, and state government. Additional recommendations include strengthening support for workforce intermediaries, who are uniquely positioned to build the kinds of partnerships needed to develop and sustain RA programs, and ensure that there is adequate support for the significant investment of time and effort required for RA program planning and development. Finally, a longer-term recommendation is to take steps to integrate apprenticeship training into the postsecondary education system.

Appendix A. Key Informants

Name	Position	Organization
Barbara Barney-Knox	Chief Nursing Executive	CA Correctional Health Care Services
Steve Bender	Executive Director	SEIU 1199NE Training & Upgrading Fund
Krista Blyth-Gaeta	Chief Program Officer	Homebridge
Coert Bonthuis	Director	1199SEIU Training & Upgrading Fund – Upstate NY
Harneen Chernow	Director	1199SEIU Training & Upgrading Fund – MA
Ruel Delrosario	Lab Clinical Services Director	Kaiser Permanente – Colorado Region
Hellan Dowden	Consultant	SEIU Local 1000
Laura Dresser	Associate Director	University of Wisconsin-Madison, COWS
Corinne Eldridge	Executive Director	California Long-Term Education Center
Jacqueline Garcia	Statewide Apprenticeship Coordinator	Alaska Department of Employment and Workforce Development
John Garcia	Director of Non-Credit Administrative Services & Program Operations, Higher Education Officer	Division of Adult & Continuing Education, LaGuardia Community College
Lorelei Gauthier	Chief Strategy Officer	Philadelphia FIGHT
Elizabeth Jacobi	Human Resources Director	Los Angeles County Department of Health Services
Ron Johnson	Senior Consultant	AWD Consultants
Katherine Lechner	Workforce Development Manager	Washington Association of Community and Migrant Health Centers
Mary Alice McCarthy	Director, Center on Education and Skills	New America
Rebecca Miller	Workforce Director	SEIU UHW-West
Holly Moore	Executive Dean	South Seattle College, Georgetown Campus
Shirley Moy	Director, Center for Social Policy and Community Development	Temple University
Mary Riebe	Community & Academic Relations Consultant	Kaiser Permanente – Colorado Region
Susan Thomas	Industry Partnership Director	District 1199C Training & Upgrading Fund
Amy Weinstein	Employer Liaison	Apprenticeship Rhode Island
Hannah Weinstock	Executive Director, Workforce Development	Division of Adult & Continuing Education, LaGuardia Community College
Anne Wetmore	Senior Consultant, Workforce Development and Apprenticeship	Wetmore and Associates