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Apprenticeships in Maryland Hospitals: Advancing the Hospital Workforce

Joint Chairmen's Report, p. 176

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Executive Summary

This report responds to the legislative budget committees'[1] request to submit a report on registered apprenticeships in hospitals in Maryland, including existing registered apprenticeships by occupation, goals to increase and scale these registered apprenticeships, identification of barriers to developing and scaling registered apprenticeship programs in hospitals, and ways the Health Services Cost Review Commission (HSCRC) is working with the hospital industry to address the identified barriers and expand registered apprenticeships. Within the report HSCRC examines the current state of hospital-based apprenticeships in Maryland and offers recommendations to expand and strengthen these programs. Apprenticeships provide structured pathways into health care careers and can address critical workforce shortages while supporting worker development and retention. The HSCRC undertook this review to identify opportunities to scale apprenticeship programs that meet the needs of hospitals, educational institutions, and workers.

Maryland hospitals face ongoing workforce shortages, as documented by the Maryland Health Care Workforce Development Commission,[2] which extend beyond nursing roles to technical and support occupations that are integral to hospital operations. To assess the current state of apprenticeships in Maryland hospitals and to form recommendations to expand them, the HSCRC conducted informational interviews with providers of related-instruction and participated in roundtable discussions with hospitals.

There are ample opportunities to scale existing apprenticeship programs that have shown regional success. Additionally, there is a vast range of healthcare occupations that would benefit from apprenticeship models, beyond nursing roles which are being concurrently studied. HSCRC offers the following recommendations to advance apprenticeships in Maryland hospitals.

1. Prioritize scaling existing apprenticeship programs for high-vacancy occupations in hospitals.
2. Elevate community colleges as regional assets and encourage partnerships between schools to replicate apprenticeship models to expand statewide reach and impact.
3. Scale youth apprenticeship models for Certified Nursing Assistant (CNA) and Patient Care Technician (PCT) roles to set students up for career ladders into nursing, surgical technician, and other healthcare related roles.
4. Establish youth apprenticeship models for skilled-trades based inside hospitals to address an aging workforce for specific occupations.

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[1] Chairmen of the Senate Budget and Taxation Committee and House Appropriations Committee. Report on the Fiscal 2026 State Operating Budget (HB 350) And the State Capital Budget (HB 351) And Related Recommendations.

[2] Commission to Study the Health Care Workforce Crisis. Final Report. (December 31, 2023.) https://health.maryland.gov/pages/workforce-commission.aspx

5. Expand social supports and investments to address “social determinants of work” which impact worker success.
6. In line with the Final Report of the Apprenticeship 2030 Commission[3], create a formal Office of Apprenticeship Development to manage the development of new healthcare and hospital apprenticeship programs and help scale existing successful programs.

Background

As the population of Maryland ages, ensuring there is a well-trained healthcare workforce and adequately staffed hospitals is important to the health of Maryland residents. Based on findings from the Maryland Commission to Study the Health Care Workforce Crisis,[4] Maryland is currently facing a healthcare workforce shortage across multiple professions and is recovering at a slower pace than other states in the region. Expanding the number, scale, and accessibility of pathways into hospital careers is an essential strategy to address both immediate and long-term needs to strengthen Maryland’s hospitals. In addition to the challenges of an aging patient population, as more workers reach retirement age, maintaining a strong pipeline of qualified candidates to fill hospital roles will be critical to protecting the health and well-being of residents.

A registered apprenticeship is a structured, work-based learning program recognized by the U.S. Department of Labor or a state apprenticeship agency. These programs combine paid, on-the-job training with related classroom instruction, and follow national standards to ensure quality and consistency. According to the U.S. Department of Labor, employee retention rates can exceed 90 percent.[5] For workers, apprenticeships increase job satisfaction, foster a sense of commitment to employers who invest in their training, and strengthen their sense of belonging in the workplace. Employers, in turn, gain a well-trained workforce, experience lower turnover costs, and are better positioned to attract and retain talent.

In the final report on the State of Apprenticeship Programs in Healthcare, Direct Care, and Nursing (2023), the Commission noted that while there are growing healthcare apprenticeships, “their non-traditional status in the organized system of Registered Apprenticeship means it often takes additional time and work to get employers, sponsors, and jobseekers acquainted with apprenticeship as a means for training.”[6] The 2023 report is a useful reference that provides additional detail on the broader status of apprenticeships in healthcare.

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[3] Apprenticeship 2030 Commission. (2025, March). Final report. https://dls.maryland.gov/pubs/prod/NoPblTabMtg/AppCmsn2023/FinalReportApprenticeship2030Commission.pdf

[4] Commission to Study the Health Care Workforce Crisis. (2023, December 31). Final report. https://health.maryland.gov/docs/SB%20440%20Ch.%20708%20(2022)%20%E2%80%93%202023%20Final%20Report%20%E2%80%93%20Commission%20to%20Study%20the%20Heal.pdf

[5] ApprenticeshipUSA Fact Sheet. (2022, August.) https://www.apprenticeship.gov/sites/default/files/dol_apprenticeshipusa_v13_web-ready.pdf

[6] Maryland Apprenticeship and Training Program. (2023). Healthcare Apprenticeship Workgroup: 2023 final report. https://www.dllr.state.md.us/employment/appr/apprfinreporthc2023.pdf

The HSCRC interpreted the directive in the 2025 Joint Chairmen's Report [7] broadly and elected to include occupations beyond clinical healthcare roles in the hospital workforce, such as building maintenance, information technology, and environmental services. Although nursing shortages are well documented, many other hospital positions face similar vacancy rates and suffer from limited public awareness of these career options. For example, while most people are familiar with nursing careers, far fewer know about critical roles such as surgical technologists or radiology technicians, which are essential to hospital operations. Based on quarterly workforce vacancy data from the Maryland Hospital Association (MHA) through December 2024, the top four hospital occupation vacancies are for surgical technicians, respiratory therapists, radiology technicians, and pharmacy technicians. There are existing apprenticeship models that are underleveraged for two of these occupations: surgical technicians and pharmacy technicians.

Table 1. Top 10 Hospital Occupations by Vacancy Rate

Surgical Technicians	**13.1%**
Respiratory Therapist	**12.9%**
Radiology Technicians	**12.4%**
Pharmacy Technician	**12.2%**
Nursing Assistive Personnel	**10.5%**
Dietitians & Nutritionists	**10.3%**
Sterile Processing Technician	**10.0%**
All Other Personnel	**9.9%**
Housekeeper	**9.9%**
Registered Nurses	**9.9%**
Overall Total Vacancy	**9.7%**

Source: Maryland Hospital Association, Data through December 2024

The HSCRC conducted a primarily qualitative analysis of apprenticeship and workforce training models in Maryland hospitals. This included informational interviews with subject matter experts in registered apprenticeships, including both employers and related-instruction providers with demonstrated experience and success in advancing these programs. In partnership with the MHA, the HSCRC also participated in roundtable discussions with several hospitals from across the state, representing both large health systems and smaller institutions, as well as urban, suburban, and rural geographies. In addition, the HSCRC

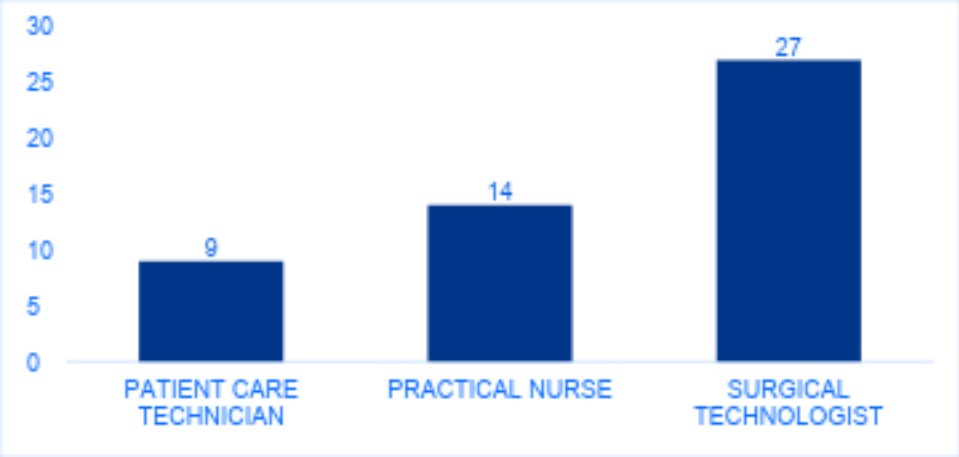
[7] Chairmen of the Senate Budget and Taxation Committee and House Appropriations Committee. Report on the Fiscal 2026 State Operating Budget (HB 350) And the State Capital Budget (HB 351) And Related Recommendations.

reviewed multiple data sources, including hospital workforce vacancy reports collected by MHA and registered apprenticeship data from the Maryland Department of Labor, to identify lead sponsor organizations and employers actively engaged in apprenticeship initiatives.

Status of Existing Hospital Apprenticeships

According to data through June 2025 from the Maryland Department of Labor, there are currently 50 active registered apprenticeships in clinical roles across three occupations: patient care technicians (PCTs), licensed practical nurses (LPNs), and surgical technologists.[8] Surgical technologists represent the largest share of active apprenticeships, primarily sponsored by Howard Community College (HCC). While HCC's active surgical technologist apprentices are currently employed exclusively at MedStar Health, prior cohorts have included apprentices placed at hospitals within Johns Hopkins Health System, University of Maryland Medical System, and LifeBridge Health, demonstrating interest in apprenticeships across multiple health systems. Overall, most apprenticeships are concentrated in the Baltimore region, with additional placements in Howard County and Prince George's County.

Figure 1. Active Registered Apprenticeships, as of June 2025



Source: Maryland Department of Labor Data

This data suggests that there are ample opportunities to scale apprenticeships in these occupations, particularly outside of the Baltimore region. There are other healthcare occupations employed by hospitals that do not currently have active apprenticeship participants, including community health worker, peer recovery specialist, medical assistant, pharmacy technician, central sterile processing technician, and environmental care supervisor.[9] Expanding apprenticeships for these occupations could significantly

[8] Surgical technologist is frequently used interchangeably with surgical technician.

[9] Maryland Department of Labor. Explore Registered Occupations - Maryland Apprenticeship and Training Program (MATP) Website. Accessed September 24, 2025. https://www.labor.maryland.gov/employment/approcc/approcc.shtml

strengthen the hospital workforce, particularly given that pharmacy technician and central sterile processing technician are among the top ten occupations with the highest vacancy rates (Table 1). In addition, there are a number of skilled trades in building and maintenance operations (e.g. stationary engineers and more specific engineering roles) and IT that have versatility across multiple industries and fields, including hospital settings.

Hospital Perspectives on Implementing Apprenticeships

The HSCRC, in collaboration with the MHA, convened hospital leaders to discuss the role of apprenticeships in addressing workforce needs. Hospitals expressed strong interest in expanding apprenticeships as a strategy both to fill critical vacancies and to support incumbent workers seeking career advancement. Several hospitals highlighted successes with registered apprenticeships and similar training models in which hospitals directly fund education expenses for incumbent employees. Hospital leaders emphasized that employer investments, such as mentorship, tuition assistance, and work-release time, are essential to sustaining these models and fostering worker loyalty. At the same time, hospitals noted persistent challenges in recruiting staff across both clinical and non-clinical roles. While nursing shortages remain especially acute, hospitals stressed that shortages also affect other clinical positions as well as building maintenance roles that are vital to hospital operations and should not be overlooked in broader workforce discussions.

Duration and Training Alternatives

Hospitals raised concerns about the duration of apprenticeship programs, particularly those extending beyond two to three years. They noted that longer programs can limit employees' immediate earning potential and delay advancement opportunities. Both hospitals and related-instruction providers suggested that in some cases, short-term training may be more effective than full-length apprenticeships, and recommended tailoring program length by role to maximize worker success. For example, certified nursing assistants (CNAs) can become work-eligible through short-term instruction, allowing them to enter the workforce quickly and progress into higher-level apprenticeships such as PCT or LPN pathways, as opposed to completing a 12–18 month CNA program. Youth apprenticeships in CNA roles may be an exception to this, given that students are still completing high school. Similarly, peer recovery specialists and community health workers can often obtain certification through short-term training that leads directly to employment.

Recruitment Challenges and Aging Workforce

Hospitals expressed interest in developing apprenticeship programs for additional high-need roles but noted limited candidate interest in certain positions despite ongoing shortages. A particular concern was the lack of young candidates pursuing skilled trade careers within hospitals. One hospital reported significant difficulty recruiting for building maintenance occupations, such as boiler engineers, noting that hospitals often compete for the same limited pool of workers and struggle to attract new entrants. Youth apprenticeship programs in skilled-trades based within hospitals could help address an aging workforce that continues to shrink as employees retire.

Licensing and Certification Challenges

Hospitals also highlighted the impact of licensing requirements and certification delays on their ability to hire workers following apprenticeship completion. Such delays can create barriers to timely employment and limit the effectiveness of apprenticeship programs. Hospitals suggested that expediting certification and licensing for individuals who successfully complete apprenticeships could help prevent hiring delays and strengthen workforce pipelines.

Youth Apprenticeships

Hospitals expressed strong support for youth apprenticeship programs that introduce students to early career pathways in healthcare. LifeBridge Health reported success with a CNA youth apprenticeship program, while Johns Hopkins Health System highlighted positive outcomes from a PCT youth apprenticeship program. Both systems emphasized that these initiatives effectively engage high school students and prepare them for long-term healthcare careers. By placing young apprentices on career ladders toward higher-earning roles, such as nursing and technician positions, the programs help build a sustainable workforce pipeline. Hospitals also underscored the importance of seed funding, noting that these programs would not have been established without supplemental financial support.

Funding Sources

Hospitals reported using a range of strategies to fund apprenticeship programs. Some rely on hospital operating budgets to cover related instruction, while others leverage external support through grants, hospital foundations, or private philanthropy. One hospital noted that without initial seed funding, it would not have been able to pilot a youth apprenticeship program, underscoring the importance of start-up resources in testing and scaling new programs. Hospitals that allocate internal resources to support related instruction and advanced education are most often doing so to promote incumbent employee advancement, creating clear pathways for career growth within the organization.

Opportunities for Providers of Related-Instruction

Community Colleges

As core education resources in every county, community colleges are uniquely positioned to expand and scale hospital apprenticeships as leading providers of related instruction. With additional support for faculty retention, resources to sustain programs in specialized fields, and wraparound services for students, community colleges can serve as even stronger partners in addressing Maryland's hospital workforce needs.

Howard Community College (HCC) has emerged as a key leader in advancing healthcare apprenticeships in the state. Partnering with hospitals such as Saint Agnes Hospital, Johns Hopkins Health System, MedStar Health, and LifeBridge Health, HCC has developed pathways into critical roles including licensed practical nurses (LPNs) and surgical technologists. Students enter these programs through multiple routes, whether pre-nursing coursework, mid-career transitions, or as incumbent hospital employees. Employers often prioritize incumbent hospital employees for these opportunities to support employee growth, with education costs supported by a mix of hospital funding, grants, and foundation resources. This combination of strong employer partnerships and flexible entry points underscores the value community colleges bring to healthcare apprenticeship pipelines.

Community colleges face constraints that are common across healthcare training programs. Program capacity is often limited by the availability of qualified faculty, access to clinical sites, and the supply of mentors and preceptors. Additionally, healthcare programs often require extensive clinical hours and licensure or certification, making them longer and more complex to administer than apprenticeships in other sectors. These challenges highlight the need for ongoing collaboration, as close partnerships between colleges and employers are not simply mutually beneficial but essential for sustaining and expanding apprenticeship programs.

One of the most significant growth opportunities lies in fostering stronger partnerships across community colleges to replicate successful apprenticeship models and extend their reach. By leveraging existing expertise, colleges can expand programs beyond their immediate service areas. For example, HCC's surgical technologist apprenticeship currently focuses on Baltimore-area and Howard County hospitals, yet surgical technologists are high-demand positions across all hospitals in the state. With strategic coordination, colleges could share curricula, clinical placements, and faculty resources, enabling more regions to benefit from established models while avoiding duplicative start-up efforts. To address faculty shortages that restrict student enrollment, schools could explore faculty-sharing partnerships to expand program capacity.

Taken together, these efforts illustrate the central role community colleges can play as regional anchors in apprenticeship expansion. With stronger cross-college collaboration, increased instructional capacity, and sustained engagement and employment opportunities from hospitals, community colleges can help grow a scalable and sustainable pipeline of healthcare workers across Maryland. In doing so, they will not only strengthen local hospital systems but also contribute to a more resilient and equitable healthcare workforce statewide.

Non-Profit Workforce Organizations

Nonprofit organizations are also well-positioned to support the expansion of apprenticeship programs by acting as intermediaries between hospitals, prospective employees, and community resources. In this role, nonprofits can help hospitals identify and screen candidates, provide related instruction, and connect workers to wraparound services that increase the likelihood of success. Unlike individual hospitals that may be limited to their own recruitment networks, nonprofits can create strategic partnerships across multiple hospitals, thereby extending regional reach. They also often have stronger ties to community-based organizations, enabling them to engage prospective employees who might otherwise be overlooked. By assessing education levels and conducting readiness assessments, community partners can help ensure that apprentices enter programs with the foundation needed to succeed.

Nonprofits can also play a role in building early interest in healthcare careers among young people. The Baltimore Alliance for Careers in Healthcare (BACH), for instance, operates a year-round initiative that offers summer internships and rotational hospital positions for high school students. While not a formal apprenticeship, this type of early exposure introduces students to a wide array of healthcare careers and helps cultivate the next generation of workers. By building bridges between schools, hospitals, and community partners, such programs establish a pipeline that can naturally flow into hospital apprenticeships, ensuring a more sustainable and diverse workforce in the long term.

Social Determinants of Work

Hospitals consistently emphasized the importance of addressing the social determinants of work as critical to workforce retention and employee success. Building on the concept of the social determinants of health—non-medical factors that influence a person's well-being—the social determinants of work refer to the conditions that shape an individual's ability to obtain, sustain, and advance in employment. Barriers such as unstable housing, unreliable transportation, and limited childcare or family supports can significantly affect the success of workers in apprenticeship and other earn-and-learn programs. Across diverse geographies, hospitals most frequently identified transportation and childcare as persistent obstacles to workforce participation and retention.

Recognizing these challenges, several hospitals have developed wraparound services to help apprentices and employees navigate barriers outside of the workplace. Approaches vary depending on local context and available partners. In Baltimore City, for instance, nonprofit organizations provide case management, connecting employees with transportation assistance, childcare resources, and essential skills training. Hospitals emphasized that third-party organizations play a particularly valuable role by building trust with workers and serving as independent brokers. These intermediaries can help identify early warning signs—such as repeated lateness or absences—and intervene before such issues undermine long-term success.

In contrast, hospitals in rural areas reported fewer community-based resources to draw upon and often rely on hospital-employed social workers to connect staff with needed supports. This reliance underscores both the importance of flexible approaches and the uneven distribution of resources across regions. One hospital proposed expanding apprenticeships for childcare development specialists as a dual strategy: meeting the pressing childcare needs of hospital employees while simultaneously strengthening the broader community workforce.

These examples demonstrate that addressing the social determinants of work is not peripheral but central to the success of healthcare apprenticeships. By reducing such barriers, hospitals can improve retention, enhance employee stability, and ensure that apprenticeship programs fulfill their promise of creating sustainable career pathways.

Recommendations

After conducting informational interviews, reviewing hospital workforce vacancy data, and considering additional state-level findings, the HSCRC offers the following recommendations to strengthen and expand hospital apprenticeships in Maryland. These recommendations are designed to build a continuum of practice in which hospitals, together with educational institutions providing related instruction, can collaborate to address workforce shortages, enhance training opportunities, and create sustainable pathways into careers in Maryland hospitals.

Prioritize Scaling Existing Registered Apprenticeship Programs

1. **Place initial focus on scaling existing healthcare apprenticeship models to address high vacancy workforce shortages, as opposed to building new apprenticeship models.** Surgical technicians, pharmacy technicians, and central sterile processors have high vacancy rates for hospitals. Surgical technician apprenticeships are already being implemented successfully by HCC in partnership with multiple health systems. While DOL data indicates there are pharmacy technician and central sterile processor apprenticeship models, there are no active apprenticeships currently in place. The State and hospitals should prioritize scaling these models which already

possess frameworks which can be implemented immediately. Targeted seed funding and access to expertise in implementing registered apprenticeships could enable hospitals to launch or scale these underleveraged models, fostering broader adoption across the sector.

2. **Facilitate cooperation between government agencies and oversight bodies to expedite certification and licensing for individuals who have completed an apprenticeship process.** Delays in certification and licensing can hinder hospitals in hiring employees after their apprenticeship concludes.
3. **Enhance public awareness of hospital apprenticeship programs through coordinated marketing and outreach initiatives.** Sustained, strategic outreach can strengthen awareness and expand the pipeline of candidates pursuing apprenticeship opportunities in the hospital sector

Expand Support for Community Colleges

1. **Elevate community colleges as regional assets to sponsor apprenticeship programs that benefit hospitals.** Encourage collaboration and partnerships between schools to help scale apprenticeship programs that can benefit a larger geography of hospitals.
2. **Provide sufficient resources to community colleges to help them retain training programs and faculty**. This will be particularly vital for occupations that may not have large student interest but are integral to hospital operations.

Scale Youth Apprenticeship Opportunities in Hospitals

1. **Build youth apprenticeship programs for maintenance and building trades occupations at hospitals.** The aging workforce was cited as a major concern by hospitals for maintenance roles. Investing in a new generation of workers early in life will have a long-term transformative impact on these types of occupations.
2. **Scale youth apprenticeship programs for early career opportunities that have ladders to higher-earning occupations.** Youth apprenticeships for CNA and PCT roles can set individuals up early in life for career pathways into nursing and technical roles.
3. **Expand education, particularly for middle and high school students, on the wide range of occupations available at hospitals.** Although hospitals offer a wide array of diverse occupations, students and the broader community may lack awareness of the career and growth opportunities these roles provide.

Address Social Determinants of Work

1. **Grow state and local resources to address social determinants of work.** Many hospital workers entering apprenticeship programs face the same challenges as workers in any other occupation in Maryland. Challenges with finding reliable transportation and childcare were the two

more common barriers cited by hospitals. Continued investments in affordable child care will benefit hospitals and their employees, as well as the broader workforce.

2. **Leverage the expertise of local non-profit organizations as trusted partners to provide wraparound services to workers in apprenticeship programs.** Social services available to support workers varies across the State. Some hospitals benefit from the expertise of local non-profit organizations. Other hospitals leverage internal social work resources to connect their employees with social services.

Create a Formal Office of Apprenticeship Development

1. HSCRC supports the recommendation in the Final Report of the Apprenticeship 2030 Commission[10] to establish a Maryland Office of Registered Apprenticeship Development to lead the complex work of scaling existing registered apprenticeship programs. As shown earlier in the report, there are multiple registered apprenticeship models for hospital-based occupations, but there is low uptake across both hospitals and candidates. More expert assistance is needed to assist hospitals in growing apprenticeship programs and facilitating relationships between providers of related-instruction.

Conclusion

Maryland's hospitals, community colleges, and nonprofit partners have already demonstrated the value of apprenticeships in addressing workforce shortages and building sustainable career pathways. Yet the current scope of hospital-based apprenticeships remains limited relative to the scale of the state's workforce needs. Based on the findings and recommendations in this report, apprenticeships can serve as a central strategy to strengthen Maryland's hospital workforce across both clinical and non-clinical roles.

Expanding apprenticeships will require coordinated investment and deliberate action. Community colleges must be elevated as regional anchors with the resources and capacity to sponsor and scale programs, while partnerships among schools can extend statewide reach. Youth apprenticeship pathways are critical to cultivating the next generation of health care and hospital workers, particularly as Maryland faces an aging workforce and patient population. The State of Maryland, hospitals, and their partners must also continue to address social determinants of work, such as transportation and childcare, that directly affect apprenticeship completion, employee retention, and long-term career success.

Finally, creating a formal State Office of Apprenticeship can provide the leadership and structure needed to accelerate program growth. Such an office would ensure coordination across hospitals, employers, community colleges, and nonprofits, while also advancing apprenticeship models for high-vacancy

[10] Apprenticeship 2030 Commission. (2025, March). Final report. https://dls.maryland.gov/pubs/prod/NoPblTabMtg/AppCmsn2023/FinalReportApprenticeship2030Commission.pdf

occupations. By scaling proven models, investing in education and social supports, and creating the infrastructure to grow statewide impact, Maryland can ensure that its hospitals have the skilled workforce necessary to deliver high-quality care today and into the future.