COMMISSION TO STUDY THE HEALTH CARE WORKFORCE CRISIS

FINAL REPORT 2022/2023

PREPARED FOR THE MARYLAND GENERAL ASSEMBLY

IN ACCORDANCE WITH SB440/CH0708 (2022)

COMMISSION TO STUDY THE HEALTH CARE WORKFORCE CRISIS

FINAL REPORT

December 31, 2023

ACKNOWLEDGEMENTS

The preparation of this report involved the efforts of many individuals who generously contributed their time and expertise. The Commission would like to thank Casey Tiefenwerth, MSW, Special Grants Program Manager, Division of Workforce Development and Adult Learning, Maryland Department of Labor, Chair of the Workforce Advisory Group, and Jane Kirschling, Ph.D., RN, Dean, University of Maryland School of Nursing, Chair of the Education and Pathways Advisory Group. Their dedication and commitment resulted in the collection of information vital to policy considerations for the healthcare workforce shortage in Maryland.

The Commission would also like to acknowledge the work of the 24 commission members who actively participated in the Workforce Data Advisory Group, the Education and Pathways Advisory Group, and the State Efficiencies and Cooperation Advisory Group. Their contributions are evident in this report.

The Commission greatly appreciates the participation and contributions of over 70 stakeholders who provided important information and recommendations on how to address the health care workforce crisis. We have endeavored to list all the individuals in Attachment A, and we apologize for any omissions.

This report was prepared by Kimberly B. Link, Senior Advisor for Health Boards, Maryland Department of Health; Commission Chair, Casey Tiefenwerth, MSW; and Jane Kirschling, Ph.D., RN. Deborah Prout and Jeff Frederick of the University of Maryland School of Nursing and Sydney Westwick of the Maryland Department of Health provided substantial research and support.

EXECUTIVE SUMMARY

In accordance with SB440/CH0708 (2022), the Commission to Study the Health Care Workforce Crisis (Commission) submits this Final Report. This report outlines the work of the Commission, contributions from external stakeholders, and policy recommendations to the Senate Finance Committee and the House Health and Government Operations Committee of the Maryland General Assembly. The Final Report is the product of the Commission and does not necessarily represent the views of the Maryland Department of Health (MDH), the Maryland Department of Labor, or other State agency or institution.

The General Assembly established the Commission during the 2022 session to examine certain areas related to health care workforce shortages, short-term solutions to the workforce shortage, future health care workforce needs, and the relationship between MDH and the health occupations boards. The Commission was composed of 24 members including representatives from the Maryland General Assembly, state agencies, offices, and institutions.

The Commission held its first meeting in June 2022. Three advisory groups were formed: the Workforce Data Advisory Group; the Education and Pathways Advisory Group, and the State Efficiencies and Cooperation Advisory Group. Commission members were assigned to one or more advisory groups. External stakeholders were invited to participate in each advisory group. Over 70 external stakeholders and contributors participated in the work of the advisory groups. Notices of Commission and advisory group meetings, along with meeting agenda, minutes, and presentations were posted to the Commission's web page.

The Workforce Data Advisory Group began its work in August 2022 with the charge of examining workforce shortages across different settings, occupations, regions, and levels of care. Workgroups were established, based on healthcare settings, to collect current data about workforce shortages, average length of tenure, and turnover rates. The workgroups focused on the following healthcare settings: hospitals, in-home and long-term care facilities, community health centers, school-based health centers, primary care, rural, and behavioral health.

The Workforce Data Advisory Group found the following: Maryland is not growing its health care workforce at the same rate as other states, health care workforce shortages are most pronounced in rural parts of the state, wage visibility is strong, but wage stagnation and other gaps exist, and uncredentialed and other home health care workforces play a significant role in the healthcare system but data about them is limited. Key recommendations from this advisory group include: the creation of a state health care workforce data center, development of a definition of "healthcare workforce shortage" that is specific to Maryland, increased efforts to create pathways into the health care workforce and to retain health care workforces, and the creation of a task force to examine the in-home health care workforce supply and demand, including certain Medicaid considerations. Other stakeholder recommendations include funding certain loan repayment programs, examining insurance reimbursement, and data collection requirements for the health occupations boards.

The Education and Pathways Advisory Group was charged with, among other things, identifying incentives to enter and remain in the workforce, methods for improving the transition of active duty

and retired military to the civilian health care workforce, barriers to foreign born health professionals, and licensure pathways for refugees and immigrants. Through stakeholder presentations, the advisory group gathered recommendations, as more fully set forth in this report. Some of the recommendations include increased funding and/or the expansion of current programs managed by the Maryland Department of Labor such as EARN Maryland, Career Pathways for Healthcare Workforces, and the Direct Care Workforce Innovation Fund, sustained funding for the community preceptor tax credit program and certain loan repayment plans, and funding for a rural family medicine residency training program on the Eastern Shore.

Additional stakeholder recommendations include removing the geriatric nursing assistant designation requirement for those working in long-term care facilities, altering the scope of practice for physician assistants, allowing licensed clinical professional counselors to hold mental health provider positions in public schools, evaluating current Medicaid reimbursement models, and improving health care workforce safety on the job. Consideration may also be given to the creation of "Green to Blue" campaign to assist in transitioning military personnel into the healthcare workforce.

The State Efficiencies and Cooperation Advisory Group examined the relationship between the health occupations boards and MDH to determine what authority the Secretary of Health should have over the boards, and what additional support MDH could provide the boards to assist with workloads, overhead, staffing, and technology improvements. The advisory group found that there is no one consistent model for health occupations boards across states. In Maryland, 20 health occupations boards license and regulate over 400,000 health care providers. Each board is a statutorily independent unit of MDH regarding licensing, investigations, and discipline. Except for the Board of Nursing and the Board of Physicians, the Secretary of Health has no authority over board staff. The Secretary of Health has no authority over the health occupations boards' licensing, investigation, or disciplinary functions.

Administrative operations such as licensing platforms, payment processing, computer network management, and staffing vary between boards. Seventeen of the 20 boards are funded solely by licensing and other related fees. The boards collectively articulated that no statutory changes should be made to the authority of the Secretary. MDH and the boards should continue to work collaboratively to address short, mid-, and long-term recommendations by the boards to improve administrative operations and customer service.

I. LEGISLATIVE MANDATE

During the 2022 session of the Maryland General Assembly, legislation was enacted creating the Commission to Study the Health Care Workforce Crisis (SB440/CH708). The Commission was established to examine certain areas related to health care workforce shortages, short-term solutions to the workforce shortage, future health care workforce needs, and the relationship between the Maryland Department of Health (MDH) and the health occupations boards.

Pursuant to SB440/CH708 (2022), §(g)(1), the Commission was required to:

(1) determine the extent of the health care workforce shortage in the State, including the extent of shortages in:

> (i) different settings including in-home care, hospitals, private practice, nursing homes; and other long term care settings, primary and secondary schools, community health centers, community-based behavioral health treatment programs, and hospice care;
>
> (ii) different regions of the State;
>
> (iii) care provided in different languages spoken in the State;
>
> (iv) environmental services in hospitals and nursing homes; and
>
> (v) different levels of care for health occupations including entry level direct care positions, director support professionals, professional extenders, primary care providers, and specialists;

(2) examine turnover rates and average length of tenure for shortages identified in item (1) of this subsection and identify strategies to reduce turnover in the professions that are experiencing shortages, including wage increases and opportunities for career advancement;

(3) examine short-term solutions to address immediate needs for the shortages identified in item (1) of this subsection while ensuring the safety of Maryland patients by:

> (i) determining which health occupations boards have backlogs of applicants for licensure and certification;
>
> (ii) determining whether expediting or streamlining the licensing or certification process for specific health occupations is a viable option;

(iii) determining whether implementing additional temporary licensure or certification for specific health occupations is a viable option; and

(iv) determining whether the State has adequate State educational institutions and training programs, including by:

1. examining the capacity of State educational institutions to meet the demand for health occupations, including alternative degree models, access, cost, eligibility, length of time necessary to complete a program, and barriers posed by clinical requirements;

2. examining the cost of training programs, how the programs are paid for, and the role the State has or could have in paying for the programs, including the role the Maryland Department of Labor has in the process and whether it would be feasible to reimburse employees for training costs if they maintain employment for a certain number of years; and

3. comparing training programs for the direct health care workforce in nursing compared to programs in traditionally male industries.

(4) examine future health care workforce needs as populations age including by region and spoken language;

(5) examine what changes are needed to enhance incentives for individuals to enter and stay in the health care workforce in the State, including changes to high school curricula, mid-career transition programs, State tax incentives, grant programs, enhanced benefits, tuition subsidies, and potential rate increases;

(6) examine ways to facilitate career advancement and retention by identifying and elevating career ladders and programs for on-the-job advancement, particularly for low-wage employees;

(7) examine the special needs of the rural health care system in the State and methods for recruiting and retaining workers in rural areas;

(8) examine the impact reimbursement has on workforce shortages, including in industries that are heavily reliant on Medicaid reimbursement;

(9) examine the relationship between the health occupations boards and the Maryland Department of Health and determine:

(i) what authority the Secretary should have over the boards; and

(ii) what additional support the Department could provide the boards to assist with workloads, overhead, staffing technology improvement, and other areas identified by the Commission;

(10) in consultation with the Department of Veterans Affairs, examine methods for:

(i) improving the transition of active duty and retired military to the civilian health care workforce; and

(ii) establishing pathways for active duty and retired military personnel to enter the civilian health care workforce as recommended by the Maryland Department of Veterans Affairs Final report submitted in accordance with Chapters 511 and 512 of 2010; and

(11) examine barriers confronting the foreign-born health professionals and identify career and licensure pathways for refugees and immigrants with education, training, and experience from other nations.

In accordance with SB440/CH708, the Commission has authored this final report of its findings and recommendations to the Senate Finance Committee and the House Health and Government Operations Committee.

II: COMMISSION MEMBERS AND MEETINGS

The Commission was composed of the following members:

Two members of the Senate of Maryland:	Senator Pamela Beidle
	Senator Clarence Lam
Two members of the House of Delegates:	Senator Ariana Kelly (former Delegate)
	Delegate Kenneth Kerr
Secretary of Health:	Dwain Shaw, Designee
Secretary of Commerce:	Sarah Sheppard, Designee
Secretary of Labor:	Casey Tiefenwerth, Designee
Deputy Secretary of Behavioral Health:	Michelle Darling, Designee
Deputy Secretary of Developmental Disabilities:	Adrienne Hollimon, Designee
Deputy Secretary of Public Health:	Katherine Feldman, DVM, Designee
Maryland Health Care Commission:	Arun Bhandari, MD, Designee
Board of Nursing:	Karen E. B. Evans, Executive Director
Board of Pharmacy	Deena Speights-Napata, Executive Director
Board of Physicians	Christine Farrelly, Executive Director
Board of Dental Examiners:	Murray Sherman, Designee
Other Health Occ. Board Representative:	Sharon J. Oliver, Executive Director
MDH Liaison to Boards/Commissions:	Kimberly B. Link
Director of State Office of Rural Health:	Sara A. Seitz, Director
Director of Office of Minority Health and Health Disparities:	Mark A. Martin, PhD., Director
Director of Office of Health Care Quality:	Shaliek Maxwell West, Designee
Provost of Graduate School of University of	

Maryland, Baltimore Campus:	Jane Kirschling, PhD., Dean, UM School of Nursing
Maryland Higher Education Commission:	Glenda Abney, Designee
Department of Veteran Affairs:	Sharon L. Murphy, Designee
Maryland Longitudinal Data System Center:	Ross Goldstein, Director

Shortly after the enactment of SB440, MDH contacted each of the departmental-level State agencies and institutions identified in the legislation requesting that they assign staff designees to serve on the Commission. Former Secretary of Health, Dennis Schrader, appointed Kimberly Link to serve as the Commission Chairperson. Commission and Advisory Group meetings were held virtually and in compliance with the Open Meetings Act. Meeting dates, agenda, minutes, and presentations are posted on the Commission's webpage: https://health.maryland.gov/Pages/Workforce-Commission.aspx.

The Commission held its first meeting on June 29, 2022. To address the mandates of the legislation, three advisory groups were created: the Workforce Data Advisory Group; the Education and Pathways Advisory Group, and the State Efficiencies and Cooperation Advisory Group. Casey Tiefenwerth, Maryland Department of Labor, was designated as the Chair of the Workforce Data Advisory Group. Jane Kirschling, Ph.D., RN, was designated as the Chair of the Education and Pathways Advisory Group. Kimberly Link was designated as the facilitator of the State Efficiencies and Cooperation Advisory Group. Commission members were assigned to one or more advisory groups. Stakeholders from the health care industry, organizations involved in health care workforce issues, community colleges, and others were invited to join and participate in each Advisory Group. A list of stakeholders and contributors is attached hereto as Attachment A.

The Commission held its second meeting on November 16, 2022. The Chairs of each Advisory Group presented work performed to date and goals for the Commission's final report. The Commission met again on January 23, 2023, to review and approve the interim report. The work of the Commission continued through advisory groups. Each advisory group met at regular intervals as set forth below. The advisory groups concluded their work in September 2023 to prepare and submit this final report. The final meeting of the Commission was held on November 9, 2023, to approve the final report.

III. WORKFORCE DATA ADVISORY GROUP

A. BACKGROUND

The Workforce Data Advisory Group began meeting in August 2022 with the charge of examining workforce shortages across different settings, occupations, regions, and levels of care. During the first five months, workgroups were established, based on healthcare setting, to collect current data about workforce shortages, average length of tenure, and turnover rates. The workgroups focused on the following healthcare settings:

1. Hospitals;
2. In-Home Care and Long-term Care Facilities;
3. Community Health Centers, School-Based Health Centers, and School Health;

4. Primary Care and Rural Health; and,
5. Behavioral Health.

Each workgroup was led by a subject matter expert in one or more of the settings represented by their group. Workgroup leads were responsible for collecting data and other information related to the Workforce Data Advisory Group's charge for the development of recommendations to be included in the interim and final reports.

Simultaneously, stakeholder presentations were held during Workforce Data Advisory Group meetings to supplement data collection efforts and build a comprehensive understanding of the extent of healthcare workforce shortages (Figure 2). The culmination of data submitted by Commission members and members of the public, as well as the information from the presentations, resulted in the recommendations found in Section D.

The Workforce Data Advisory Group continued to meet monthly following the submission of the interim report. The workgroups disbanded in July 2023 because they exhausted the available avenues for data collection with the current, active Commission members and stakeholders. A summary of the meetings held since the Workforce Data Advisory Group's formation is set forth below.

B. MEETING SCHEDULE AND PRESENTATIONS

The Workforce Data Advisory Group convened bi-weekly from August 2022 through December 2022 and continued to meet monthly starting January 2023 through July 2023 (see Figure 1). A virtual meeting format allowed for greater accessibility for Workforce Data Advisory Group members and members of the public. Meeting agendas, minutes, and other relevant documents were uploaded to a public, shared drive.

Figure 1- Summary Table: Workforce Data Advisory Group Meeting Dates and Descriptions

Meeting Date/Time	Description of Meeting
08/19/22 11:00AM-12:00PM	The Data Advisory Group reviewed SB440 and items it was responsible for addressing. Members voted on meeting frequency and duration.
09/02/22 1:00PM-2:00PM	Data Advisory Group members were introduced to the shared drive that served as a repository for data, presentations, and other documents. Initial workgroups were proposed.
09/16/22 11:00AM-12:00PM	*Public Policy Partners* gave a presentation, "Health Care Professionals in Schools: An Overview of Roles, Data, and Impact of Shortages". The Data Advisory Group reviewed and finalized workgroups.
9/30/22 11:00AM-12:00PM	A presentation from the Maryland Longitudinal Data System Center (MLDS) outlined the types of data collected, sources, and requests for specific datasets. Workgroups met for brief introductions.

10/14/22 11:00AM-12:00PM	The Maryland Hospital Association and a representative from *GlobalData* gave a presentation about the Maryland Nursing Workforce Study that included projections for Maryland's nursing workforce through 2035 and subsequent recommendations. Workgroups met briefly.
10/28/22 11:00AM-12:00PM	A representative from the *Maryland Regional Direct Services Collaborative* gave a presentation about their forthcoming report regarding the direct service workforce in Baltimore City. Workgroup leads provided an update about the status of data collection and review.
The Data Advisory Group did not meet in the month of November due to multiple state holidays. Members were encouraged to use the month to collect and submit data to workgroup leads in preparation for a presentation in December.	
12/09/22 11:00AM-12:00PM	Workgroup leads gave presentations about health care workforce shortages in their respective setting(s).
01/20/23 11:00AM-12:15PM	Dr. Yetty Shobo, Director of Virginia Healthcare Workforce Data Center, gave a presentation about the creation of the Data Center and provided an overview of their data dashboard, including how they have been used to inform policy recommendations.
02/17/23 1:30PM-2:30PM	Gene Ransom, CEO of *MedChi*, gave the presentation "Payment Issues in Maryland for Physicians" that included data gleaned from MedChi's 2022 salary survey.
04/21/23 1:30PM-2:30PM	Dr. Ann Kellogg and Michele Calderon of the MLDS delivered the results of a data request submitted by Workforce Data Advisory Group to examine the labor market outcomes of students who graduated with an associate degree or certificate in healthcare-related majors from Maryland Community Colleges.
05/25/23 2:30PM-3:30PM	Sara Seitz, Director of the State Office of Rural Health, gave the presentation "*Preparing for a Maryland Healthcare Workforce Data Clearinghouse*."
07/21/23 1:30PM-2:30PM	Dr. Ann Kellogg provided an update to the MLDS data request made by the Workforce Data Advisory Group. Dr. Kellogg's presentation focused on wage visibility for the same group of students who graduated with an associate degree or certificate from Maryland Community Colleges at three, five-, and ten-years post-graduation.

The Data Advisory Group concluded regular meetings in July 2023. The Data Advisory Group Chair continued to communicate with members and stakeholders via email throughout the duration of the Commission's operation.

C. FINDINGS

It is challenging to find current, publicly available data on the healthcare workforce shortages in Maryland. Data sources are often siloed and do not account for the interconnectedness of the allied healthcare system. When asked to provide data that detailed workforce shortages, many Commission

members responded that they could only provide data that, when taken collectively, could infer shortages for a particular occupation. Despite this, the Workforce Data Advisory Group was able to make some progress in determining the extent of healthcare workforce shortages across the state. More complete and accurate data is required to fully examine the workforce shortages and to develop potential solutions.

1. Maryland is faring worse in growing its healthcare workforce compared to other states.

Maryland experienced slower growth in healthcare employment compared to other states in the region. According to the Bureau of Labor Statistics Quarterly Census of Employment and Wages, 2013-2022, Maryland's healthcare workforce grew at a rate of 4.6%. This represents a full percentage point lower than all other mid-Atlantic states combined (excluding Maryland) which grew at 5.8%. Maryland's healthcare workforce grew significantly slower than the national average of 11.5%.

Maryland is not restoring its pre-pandemic healthcare workforce at the same rate as other states. While most states in the mid-Atlantic region have not fully returned to their 2019 level of employment in the healthcare sector, Maryland is tied with Pennsylvania as having the second-worst recovery rate post-pandemic at 4.3%. This is also lower compared to the rest of the region and the nation, with a recovery rate of -2.2 % and -0.1%, respectively. Virginia is the only state in the mid-Atlantic that has reached, and exceeded, its 2019 level of employment, at 14% growth.

Prior to the pandemic, many critical healthcare occupations were already experiencing, or projected to experience, a workforce shortage. A 2017 report by the U.S. Department of Health and Human Services showed a gap existed between the supply of nurses and projected need, citing Maryland among the top six states facing a deficit in Licensed Practical Nurses (LPNs) by 2030.[1] A nursing workforce study conducted by the Maryland Hospital Association similarly found that Registered Nurses (RNs) and LPNs will see a 38%, 50%, and 57% demand in growth in home health, nursing homes, and residential care, respectively, by 2035.[2]

Behavioral healthcare providers are also seeing distinct shortages. A 2019 survey of the behavioral health workforce conducted by Maryland's Behavioral Health Administration found that respondents experienced turnover in occupations such as Social Workers, Case/Care Managers, and Rehabilitation Specialists at rates of 25-50%.[3]

2. Health care workforce shortages are most pronounced in rural parts of the state.

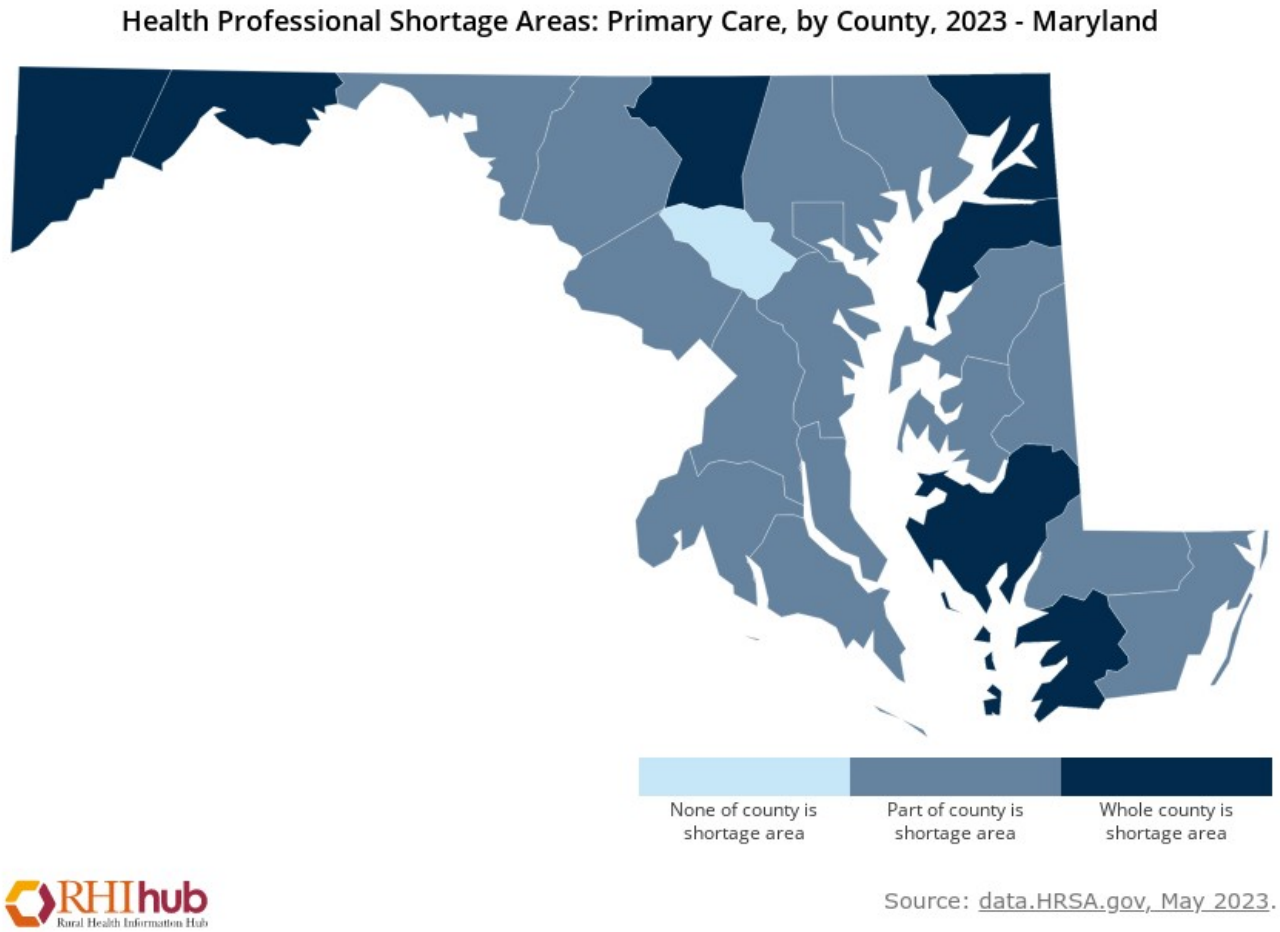
A recent report produced by the Maryland Loan Assistance Repayment Program (MLARP) for Nurses and Nursing Support staff found that as of September 30, 2023, there are a total of 76 primary care Health Professional Shortage Areas (HPSAs) in the state, inclusive of 1,748,349 Maryland residents.

[1] https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/data-research/nchwa-hrsa-nursing-report.pdf
[2]https://www.mhaonline.org/docs/default-source/default-document-library/maryland-nurse-workforce-projections-globaldata.pdf
[3]https://health.maryland.gov/bha/Documents/Workforce%20Survey%20Summary%20distribution9.4.20%20(2)%20(2).pdf

Ten of these HPSAs are geographically based, meaning there is a shortage of providers for an entire group of people within a defined geographic area (see Figure 2). Forty-seven (47) are population-based, meaning there is a shortage of providers for a specific group of people within a defined geographic area. Examples include individuals who are considered low-income, Medicaid eligible, or experiencing homelessness. Nineteen (19) are facility-based shortages which includes public or non-profit private medical facilities, correctional facilities, state/county psychiatric hospitals, Federally Qualified Health Centers (FQHCs), FQHC Look-a-Likes, or CMS-certified Rural Health Clinic.

To eliminate the primary care HPSA designations, Maryland needs an additional 354 primary care practitioners to provide services in these areas. Similar shortages are present for dental health and behavioral health care where an additional 348 and 105 practitioners, respectively, are necessary to serve Marylanders.

Figure 2- HRSA Health Professional Shortage Areas: Primary Care, November 2023



3. Wage visibility for healthcare workforces is strong but wage stagnation and other gaps exist.

Despite Maryland lagging behind other mid-Atlantic states and the nation in its ability to grow the healthcare workforce, community colleges continue to produce graduates in healthcare-related majors at a significant rate. This is particularly true for community colleges in rural parts of the state for which healthcare-related degrees account for 30-50% of the degrees conferred. The Workforce Data Advisory Group focused on community college degree production because of the higher likelihood that those graduates would stay in Maryland upon entering the workforce. A data report developed by the Maryland Longitudinal Data System Center (MLDS) confirmed that assumption and yielded other promising findings. For the purposes of this report, healthcare-related majors include nursing, radiography, physical therapy assistant, dental hygiene, respiratory therapy, medical assistant, massage therapy, addiction counseling, EMT/paramedic, phlebotomy, public service, pharmacy technician, and geriatric aide.

Initial wage visibility[4] for community college graduates in healthcare-related majors is strong but decreases over time. Wage visibility is almost 75% six months post-graduation but drops 2-3 percentage points per year. Ten years post-graduation, wage visibility is around 55%. This presents a concerning trend that the state is losing its most experienced healthcare professionals within a decade of their entrance into the workforce. Further analysis from MLDS shows that this trend is also consistent among community college graduates in a healthcare major who went on to earn a bachelor's degree.

Wages among healthcare professionals double over a 10-year period, however, they increase at a decreasing rate. Although there are multiple factors that could contribute to the loss of healthcare professionals in the decade following their graduation, one reason may be the stagnation of wages over time. At six months post-graduation, new entrants into the healthcare workforce are earning an average of $7,069 per quarter ($28,000 annualized). Healthcare professionals see the biggest jump in their earnings by their third year in the workforce at $12,895 per quarter ($51,000 annualized) representing an 82% wage increase. By their fifth year and tenth year, healthcare professionals are earning $13,517 per quarter ($54,000 annualized) and $16,208 per quarter ($64,000 annualized), respectively. While this represents a 129% increase in wages since entering the workforce, healthcare professionals are seeing their wages stagnate between years three and ten at a growth rate of only 25%. The timing of wage stagnation likely coincides with an increase in life expenses such as childcare costs and home ownership.

Wage gaps among healthcare professionals exist and show up in expected and unexpected patterns. Despite women making up most of the healthcare workforce, a discrepancy in earnings persists between men and women immediately upon graduation through their first decade in the workforce (see Figure 3). This also holds true for healthcare practitioners with advanced degrees. A 2022 Salary Survey conducted by MedChi found that female physicians earn 50% less on average than their male counterparts, a trend which has continued since MedChi first began surveying Maryland physicians in 2016.

[4] Wage visibility is defined as the number of individuals in the population of interest who are identified as having compensation paid during the time period of interest. For more information about wage visibility and/or gaps in data, visit: https://mldscenter.maryland.gov/egov/Publications/Datagap/MLDSCDataGapAnalysis2022.pdf

When analyzed by race and ethnicity, quarterly median earnings tend to be higher for Black and Asian healthcare professionals compared to their white counterparts who make up an overwhelming majority of healthcare graduates in the workforce (See Figure 4).

Figure 3- Healthcare-Related Graduates, Associate's and Certificate Graduates from Maryland Community Colleges, Wages by Gender, 6 Months After Graduation Through 10 Years After Graduation (2007-2008 to 2020-2021)

	6 Months After Graduation		3 Years After Graduation		5 Years After Graduation		10 Years After Graduation	
	Total Grads	Median Quarterly Earnings	Total Grads	Median Quarterly Earnings	Total Grads	Median Quarterly Earnings	Total Grads	Median Quarterly Earnings
Female	27,993	$6,864	25,294	$12,558	19,218	$13,137	10,321	$15,656
Male	5,768	$8,296	5,231	$14,425	3,947	$15,410	1,970	$19,324

Analysis Completed by the Maryland Longitudinal Data System Center, June 2023

Figure 4- Healthcare-Related Graduates, Associate's and Certificate Graduates from Maryland Community Colleges, Wages by Race (any Ethnicity), 6 Months After Graduation Through 10 Years After Graduation (2007-2008 to 2020-2021)

	6 Months After Graduation		3 Years After Graduation		5 Years After Graduation		10 Years After Graduation	
	Total Grads	Median Quarterly Earnings	Total Grads	Median Quarterly Earnings	Total Grads	Median Quarterly Earnings	Total Grads	Median Quarterly Earnings
Black	8,577	$7,404	7,462	$13,232	5,516	$14,117	2,941	$17,364
Asian	1,711	$6,497	1,476	$14,163	1,088	$15,282	565	$18,965

All Other	933	$7,320	711	$13,077	304	$12,727	101	$14,371
Two or More	1,181	$6,880	957	$13,841	611	$13,791	282	$16,345
White	20,879	$6,954	19,354	$12,674	15,097	$13,293	7,880	$15,613

Analysis Completed by the Maryland Longitudinal Data System Center, June 2023

4. Uncredentialed healthcare professionals and those who provide in-home care play a significant role in the healthcare system but data about them is limited.

A 2018 PHI National of New York study estimated that there are over 71,000 direct care workers in Maryland.[5] Direct care occupations such as personal care attendants, home health aides, and direct support professionals provide key services that enable many Marylanders to stay in their homes rather than relying on costly care from a hospital or nursing facility. Direct support professionals assist individuals with activities of daily living (ADLs) but do not necessarily provide medical or clinical interventions. ADLs include things such as eating, bathing, and mobility and directly impact a person's ability to live independently and care for themselves.[6]

1199 SEIU United Healthcare Workforces East reports that there are nearly 20,000 direct care workers providing Medicaid-funded personal care throughout the state, roughly 10% of whom provide personal care through two or more Residential Services Agencies. These positions are usually low paying, with workers on the Eastern shore earning $14,600/year and those in the capital region earning nearly $28,000/year. These workers often care for the state's most vulnerable and medically complex residents.

Population projections for Maryland estimate that the number of residents aged 65 or older will increase 33% from 2020 to 2030. Coupled with the slow recovery of Maryland's healthcare workforce, the need for healthcare for this population, including increased demand for opportunities to age in place, will put a strain on the current workforce.

D. RECOMMENDATIONS

The scope and breadth of the issues related to healthcare workforce shortages presented challenges to the creation of recommendations that would be singularly impactful across all healthcare occupations, settings, and populations. It is the intention of the Commission to provide information gathered in the course of its work to help inform sound policy decisions. Specific recommendations submitted by stakeholder organizations regarding certain occupations, settings, and populations can be found in Attachment B.

1. There is a need for a state healthcare workforce data center.

[5] https://www.phinational.org/wp-content/uploads/2018/09/DSWorkforces-Maryland-2018-PHI.pdf

[6] Edemekong PF, Bomgaars DL, Sukumaran S, et al. Activities of Daily Living. [Updated 2023 Jun 26]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK470404/

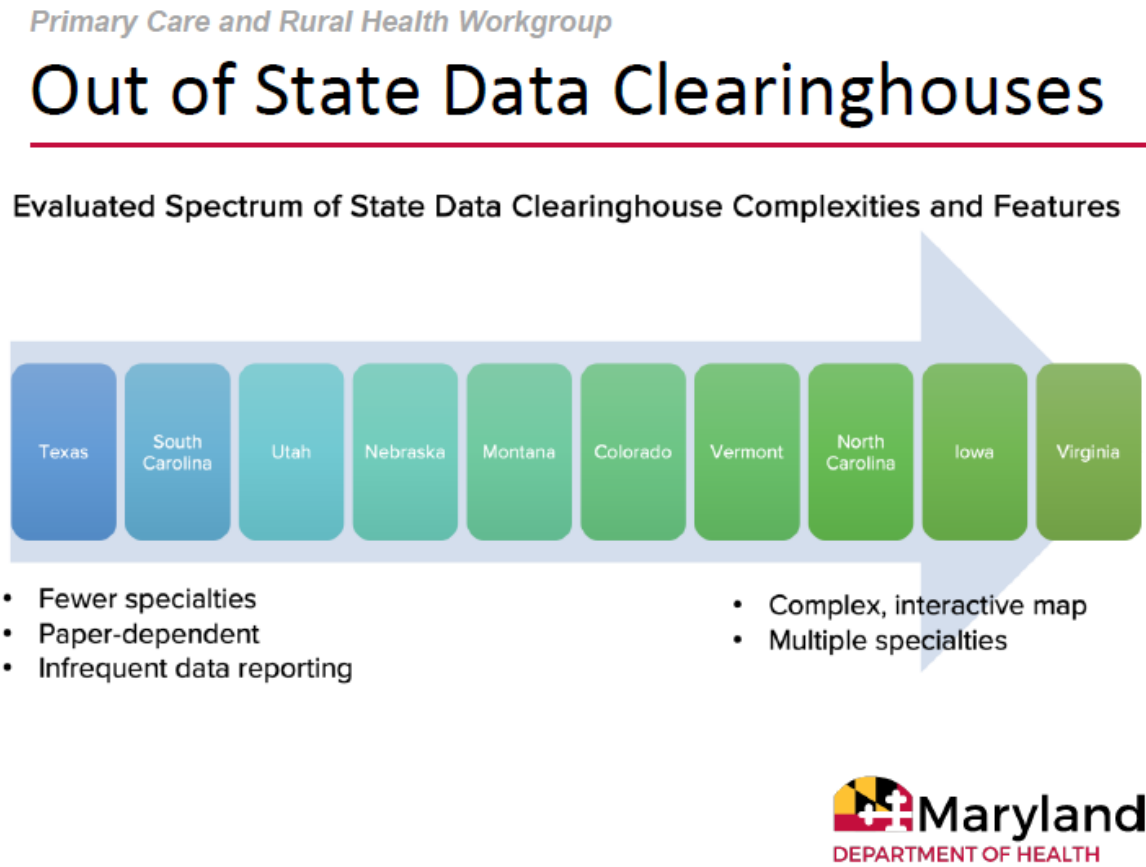
Healthcare workforce data should be collected, analyzed, and managed within a state data center on a consistent basis. Healthcare workforce trends are fluid, a point that was reinforced by the COVID-19 pandemic. One-time collection efforts only provide a point-in-time snapshot of the current landscape and predicted need. While workforce data is collected by federal and state agencies and stakeholder organizations, there are gaps in the data which make it difficult to determine the supply and demand for any given healthcare occupation. For example, data collected by the health occupations boards does not consistently include demographic information, work settings, or work locations. Data collected by stakeholder organizations is limited to their constituency or a particular healthcare setting. Similarly, data provided by programs such as Medicaid or Medicare are specific to certain populations. A healthcare workforce data center is needed to accurately identify current and projected supply and demand for healthcare workforces.

The Primary Care Coalition of Montgomery County, Inc. ("PCC"), via funding from the MDH's State Office of Rural Health, developed a national landscape analysis to inform the creation of a Maryland Statewide Healthcare Workforce Data Clearinghouse that offers recommendations for models, approaches to implementation, and considerations for sustainability. PCC found that several states have developed data clearinghouses that collect, analyze, and disseminate data regarding supply and demand trends, geographic distribution of health care occupations, and demographic information about healthcare professionals. These data clearinghouses vary by size and sophistication but serve as a single source for much of the same information the Commission was charged with analyzing (see Figure 5). Based on the work of PCC, it appears that the Commonwealth of Virginia's model represents the "gold standard" in comparison to other states surveyed. In Virginia, the Health Care Workforce Data Center sits within the Department of Health Professions as part of the Health and Human Services Secretariat.[7]

A healthcare workforce data collection center that is supported by the Maryland Department of Health, Maryland Department of Labor, Maryland Longitudinal Data Systems Center, the health occupations boards, and other key state and federal agencies would provide consistent collection, analysis, and dissemination of data. The regular assessment of workforce supply and demand across Maryland's healthcare professions through a workforce data center would improve data collection and measurement and ensure Maryland has a diverse healthcare workforce.

[7] https://www.dhp.virginia.gov/PublicResources/HealthcareWorkforceDataCenter/

Figure 5- Out of State Data Clearinghouses, Spectrum of Complexities and Features



Source: Primary Care and Rural Health Workgroup, December 2022

2. **Develop a definition of "shortage" specific to Maryland for each identified critical health care occupation.**

Maryland largely relies on federally defined provider ratios or facility-level vacancy rates to determine health care occupation shortages. For instance, HRSA states that for primary medical care, the population to provider ratio must be at least 3,500 to 1 (3,000 to 1 if there are unusually high needs in the community). HRSA's formula for designating HPSAs is limited by the exclusion of advanced care practitioners and specialists and may not adequately portray the need across Maryland. Similarly, vacancy rate determinations are not necessarily standard and do not produce a shortage formula that can be utilized across occupations, settings, patient populations, and specialty.

3. **Efforts to improve healthcare workforce shortages should focus on retention strategies in equal measure to creating entryways into the healthcare workforce.**

Data provided by MLDS shows that healthcare professionals with an associate or bachelor's degree have noticeably decreased wage visibility at five- and ten-years post-graduation. This suggests that although creating accessible and attractive pathways into healthcare should continue, it is equally important to ensure that there are incentives for workforces to stay in the field.

Individuals who continue to work in healthcare for ten or more years also tend to leave hospital settings in favor of outpatient care centers or physicians' offices. Hospitals often serve as the teaching ground for many new healthcare professionals. However, the loss of veteran staff, whether to attrition from the field or to private healthcare settings, means that Maryland's new healthcare professionals are not getting the full benefit of their experience and knowledge. Stakeholder organizations that have participated in the Commission have identified several recommendations for retaining workers such as fully funding loan repayment programs for critical healthcare occupations and ensuring that insurance payments to practitioners are competitive.

4. Create a Task Force to study home healthcare workforce shortages in Maryland.

The home healthcare workforce plays a vital role in the care of Maryland's aging and disabled citizens. Accurate data on this workforce may not be available for several reasons. First, the care is provided outside of traditional settings. Second, many home healthcare workers are not credentialed and, therefore, do not appear in state licensing data. Third, the occupational titles and credentials required for professionals providing care in the home can vary between employers or based on the population they serve (e.g., older adults, individuals with disabilities). For example, an Indeed.com search for "home care" in Maryland yielded results for "caregiver", "personal care attendant", and "direct care professional." Some of the "home care" positions required that the provider be certified as a CNA/GNA, but many did not. The same search also included postings for RNs and LPNs, which are needed in a supervisory capacity for home nursing provided by CNA/GNAs. A task force dedicated to the study of the home health care workforce may help assess the needs of Marylanders who wish to receive quality healthcare in their homes.

IV. EDUCATION AND PATHWAYS ADVISORY GROUP

A. BACKGROUND

The Education and Pathways Advisory Group held its initial meeting in August 2022. In keeping with the charge to the Advisory Group, issues related to education and pathways of the health care workforce were explored. The foci of the Advisory Group included: examining short-term solutions to address immediate needs related to shortages, examining changes needed to enhance incentives for individuals to enter and stay in the health care workforce in the State, examining methods for improving transition of active duty to retired military to the civilian health care workforce, and examining barriers that confront foreign-born health professionals and identifying career and licensure pathways for refugees and immigrants with education, training, and experience from other nations. In addition, in collaboration with the Workforce Data Advisory Group, examining ways to

facilitate career development and examining the special needs of the rural health care system in the State and methods for recruiting and retaining workers in rural areas.

The Advisory Group was open to all interested persons/organizations and membership as of August 2023 was 50 persons. The Advisory Group worked with stakeholder presentations designed to address the various foci. The recommendations presented in Section E of this report were generated from the stakeholder presentations. In addition to the Advisory Group meetings, the Chair of the Advisory Group and two staff working on this initiative held numerous information gathering meetings with the individuals and organizations listed in Attachment D.

B. MEETING SCHEDULE AND PRESENTATIONS

The Advisory Group convened monthly for 90-minutes using a virtual format. This format allowed for greater accessibility for Advisory Group members and members of the public. Meeting agendas, minutes, materials accompanying presentations, and other relevant documents were uploaded to the Commission's web page. Figure 6 includes a description of the presentations.

Figure 6 – Education and Pathways Advisory Group Meeting Dates and Descriptions

Meeting Date	Description of Meeting
August 31, 2022	The Committee reviewed SB440 and discussed the items that the Committee was responsible for addressing.
October 5, 2022	Reviewed, discussed, and solicited suggestions on a draft survey for selected licensing boards on key issues as outlined in the legislation. Presentation by Jeff Smith, Program Manager for Apprenticeship and Career Programs as Health Care Pathways; and Logan Dean, Policy Analyst, Division of Workforce Development and Adult Learning, of the Maryland Department of Labor regarding registered apprenticeship and career programs, including those related to health care pathways.
November 2, 2022	Presentation by Dr. Richard Colgan, Director, Maryland Area Health Education Center, on delivery of primary health care services throughout Maryland, with additional presentations by Dr. Bridgitte Gourley, Specialty Director, Family Nurse Practitioner Doctor of Nursing Practice Program, University of Maryland School of Nursing; and Theresa Neumann, Assistant Program Director and Association Director, University of Maryland, Baltimore, Graduate School, Physician Assistant Program. The presentations were through the lens of primary care, including physicians, nurse practitioners, and physician assistants. Presentation by Dan Martin, Senior Director, Public Policy, Mental Health Association of Maryland on the delivery of behavioral health care services throughout Maryland. He outlined the unmet need for behavioral health services, including the increase in the average

Meeting Date	Description of Meeting
	length of stay of psychiatric patients in the ER. He provided several recommendations, including expanding the workforce through a Behavioral Health Workforce Investment Fund and continuing reimbursement for telehealth. **Update**: Behavioral Health Workforce Investment Fund was enacted in SB283(2023).
December 7, 2022	Presentation by Brittney Hansen, EARN Maryland Administrator, MDL, regarding three programs including:1) EARN Maryland which includes 13 healthcare grantees. Trainings include certified nursing assistant/geriatric nursing assistant, patient care technician, pharmacy technician, medical assistant, community health worker, direct support professional, health administration, and surgical technician; 2) Direct Care Workforce Innovation Program which funds programs related to five occupational areas and has had one proposal for training personal aides funded to date; and 3) the Maryland's Workforce Development Response to Addiction and Overdose. Since 2018 over 1,900 persons have participated in training with 850 obtaining employment because of the training.
	Presentation by Joana Winningham, New American Initiative Coordinator, MD Labor's Division on Workforce Development and Adult Learning. This included presentations on the New Americans Initiative, the Maryland Office for Refugees and Asylees (MORA), (by Myat Lin, Director) the Welcome Back Center of Suburban Maryland (by Carmen Saenz, Manager); and World Education Services (Mike Zimmer, Consultant). In addition to policy barriers to licensing, additional barriers include limited English proficiency, challenges navigating the licensure process, economic difficulties associated with licensure expenses, and lack of time to simultaneously study and work. Between 2006 and 2022 the Welcome Back Center received 2,666 individual inquiries and 358 immigrants received services to facilitate their employment in health care. Presentation by Dr. Michael Flaherty, Board Chair, the Annapolis Coalition, on the work of the Annapolis Coalition related to the behavioral health workforce. The presentation focused on strategies for addressing the workforce emergency in behavioral health, including reviewing key findings from the Annapolis Framework, which surveyed over 5,000 behavioral work groups in 2007. It highlighted work that has been done in other states, including Massachusetts, Oregon, and Connecticut, to address the behavioral health workforce emergency.

Meeting Date	Description of Meeting
February 13, 2023	Review and discussion of the Summary of Survey of Licensing Board Results. Discussion focused on what could be done to address incomplete applications by those applying for licensure. Discussion also focused on information technology barriers for licensing boards and any ramifications of the recent cyber-attack. Presentation by Roni K. White, Chair, Advocacy Committee, Maryland Counseling Association regarding mental health and wellness services for students in Maryland Public Schools. **Update**: Health Occupations – Licenses, Certificates, and Registrations-Immigrants SB0187 (2023). The legislation prohibits a health occupations board from requiring as a condition for licensure, certification, or registration that an applicant (1) provide proof of lawful presence in the United States or (2) have a Social Security number or individual taxpayer identification number.
March 13, 2023	Presentation on health care facilities' perspectives on current challenges in the delivery of care. Presenters included Allison Ciborowski, President & CEO, LeadingAge Maryland and Joseph Demattos, Jr. President and CEO, Health Facilities Association of Maryland (HFAM), along with Hope Morris, Manager, Outreach and Government Relations, HFAM. HFAM represents skilled nursing and rehabilitation centers and assisted living centers. HFAM's recommendations included raising the Medicaid rates for long-term care services and skilled nursing facilities and recognizing that many of the workforce issues are about more than the workplace or wages. These key ancillary issues impacting the workforce include transportation, childcare, and housing. LeadingAge represents affordable senior housing; assisted living facilities; continuing care at home; continuing care retirement communities (CCRCs); and skilled nursing, home, and community-based services; and hospice and palliative care. They provide care to more than 20,000 older adults in Maryland.
May 8, 2023	Presentation by Dr. Nayna Philipsen, Treasurer, Maryland Nurses Association, on the challenges of the nursing profession and how these challenges are affecting the current health care workforce crisis in Maryland. The cyclical nature of the nursing shortage was presented.

Meeting Date	Description of Meeting
	Presentation by Dr. Ted McCadden, Professor and Program Director, Human Services Counseling; and Director, Opioid Impacted Family Support Program, Community College of Baltimore County (CCBC). Dr. McCadden discussed the ongoing Behavioral Health Counseling Apprenticeship Program and the Alcohol and Drug Trainee Apprenticeship Program at the Community College of Baltimore County. He indicated that a Peer Recovery Specialist Apprenticeship is currently under development at CCBC.
June 12, 2023	Presentation by Jane Krienke, Senior Analyst, Government Affairs, MHA; Anne Zukowski, Marketing Coordinator, MHA; and Celia Guarino, Special Assistant to the CEO, Holy Cross Hospital. Ms. Krienke provided progress updates on primary recommendations of MHA's Workforce Taskforce, including expanding the pipeline, retaining the healthcare workforce, removing barriers to health education, and leveraging talent with new care models. Ms. Guarino provided an update on MHA's LPN workgroup, including its survey of community college LPN programs, which found all responding schools (11/14) provided LPN to RN bridge programs. Ms. Zukowski discussed MHA's marketing campaign -- JoinMDHealth.org. – which focuses on generating interest among Marylanders in health care jobs within the State and supporting recruitment.
August 14, 2023	Presentation on the work of the American Nurses Association (ANA)/ American Association of Critical-Care Nurses (AACN) through the Nurse Staffing Think Tank and the Nurse Staffing Task Force. Dr. Katie Boston-Leary, Director, Nurse Programs, ANA and Facilitator, AACN/ANA Nurse Staffing Task Force; and Dr. Sherry Perkins, President Luminis Health Anne Arundel Medical Center & Luminis Health Chief of Hospital Integration and Co-Chair, AACN/ANA Nurse Staffing Task Force. They provided an overview of recommendations of the Think Tank and the Task Force. Recommendations of the latter include reforming the work environment, innovating models of care delivery, establishing staffing models to ensure quality, improving regulatory efficiency, and valuing the contributions of RNs. There was extensive discussion of the need to focus on steps required to improve retention of the existing nursing workforce in concert with increasing the nursing pipeline. Presentation by Dr. Jennifer Grover, Legislative Director, Maryland Academy of Physician Assistants (MdAPA) on how physician assistants can be part of the solution for the health care workforce crisis. She was joined by Deanna Najera and Richard Rohrs, both

Meeting Date	Description of Meeting
	past presidents of MdAPA and on its legislative committee. Dr. Grover outlined training and certification requirements for physician assistants and discussed options for optimizing PAs.

C. FINDINGS

The Education and Pathways Advisory Group learned about Maryland Department of Labor health care apprenticeships and career programs and the delivery of primary health and behavioral health services in Maryland. The demand for primary health and behavioral health services is growing while, at the same time, both are experiencing healthcare workforce shortages throughout Maryland. The Advisory Group also learned about the workforce challenges in acute care as well as across the health care continuum.

Maryland has a growing immigrant population of individuals that have received health care training in their countries of origin (est. 35,000 per Migration Policy Institute). These individuals face an array of challenges to be able to be licensed to practice in their chosen professions. In the 2023 Maryland legislative session, Health Occupations – Licenses, Certificates, and Registrations-Immigrants SB0187 (2023) was enacted. This legislation allows individuals applying for licensure as a healthcare provider to be able to provide a Tax Identification Number, in place of a Social Security Number, thereby removing a barrier for those who do not have Social Security Numbers.

The Advisory Group also heard about the national work regarding nurse staffing including the growing need to address workplace violence and to review new models for ensuring adequate staffing on units. It also learned that, at present, licensed clinical professional counselors are not able to provide counseling services in Maryland's public schools. It also gathered information on the importance of primary care services as delivered by physicians, nurse practitioners, and physician assistants in meeting the health care needs of Maryland.

A survey of the following 19 licensing/certification bodies was undertaken in late fall of 2022 to gather and summarize information on average numbers of initial and renewal applications, average time of processing, license/certification delays or backlogs, issuance of temporary licenses and viability of such an option, and processes for streamlining transition of active duty and retired military into health care professions:

1) Board of Acupuncture
2) Board of Examiners for Audiologists, Hearing Aid Dispensers, Speech-Language Pathologists, and Music Therapists
3) Board for the Certification of Residential Child Care Program Professionals
4) Board of Chiropractic Examiners
5) Board of Dental Examiners
6) Board of Dietetic Practice
7) Board of Environmental Health Specialists
8) Board of Long-Term Care Administrators
9) Board of Massage Therapy

10) Board of Nursing
11) Board of Occupational Therapy
12) Board of Examiners in Optometry
13) Board of Pharmacy
14) Board of Physical Therapy Examiners
15) Board of Physicians
16) Board of Professional Counselors and Therapists
17) Board of Podiatric Medical Examiners
18) Board of Examiners of Psychologists
19) Board of Social Work Examiners

The Commission was charged with determining several items related to the health occupations boards, including:

1) *Which health occupations boards had backlogs of applicants for licensure and certification.* The boards were asked to provide this information as of December 1, 2022. Four of the boards were unable to provide the information at the time of the survey; 5 reported they were up to date (no backlog), and the remaining 10 boards had a range of "very few" to 240. It was noted that some of the applications were incomplete and were pending additional information.

2) *Whether expediting or streamlining the licensing or certification process for specific health occupations was a viable option.* The survey asked the respondents what would help the board reduce the time for processing initial or renewal licenses going forward. Responses included the need to hire additional staff, additional training for licensing personnel, having an online application/license management system, faster finger printing results from Criminal Justice Information Services (CJIS), and applicants submitting complete applications.

3) *Whether implementing additional temporary licensure or certification for specific health occupations is a viable option.* Ten of the boards surveyed had some form of temporary/provisional option. The remaining boards did not see issuing a temporary licensure or certification as a viable/desirable option for their specific occupations.

4) *Establishing pathways for active duty and retired military personnel to enter the civilian health care workforce.* The boards were asked if they (a) have a process in place for streamlining the transition of active duty and retired military into the civilian health care workforce; 14 boards responded they such have a process in place; and (b) have a process for spouses of active duty and retired military; 11 boards responded they have a process in place for spouses. Since the completion of the survey, all of the boards have reported compliance with the Veterans Auto and Education Implementation Act of 2022 which allows for active-duty service members and their spouses to obtain licensure in Maryland on an expedited basis.

D. RECOMMENDATIONS FROM STAKEHOLDER PRESENTATIONS

Stakeholders were asked to provide recommendations as part of their presentations and at the regularly scheduled Advisory Group meetings. The recommendations set forth below, while not

exhaustive, represent the most common suggestions for addressing workforce issues. Additional information and details regarding all stakeholder recommendations may be found in the Advisory Group meeting minutes and presentations on the Commission's webpage.

1. Increase funding for current programs and/or the expansion of those programs.

Programs such as EARN Maryland, Career Pathways for Healthcare Workforces, and the Direct Care Workforce Innovation Fund, all managed by the Maryland Department of Labor, have a shared goal of increasing the number of skilled professionals and providing greater chances for retention. Increased funding would allow these programs to serve more individuals. Additionally, there could be opportunities to expand those programs, such as allowing the Direct Care Workforce Innovation Fund to include training for frontline supervisors.

Also noted was the need for sustainable funding for the community preceptor tax credit program, enabling medical, nursing, and physician assistant students to work alongside preceptors throughout Maryland. Currently, there is sustainable funding for Nurse Practitioner and Physician Assistant preceptors moving forward, but not for RN and LPN preceptors. The MLARP for Physicians and Physician Assistants, which provides educational loan repayment funds for physicians, physician assistants, and medical residents who commit to serving for two years in HPSA designated and/or medically underserved areas, also does not have the necessary funding to meet the current demand for these occupations

Providing funding for the creation of a rural family medicine residency training program on the Eastern Shore would address the healthcare workforce shortages that are prevalent in that region. Seed money from HRSA was anticipated to be depleted in Spring 2023 and the establishment of such a training program cannot proceed without State support.

Area Health Education Centers (AHECs), created to address healthcare workforce shortages across the United States in the 1970s, also serve as a valuable resource to improve the health status of Marylanders through community educational partnerships in underserved parts of the State. Maryland currently has three AHECS: AHEC West, Eastern Shore AHEC, and Central Maryland AHEC. Of the three, Central Maryland AHEC is the only one that does not receive State funding. Currently, there is no AHEC to address the needs of residents in Southern Maryland.

The Maryland Hospital Association also proposed several recommendations regarding funding opportunities:

1) Invest in a permanent General Fund appropriation for healthcare workforce education loan repayment.
2) Invest in a permanent General Fund appropriation for the administration of State-level workforce development activities.
3) Seek non-General Fund resources to supplement the MLARP Fund, ensuring a diverse revenue pool that is predictable and sustainable.

4) Create new programs such as the Maryland Nurse Pathways Program, which provide tuition and support for basic living expenses for certified nursing assistants enrolled in an RN or LPN program who commit to work in the State for two years as a nurse.
5) Increase funding for the MLARP for Physician and Physician Assistants.
6) Fund a LPN residency coordinator position under the Maryland Nurse Residency Program.
7) Identify a consistent and dedicated source of funding for the MLARP for Physicians and Physician Assistants.
8) Establish tax credits for physician assistants to precept medical students and nurse practitioner students.
9) Create incentives for physician assistant and nurse practitioner students to rotate in underserved areas by expanding loan repayment programs.

Maryland is home to many veterans and active military personnel who have valuable training and experience that could be transferable to certain healthcare occupations. To support the transition of active military personnel with clinical experience to civilian roles in healthcare, it was recommended that the state establish a "Green to Blue Campaign", like the Military Medics and Corpsmen Program in Virginia.[8]

2. Changes to licensing requirements and scope of practice.

During MHA's presentation in June, the Acute Care CNA workgroup recommended allowing certified nursing assistants (CNA) to work across health care settings with one certification by removing the separate Geriatric Nursing Assistant (GNA) credential requirement for working in long-term care facilities. To address the shortage of advanced degree nurses, particularly in high-need areas, it was recommended to support efforts to have physician assistants provide levels of care equal to that of nurse practitioners.

Roni K. White, Advocacy Committee Chair for the Maryland Counseling Association, encouraged consideration for Licensed Clinical Professional Counselors (LCPCs) to be able to apply for mental health positions in public schools, noting that the Maryland State Department of Education (MSDE) only provides two certifications for mental health specialists: school psychologists and school social workforce. LCPCs are not currently eligible to be hired by the MSDE to serve in mental health positions.

3. Examine current Medicaid reimbursement models to improve care.

There were several recommendations to impact the behavioral health workforce through examining and making changes to Medicaid reimbursement, including:

1) Require Medicaid reimbursement for the Collaborative Care Model (CoCM), which is a validated, evidence-based approach for integrating physical and behavioral health in primary care settings.Legislation accomplishing this was enacted in 2023. SB101(2023).
2)

[8] https://www.dvs.virginia.gov/education-employment/military-medics-corpsmen-mmac-program

3) Sustain and expand the network of Certified Behavioral Health Clinics (CCBHCs), which are federally designated programs that provide a comprehensive range of outpatient mental health and substance use treatment.
4) Maintain and expand use of technology, including extending provisions of the Preserve Telehealth Access Act of 2021 (SB 3/Ch. 71), and require Medicaid reimbursement for remote patient monitoring.
5) Establish a Behavioral Health Workforce Investment Fund. Legislation was enacted in 2023, establishing the Fund. SB283(2023).

From a long-term care standpoint, it was proposed that Medicaid reimbursement rates should be adequate to cover the cost of care.

4. Take steps to address and improve healthcare workforce safety.

Several stakeholders that participated in the Education and Pathways Advisory Group recommended comprehensive legislation that addresses violence against healthcare professionals in any setting and building on legislation introduced in the 2023 session, SB0568 Criminal Law – Threat Against State or Local Official – First Responder. The Maryland Hospital Association recommended the establishment of a Workplace Violence Prevention Consortium with diverse stakeholders to collaborate on the community response to workplace violence in healthcare facilities against healthcare workforces. The Maryland Hospital Association cited examples of such groups already in existence in Maine and Minnesota.

Given the national attention on the nursing workforce shortage, it is likely that Maryland's nursing and hospital leadership will be further exploring what other states are doing in relation to safe staffing. Improving retention of the existing nursing workforce is an important component in addressing the nursing workforce shortage. Exploration of these issues may result in a future legislative ask.

5. Evaluate options for expanding statewide capacity for education of health professionals.

The Education and Pathways Advisory Group heard from numerous stakeholders that clinical placements remain a significant challenge to meeting the current educational needs of students enrolled in health professions programs and are a limiting factor on further expansion of these programs. Recruitment and retention of appropriately qualified faculty is also an issue. The Advisory Groups recommends that the Department of Legislative Services convene the stakeholders from the public and private educational institutions in the State to explore the full range of issues related to expanding educational capacity.

V. STATE EFFICIENCIES AND COOPERATION ADVISORY GROUP

A. BACKGROUND

The State Efficiencies and Cooperation Advisory Group was formed to address that portion of SB440 which requires the Commission to "examine the relationship between the health occupations boards

and the Maryland Department of Health and determine what authority the Secretary should have over the boards; and what additional support the Department could provide the boards to assist with workloads, overhead, staffing technology improvement, and other areas identified by the Commission."

The State Efficiencies and Cooperation Advisory Group was composed of the following Commission members:

Senator Pamela Beidle
Senator Clarence Lam
Senator Ariana Kelly
Delegate Kenneth Kerr
Kimberly Link, MDH Liaison to Boards and Commissions
Dwain Shaw, MDH
Michelle Darling, MDH, Behavioral Health Administration
Murray Sherman, Board of Dental Examiners
Karen E. B. Evans, Board of Nursing
Sharon J. Oliver, Other Board Representative
Deena Speights-Napata, Board of Pharmacy
Christine Farrelly, Board of Physicians

B. MEETINGS AND PRESENTATIONS

State Efficiencies and Cooperation Advisory Group meetings were held virtually and in accordance with the Open Meetings Act. All stakeholders were encouraged to attend and participate in meetings. The Advisory Group's meeting agenda, minutes, and presentations are posted on the Commission's web page.

The first meeting of the State Efficiencies and Cooperation Advisory Group was held on October 25, 2022. MDH Liaison to Boards and Commissions gave an overview of the health occupations boards and how the boards are structured within MDH. The health occupations boards were asked to complete a survey and to provide written responses to the questions posed in the legislation. The National Conference of State Legislatures presented the results of research it conducted, at the request of the Commission, pertaining to how health occupations boards are structured in other states.

The second meeting of the State Efficiencies and Cooperation Advisory Group was held on November 30, 2022. MDH Liaison to Boards and Commissions provided an overview of the authority of the Secretary of Health regarding the health occupations boards, the boards' survey responses, and the joint response letter submitted by the health occupations boards. The Maryland Hospital Association gave a presentation regarding specific recommendations for the Board of Nursing.

The Advisory Group met again on February 27, 2023. A representative of the health occupations boards presented regarding the role of the health occupations boards, the authority of the Secretary of Health, data regarding board staff vacancies, and short-term and long-term recommendations.

1. National Conference of State Legislatures.

On October 25, 2022, at the request of the Commission, the National Conference of State Legislatures ("NCSL") gave a presentation to the State Efficiencies and Cooperation Advisory Group. NCSL researched the organizational structure of health occupations boards in California, the District of Columbia, Maryland, New Jersey, New York, Virginia, and West Virginia and reported that health occupations boards in Maryland, Washington, D.C., and Virginia are located within their respective departments of health/human services. Similar boards in California, Delaware, and New Jersey are located within departments of business, professional, or occupational licensing. Similar boards in West Virginia and New York are structured as independent entities or follow an alternative model that is not identified or affiliated with a specific government agency.

In addition to the statutory placement of the health occupations boards, NCSL researched how board members are appointed, who is responsible for the hiring of board administrative leadership, and board funding structures. In each of the pertinent states, board members are appointed by the governor. In Washington, D.C., board members are appointed by the mayor. Most states' statutes do not specify who or what entity is responsible for hiring board administrative leadership. As to board funding structures, most of the identified health occupations boards are funded by dedicated licensing fees that are either set by the board or a state agency.

2. Summary of the Health Occupations Boards' Survey Responses.

At the request of the Commission, the Maryland health occupations boards completed a survey which asked for general information about each board. The survey and the boards' detailed responses may be found on the Commission's web page.

The following is a summary of the boards' survey responses:

1) Health occupations boards license, regulate, and discipline health care providers. There are 20 health occupations boards in the State. Each board is governed by its own statute and regulations.
2) There are approximately 400,000 active licensees in the State who are regulated by the health occupations boards.
3) Except for the Board of Certification of Residential Child Care Program Professionals, the Board of Environmental Health Specialists, and the Board of Long-Term Care Administrators, all health occupations boards are special funded by dedicated licensing and other related fees. Fees are determined by each board and are set forth in regulations. Licensure fees vary by board and range from $50-$1050.
4) Except for the Board of Physicians, all board executive directors are hired directly by the board and report directly to the board chair or president. The executive director of the Board of Nursing and the Board's infrastructure operations fall under the Secretary of Health until 2025 pursuant to HB611/CH222 (2023).

5) Approximately one-half of the boards provide online applications for initial licensure and accept electronic payments for initial licensure. All boards do not use the same licensing platform.
6) All but two boards provide online license renewals and electronic payment for renewals.
7) One half of the boards are statutorily required to file annual reports.
8) The number of merit and contractual staff positions and vacancy rates vary by board.

C. FINDINGS

The health occupations boards are considered units of MDH. The Secretary of Health has the same authority over the health occupations boards as they have over other units of MDH, such as the Behavioral Health Administration, Public Health Services, *et. al*. Md. Code. Ann., Health Gen. Art., §2-106.

The authority of the Secretary of Health over units in MDH includes:

1) Responsibility for the budget;
2) The review and revision of rules and regulations proposed by the units;
3) To keep informed of the unit's plans, proposals, and projects; and
4) To require reporting.

Id., §2-104.

The Secretary is responsible for establishing policies to be followed by the units in their departments and to review the personnel actions taken by any unit in their department (See Md. Code. Ann., State Gov. Art., §8-205). However, except for the Board of Physicians and the Board of Nursing, the Secretary is not responsible for the hiring of the board's executive director. Pursuant to Md. Code. Ann., Health Occ. Art., §1-217, the Secretary shall confirm the appointment of a board's executive director.

There are limitations to the Secretary's authority over the health occupations boards. The Secretary does not have the power to disapprove or modify a decision or determination specifically delegated by law to the board. Those decisions typically involve licensing, discipline, and investigations. The Secretary does not have the authority to transfer board staff. Further, the Secretary does not have the power to transfer a function that pertains to licensing, discipline, or enforcement authority (See Md. Code. Ann., Health Occ., Art. §1-203).

The health occupations boards were asked to provide a written response to the questions of what authority the Secretary of Health should have regarding the boards and what support MDH could provide to assist with workloads, overhead, staffing technology improvement, and other areas identified by the Commission. In their joint response, the boards stated, among other things, that the authority of the Secretary regarding the boards should not change.

At the State Efficiencies and Cooperation Advisory Group meeting on February 27, 2023, a representative of the boards presented immediate, short-, and long-term recommendations to help improve board operations over the next five years. The complete presentation may be found on the

Commission's webpage. Immediate and short-term recommendations included: expediting staffing and procurement requests, reinstating quarterly meetings between the Secretary and the executive directors, completing reconnection to the network after the cyber incident at MDH, establishing a timeline for pending regulations, providing designated human resources staff, and increasing the number of merit positions. Mid- and long-term recommendations focus on standardized training, improvements to the hiring process, increased salaries, implementing retention incentives, reducing indirect costs, and long-term strategic planning.

The current administration at MDH has expressed its commitment to working collaboratively with the health occupations boards and to assist in providing administrative support to improve board operations. The MDH Office of Human Resources has recently improved its internal processes to facilitate the hiring of personnel in a timelier manner. The Secretary meets quarterly with the boards' executive directors to keep apprised of issues relevant to the boards and to share information. The Secretary has also met with the board chairs/presidents to discuss their role and responsibilities. The boards that chose to reconnect to the network through MDH after the cyber incident have successfully completed the reconnection process.

The health occupations boards serve a vital role in the healthcare workforce. As statutorily independent units of MDH, the boards determine criteria for licensure, ensure that qualified applicants obtain licenses, and regulate licensees to protect the citizens of Maryland. The boards and MDH should continue to work together to allow for the collection of data regarding the current and future supply of healthcare workforces. MDH and the boards should continue to explore opportunities to streamline functions to reduce potential administrative barriers to licensure and to provide exceptional customer service to the citizens of Maryland.

VI. CONCLUSION

The Commission set out to address Maryland's healthcare workforce shortage in accordance with the provisions of SB440. The Advisory Groups gathered data and other information from state agencies and external stakeholders which confirmed the existence of shortages across healthcare occupations, settings, and geographic locations. There are gaps in existing data that inhibit the ability to fully assess the extent of the shortages. The establishment of a healthcare workforce data center or clearinghouse, like those in other jurisdictions, will allow for an accurate assessment of current and projected workforce supply and demand. Accurate workforce data will enable state agencies and legislators to support policies and legislation to address workforce shortages.

Stakeholders provided information and thoughtful recommendations to the Commission. Many stakeholder organizations have done considerable research regarding shortages in occupations and settings relevant to their organizations. In addition, many organizations have implemented programs and strategies to address immediate and projected workforce shortages. The Commission endeavored to include recommendations that will help inform sound policy decisions.

ATTACHMENTS

- Attachment A: External Stakeholders and Contributors
- Attachment B: Workforce Data Advisory Stakeholder Recommendations
- Attachment C: Workgroup Guiding Questions for Health Care Workforce Data Collection
- Attachment D: Education and Pathways Advisory Group Meetings with Stakeholders
- Attachment E: Maryland Longitudinal Data System Center Overview

ATTACHMENT A: EXTERNAL STAKEHOLDERS AND CONTRIBUTORS

Aaron Greenfield, Greenfield Law
Ahemed Elsayed-Ahmed, Maryland Hospital Association
Allison Ciborowski, LeadingAge Maryland
Ajani Pierce, Maryland Department of Labor
Ann Ciekot, Public Policy Partners
Ann Kellogg, Maryland Longitudinal Data System Center
Archiena Beaver, Howard Community College
Barbara Jacobs, Maryland Hospital Association
Ben Steffen, Maryland Department of Health, Maryland Health Care Commission
Brad Phillips, Maryland Association of Community Colleges
Brittney Hansen, Maryland Department of Labor
Caroline K. Masikonde, Kaiser Permanente
Celia Guarino, Maryland Hospital Association
Christie Simon-Waterman, Maryland Nurses Association
Christina Eguizabal Love, Kennedy Krieger Institute
Christy Lee, Ascension
Costella Davis
Dan Martin, Mental Health Association of Maryland
Danna Kauffman, LifeSpan Network
David Rodwin, Public Justice Center
Deborah Prout, Staff, UMB
Dima Salloum
Ed Lovern, Maryland Hospital Association
Erin Dorrien, Maryland Hospital Association
Everette Jackson, Maryland Higher Education Commission- Veterans Affairs
Gene Ransom, CEO, Med Chi
Hope Morris, Health Facilities Association of Maryland
Iman Farid, Maryland Board of Nursing
Jane Krienke, Maryland Hospital Association
James Rosapepe, Senator
Jamie Perry, Maryland Department of Health
Jasmin Whitfield
Jason Hafer, Maryland-National Capital Homecare Association
Jeff Frederick, Staff UMB
Logan Dean, Maryland Department of Labor
Jeneva Stone, Consumer Advocate
Jennifer Zipp, Maryland Organization of Nurse Leaders, Maryland Nurse Residency Collaborative
Jill Dannenfelser, UMSON DNP Student
Jocelyn Buchanan, Comprehensive Nursing Services
Joseph DeMattos, Health Facilities Association of Maryland
Kathy Wisser, School of Nursing, Notre Dame University of Maryland
Kelly McMahon, Home Centris Healthcare
Ken Brannan, Chair, Maryland Health Benefit Exchange

Kimberly Hiner, Maryland Department of Health
Lauren Weber, Community Behavioral Health Association of Maryland
Leslie Frey, Montgomery County Government
Loraine Arikat, 1199 SEIU
Maeve Howett, University of Maryland School of Nursing
Mariana Capati, UMSON DNP Student
Mark Bayne, Comprehensive Nursing Services
Matthew Dudzic, Maryland Board of Physicians
Mary Gable, Maryland State Department of Education
Michele Calderon, Maryland Longitudinal Data Systems Center
Michelle-Nneka Utah
Mitzi Fishman
Modupe Savage, Medstar Health
Nancy Shapiro, University System of Maryland
Pam Metz, Esquire
Reena Arora, National Domestic Workforces Alliance
Renee Tucker
Richard Colgan, Maryland Area Health Education Center
Robyn Elliott, Public Policy Partners for American College of Nurse Midwives
Shamonda Braithwaite, Mid-Atlantic Association of Community Health Centers
Shayna Dee
Sydney Westwick, MDH
Tracey DeShields, Maryland Health Care Commission
Tracey C. Paliath, Maryland Association of Community Services
William Harvey, Premier Homecare

ATTACHMENT B: WORKFORCE DATA ADVISORY GROUP STAKEHOLDER RECOMMENDATIONS

Recommendation	Submitted By	Contact Information	Impact Area
Create a separate Standard Occupational Classification for home nursing and include within different levels of care and/or use existing nursing license designations. Both Pennsylvania and Virginia have two Medicaid nursing home rates, for RN and LPN.	Jeneva Stone, Family Advocate for Complex Needs	jenevastone@gmail.com	Nursing Direct Care Home Health
MDH should view the recent proposed rule from CMS – Ensuring Access to Medicaid Services[9] –as a potential set of requirements and as a set of best practices that the state should implement regardless of whether the proposed rule takes effect.	David Rodwin, Public Justice Center	RodwinD@publicjustice.org	Direct Care Home Care
MDH should leverage its role as a leading payor of direct care through Medicaid by collecting data on Medicaid-funded direct care workforces. At a minimum, this data should include information on workers' pay rates, employment classification (i.e., employee or independent contractor, because employees get benefits and independent contractors do not), employment benefits, and turnover. MDH should publish on a website both the raw data and its analysis, in line with the provisions of CMS's proposed rule. That will give the policymakers and the public a greater ability to monitor the issues and won't force people to rely on a Public Information Act	David Rodwin, Public Justice Center	RodwinD@publicjustice.org	Direct Care Home Care

[9]https://www.cms.gov/newsroom/fact-sheets/ensuring-access-medicaid-services-cms-2442-p-notice-proposed-rulemaking

request to get relevant information.			
Fully fund loan repayment for nurses, physicians, and other practitioners. Focus on ensuring that insurance payments to practitioners are competitive nationally to attract and maintain a health practitioner workforce in Maryland. Maximize alignment programs under the Total Cost of Care agreement to increase practitioner pay and loan repayment. Create pilots to increase primary care and behavioral health access in rural areas.	Danna Kaufman, LifeSpan Network	dkauffman@smwpa.com	Pathways Retention Accessibility Rural Health Behavioral Health
MDH should focus on occupational categories and that there must be a separate emphasis and analysis with regards to the direct care workforce shortage in Maryland in Medicaid's Home and Community Based Services particularly.	Reena Arora, National Domestic Workforces Alliance	reena@domesticworkforces.org	Direct Care Home Care
MDH should require collection of information of data regarding the direct care workforce as a prerequisite of payment of Medicaid reimbursement rates for HCBS services and do an analysis of sufficiency of the rates alongside the wages of direct care workers. This data should include information on workers' hourly wages, employment classification (i.e., employee or independent contractor, because employees get benefits and independent contractors do not), average hours weekly (to reflect full-time vs part-time, steadiness of work and eligibility for benefits),	Reena Arora, National Domestic Workforces Alliance	reena@domesticworkforces.org	Direct Care Home Care

employment benefits, and turnover. NDWA recommends the collection and publication of this data on an annual basis by MDH and this data should be utilized as part of mandated biennial rate studies for all of Maryland's HCBS programs, to ensure the sufficiency of rates to not only stabilize the direct workforce but also provides a living wage and is indexed to increases in cost of living.			
MDH should view the recent proposed rule from CMS – Ensuring Access to Medicaid Services – not only as a potential set of requirements but also as a set of best practices that the state should want to implement regardless of whether the proposed rule takes effect.	Loraine Arikat, 1199 SEIU	Loraine.Arikat@1199.org	Direct Care Home Care
It is essential that Maryland view needs and oversight of the healthcare workforce under the scope and purview of MDH. Since it is the department overseeing Medicaid reimbursements, it should effectively carry out its Medicaid obligations by providing greater oversight of how those dollars are being spent on the direct care workforce.	Loraine Arikat, 1199 SEIU	Loraine.Arikat@1199.org	Direct Care
It is essential that the state collect, analyze, and maintain a data dashboard on our over 20,000 home care workers in order to bolster job quality and quality of care. MDH should publish on a website both the raw data and its analysis, in line with provisions of CMS's proposed rule. This allows policy	Loraine Arikat, 1199 SEIU	Loraine.Arikat@1199.org	Direct Care Home Care

makers and the public a greater ability to monitor the issues, instead of forcing people to rely on a Public Information Act request to get relevant information			
To improve data transparency and information for those in long term care skilled nursing facilities, a first step is publishing nursing home cost reports to ensure consumers and advocates have access to fiscal information that informs quality of care for patients.	Loraine Arikat, 1199 SEIU	Loraine.Arikat@1199.org	Nursing Facilities
Recommendations for the Board of Nursing: • Add a questionnaire as part of the license renewal process asking a limited number of questions about their current role/employment status, work location, average hours worked per week, and intentions to leave the workforce over the next few years • Create a research file that removes identifying information (e.g., patient name and street address) but adds other information (e.g., county, age, gender) plus information from the above questionnaire	Jane Krienke, Maryland Hospital Association	jkrienke@mhaonline.org	Nursing Data Collection
Mandatory data collection on licensees and statewide coordination. The State health occupations boards should collect data as part of the health care licensing process. One example that could be used as a model is the National Center for Health Workforce Analysis' Minimum Data Sets.[10]	Jane Krienke, Maryland Hospital Association	jkrienke@mhaonline.org	Data Collection Health Licensing Boards

[10] https://bhw.hrsa.gov/data-research/explore-health-workforce-data-policy

ATTACHMENT C: WORKGROUP GUIDING QUESTIONS FOR HEALTH CARE WORKFORCE DATA COLLECTION

Immediate Data Needs:

Where applicable, please note whether data is collected at the unit level.

- Do you have current, shareable data about workforce shortages in:
  - certain health care settings
  - different regions of the State
  - care provided in different languages
  - environmental services
  - different levels of care for certain occupations

- Do you have current, shareable data about:
  - turnover rates
  - average length of tenure for certain occupations

- What effect has the aging of Maryland's population had on the health care setting or occupation with which you are most closely aligned?
  - Do you have current, shareable data that supports any trends you are seeing?

- What effect has reimbursement had on workforce shortages in your setting and/or occupation?
  - Do you have current, shareable data that supports any trends you are seeing?

- What effect do surrounding states and the District of Columbia have on workforce shortages in your setting and/or occupation?
  - Do you have current, shareable data that supports any trends you are seeing?

- Are there gaps in publicly available data that make it difficult to analyze trends in workforce turnover and/or retention?

Future Data Needs:

- Has the health care setting or occupation that you are most closely aligned with:
  - Identified strategies to reduce turnover?
    - If yes, what are those strategies? Have they been implemented? Do you have data on their effectiveness?
  - Developed methods/tools/processes for career advancement and retention?
    - If yes, what are they? Have they been implemented? Do you have data on their effectiveness?

ATTACHMENT D: EDUCATION AND PATHWAYS ADVISORY GROUP MEETINGS WITH STAKEHOLDERS

1) Senator Ariana Kelly, Sharon Ringley, Megan Peters, and Kim Link (July 26, 2022);
2) Dan Martin, Senior Director of Public Policy, and Linda Raines, Chief Executive Officer, the Mental Health Association of Maryland (August 19, 2022);
3) Delegate Ken Kerr (August 23, 2022);
4) Senator Pamela Beidle (August 24, 2022);
5) Karen Evans, former Executive Director, Maryland Board of Nursing (September 7, 2022);
6) Mary Gable, Assistant State Superintendent, Division of Student Support, Academic Enrichment, and Educational Policy, Maryland State Department of Education (September 8, 2022);
7) Chris MacLarion, Director, Apprenticeship and Training, Division of Workforce Development and Adult Learning and Logan Dean, Policy Analyst, Division of Workforce Development and Adult Learning, both with the Maryland Department of Labor (September 19, 2022);
8) Mary Keller, Special Grants Administrator, Division of Workforce Development and Adult Learning, Maryland Department of Labor (September 20, 2022);
9) Ted McCadden, Behavioral Health Counseling Area of Concentration Coordinator, Community College of Baltimore County (September 26, 2022);
10) Joana Winningham, New Americans Initiative Coordinator, Division of Workforce Development and Adult Learning, Maryland Department of Labor (September 27, 2022);
11) Glenda Abney, Senior Education Policy Analyst, Maryland Higher Education Commission (October 3, 2022);
12) Ann Kellogg, Director of Reporting Services and Molly Abend, Data Management Coordinator, both with the Maryland Longitudinal Data System Center (October 12, 2022);
13) Shamonda Braithwaite, Deputy Executive Director, Mid-Atlantic Association of Community Health Centers (October 13, 2022);
14) Al Dorsett, Director, Office of Student Financial Assistance, Maryland Higher Education Commission (October 14, 2022);
15) Everette Jackson, Associate Director of Veterans Affairs, Maryland Higher Education Commission (October 19, 2022);
16) Carmen I. Saenz, Manager, Suburban Maryland Welcome Back Center, Latino Health Initiative, Montgomery County Department of Health and Human Services; Ana Mejia Lin, Workforce Development Coordinator, Welcome Back Center; and Joana R. Costa Winningham, New Americans Initiative Coordinator, Division of Workforce Development and Adult Learning, Maryland Department of Labor (November 16, 2022);
17) Lauren Weber, Community Behavioral Health Association of Maryland representative (December 20, 2022);
18) Allison Ciborowski, President and CEO, Leading Age Maryland (March 6, 2023);
19) Joe DeMattos, President and CEO, Health Facilities Association of Maryland; Hope Morris, Manager, Government Relations and Outreach, Health Facilities Association of Maryland (March 7, 2023); and,

20) Sherry Perkins, President, Luminis Health, Anne Arundel Medical Center; Katie Boston-Leary, Director of Nursing Programs, American Nurses Association; and Davion Percy, Vice President, Public Policy and Community Outreach, Luminis Health (August 7, 2023).

ATTACHMENT E: MARYLAND LONGITUDINAL DATA SYSTEM CENTER OVERVIEW

The **Maryland Longitudinal Data System Center** (MLDS Center) is the State of Maryland's central repository for student and workforce data. The MLDS Center develops and maintains the MLDS to provide analyses, produce relevant information, and inform choices to improve student and workforce outcomes in the State of Maryland.

MLDS Data

The MLDS connects data from across Maryland's education, child & youth services, and workforce agencies. These data are subject to strict data management, security, and privacy requirements. The MLDS may only report aggregated, de-identified data. All research conducted by the MLDS Center focuses on what happens to students before and after critical transitions between education and workforce pathways. All research and analysis using the MLDS is cross-sector.
Below is an overview of the available data within the System that were included in the analysis completed for the Healthcare Workforce Crisis Commission:

Education Data

The MLDS contains education data on all students from Maryland public high schools, students attending Maryland public, state-aided independent and private institutions of higher education, and adults completing GED® Testing or the National External Diploma Program® (NEDP®). Education data begin with the 2007-2008 academic year. The MLDS does not contain education data on students in private high schools in Maryland. The MLDS contains limited data on out-of-state college enrollment and graduation for Maryland public high school graduates.

Wage Data

The MLDS System contains workforce data from quarterly Unemployment Insurance (UI) filings beginning with the first fiscal quarter of 2008 for individuals with a Maryland educational record (see the MLDS Data Inventory for a definition of *educational record*). UI filings are only available for Maryland employees who work for an in-state employer required to file UI and have a Maryland education record. Examples of employers that are not required to file UI include the federal government (including the military), certain non-profits, and self-employed and independent contractors. Individuals working in temporary employment, including federal postsecondary work-study programs, are also not subject to UI filings. These omissions mean it is incorrect to assume that individuals not counted as "employed" are unemployed.
The UI wages reported reflect the compensation paid during a fiscal quarter, rather than when the compensation was earned. UI wages reflect the sum of all compensation, including bonuses, commissions, tips, and other forms of compensation. The UI wage data do not distinguish between part-time and full-time employment, hourly and salaried wages, regular wages and commissions, bonuses, and other incentive pay. The UI wage data provided do not indicate the number of days or the number of hours a person worked in a fiscal quarter.

UI filings for a fiscal quarter may be incomplete. Employers may have filed UI wages after the data have been transmitted to the MLDS Center or have omitted individuals from their file. Missing wage data and/or corrections to previously reported wages may be provided in subsequent fiscal quarters. While there is no time limit on correcting UI filings, most changes (additions and/or corrections) are completed within one fiscal quarter. The analysis completed for the Healthcare Workforce Crisis Commission includes UI wage data with at least one fiscal quarter of subsequent UI data reported; therefore, errors in wage visibility and wage amounts due to corrections and late filings have been minimized.

Wage data in the MLDS include North American Industry Classification System (NAICS) codes for employers. This system classifies employers by sector rather than identifies the specific jobs performed by employees. For example, NAICS 62 is Health Care and Social Assistance, and NAICS 6221 is General Medical and Surgical Hospitals. Individuals who are doctors, hospital administrators, dietitians, and janitorial staff at a hospital would all have this same NAICS code. Employers select the sector and may change their sector designation at any time.