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General Assembly of the Commonwealth of Pennsylvania

PENNSYLVANIA HEALTH CARE WORKFORCE NEEDS

STAFF STUDY

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REPORT

*Pennsylvania Health Care Workforce Needs
Staff Study*

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The Joint State Government Commission was created in 1937 as the primary and central non-partisan, bicameral research and policy development agency for the General Assembly of Pennsylvania.¹

A fourteen-member Executive Committee comprised of the leadership of both the House of Representatives and the Senate oversees the Commission. The seven Executive Committee members from the House of Representatives are the Speaker, the Majority and Minority Leaders, the Majority and Minority Whips, and the Majority and Minority Caucus Chairs. The seven Executive Committee members from the Senate are the President Pro Tempore, the Majority and Minority Leaders, the Majority and Minority Whips, and the Majority and Minority Caucus Chairs. By statute, the Executive Committee selects a chairman of the Commission from among the members of the General Assembly. Historically, the Executive Committee has also selected a Vice-Chair or Treasurer, or both, for the Commission.

The studies conducted by the Commission are authorized by statute or by a simple or joint resolution. In general, the Commission has the power to conduct investigations, study issues, and gather information as directed by the General Assembly. The Commission provides in-depth research on a variety of topics, crafts recommendations to improve public policy and statutory law, and works closely with legislators and their staff.

A Commission study may involve the appointment of a legislative task force, composed of a specified number of legislators from the House of Representatives or the Senate, or both, as set forth in the enabling statute or resolution. In addition to following the progress of a particular study, the principal role of a task force is to determine whether to authorize the publication of any report resulting from the study and the introduction of any proposed legislation contained in the report. However, task force authorization does not necessarily reflect endorsement of all the findings and recommendations contained in a report.

Some studies involve an appointed advisory committee of professionals or interested parties from across the Commonwealth with expertise in a particular topic; others are managed exclusively by Commission staff with the informal involvement of representatives of those entities that can provide insight and information regarding the particular topic. When a study involves an advisory committee, the Commission seeks consensus among the members.² Although an advisory committee member may represent a particular department, agency, association, or group, such representation does not necessarily reflect the endorsement of the department, agency, association, or group of all the findings and recommendations contained in a study report.

¹ Act of July 1, 1937 (P.L.2460, No.459); 46 P.S. §§ 65 – 69.

² Consensus does not necessarily reflect unanimity among the advisory committee members on each individual policy or legislative recommendation. At a minimum, it reflects the views of a substantial majority of the advisory committee, gained after lengthy review and discussion.

Over the years, nearly one thousand individuals from across the Commonwealth have served as members of the Commission's numerous advisory committees or have assisted the Commission with its studies. Members of advisory committees bring a wide range of knowledge and experience to deliberations involving a particular study. Individuals from countless backgrounds have contributed to the work of the Commission, such as attorneys, judges, professors and other educators, state and local officials, physicians and other health care professionals, business and community leaders, service providers, administrators and other professionals, law enforcement personnel, and concerned citizens. In addition, members of advisory committees donate their time to serve the public good; they are not compensated for their service as members. Consequently, the Commonwealth of Pennsylvania receives the financial benefit of such volunteerism, along with their shared expertise in developing statutory language and public policy recommendations to improve the law in Pennsylvania.

The Commission periodically reports its findings and recommendations, along with any proposed legislation, to the General Assembly. Certain studies have specific timelines for the publication of a report, as in the case of a discrete or timely topic; other studies, given their complex or considerable nature, are ongoing and involve the publication of periodic reports. Completion of a study, or a particular aspect of an ongoing study, generally results in the publication of a report setting forth background material, policy recommendations, and proposed legislation. However, the release of a report by the Commission does not necessarily reflect the endorsement by the members of the Executive Committee, or the Chair or Vice-Chair of the Commission, of all the findings, recommendations, or conclusions contained in the report. A report containing proposed legislation may also contain official comments, which may be used in determining the intent of the General Assembly.³

Since its inception, the Commission has published more than 350 reports on a sweeping range of topics, including administrative law and procedure; agriculture; athletics and sports; banks and banking; commerce and trade; the commercial code; crimes and offenses; decedents, estates, and fiduciaries; detectives and private police; domestic relations; education; elections; eminent domain; environmental resources; escheats; fish; forests, waters, and state parks; game; health and safety; historical sites and museums; insolvency and assignments; insurance; the judiciary and judicial procedure; labor; law and justice; the legislature; liquor; mechanics' liens; mental health; military affairs; mines and mining; municipalities; prisons and parole; procurement; state-licensed professions and occupations; public utilities; public welfare; real and personal property; state government; taxation and fiscal affairs; transportation; vehicles; and workers' compensation.

Following the completion of a report, subsequent action on the part of the Commission may be required, and, as necessary, the Commission will draft legislation and statutory amendments, update research, track legislation through the legislative process, attend hearings, and answer questions from legislators, legislative staff, interest groups, and constituents.

³ 1 Pa.C.S. § 1939 ("The comments or report of the commission . . . which drafted a statute may be consulted in the construction or application of the original provisions of the statute if such comments or report were published or otherwise generally available prior to the consideration of the statute by the General Assembly").



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House Resolution 754 of 2018 (Printer's No. 3134) directed the Joint State Government Commission to conduct a staff study of the long-term workforce and workforce training needs of the Commonwealth's health care sector. The resolution further requested a study of how Federal and State statutes and regulations impact the ability of the Commonwealth's health care system to meet those needs, and to provide recommendations to ensure that the Commonwealth is able to adequately train, attract, and retain the workforce needed to meet those needs identified by the Commission.

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Commission staff met with a variety of stakeholders who represent the different constituent parts of Pennsylvania's health care system. These discussions and further research led to recommendations to address the workforce's current and expected challenges over the next five years.

The report, Pennsylvania Health Care Work Force Needs is enclosed and available on our website, <http://jsg.legis.state.pa.us/>.

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Respectfully submitted,

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INTRODUCTION

Pennsylvania's growing aging population, coupled with the increase in chronic disease and the omnipresent threat of developing health crises, such as the opioid epidemic, have made patient access to high-quality health care across the Commonwealth more important than ever. For this reason, the General Assembly adopted House Resolution No. 754 of 2018, which directed the Joint State Government Commission (the Commission) to study the Commonwealth's long-term health care workforce needs for the next five years. The resolution further requested a study of how federal and state statutes and regulations impact the ability of the Commonwealth's health care system to meet those needs, and to provide recommendations to ensure that the Commonwealth is able to adequately train, attract, and retain the workforce needed to meet those needs identified by Commission staff.

To facilitate the study, the resolution directed the Commission to solicit input from representatives of all aspects of the health care sector and continuum of care. In furtherance of this directive, Commission staff solicited input from organizations representing a broad spectrum of the health care field such as physicians, nurses, physician assistants, dental professionals, psychologists, optometrists, long-term care facilities, rural health needs, and other health professions. The staff also solicited input from training centers, health systems, the Pennsylvania Department of Labor, the Pennsylvania Primary Care Career Center, and the Pennsylvania Association of Community Health Centers.

Representatives from many of the foregoing organizations met in person and via teleconference with Commission staff to discuss a collection of issues, needs, and recommendations identified by each as relevant to the health care workforce over the next five years. After numerous discussions with these organizations, supplemented with additional research, the Commission has completed this report, defining the health care workforce, identifying the current health care workforce needs, proposing recommendations to address the identified needs, identifying current federal and state statutes and regulations that impact the ability of the Commonwealth's health care system to meet those needs, and highlighting possible legislative solutions for those proposed recommendations.

DEFINING PENNSYLVANIA'S HEALTH CARE WORKFORCE

In order to accurately identify the emerging needs of Pennsylvania's health care workforce, it is necessary to determine which professions actually fall within the definition of "health care workforce." When considering the term, certain health care professionals such as physicians, nurses, and pharmacists may quickly come to mind. Further consideration of the term however may reveal a definition of much broader scope. For example, one could reasonably claim that dentists, physical therapists, social workers, or even veterinarians may be considered members of the health care workforce. According to an article in the *London Journal of Primary Care*, the term "health care" is defined as curing disease or alleviating suffering by biomedical intervention, preventing disease by biomedical intervention, and helping people understand and make sense of their illness – the interpretive function.⁴

While this definition informs that health care is more than just curing, preventing or alleviating disease and physical suffering, it fails to provide specific guidance as to which trained and licensed professionals administer health care. In order to adequately answer the question as to which professionals fall within the health care workforce, both federal and state resources must be consulted.

Federal Resources

A good starting point for determining which jobs fall within the health care workforce on a national level would be a statutory definition of the term itself. Section 294q(i)(1) of the Patient Protection and Affordable Care Act (ACA) expressly defines the term "health care workforce" to include the following:

All health care providers with direct patient care and support responsibilities, such as physicians, nurses, nurse practitioners, primary care providers, preventive medicine physicians, optometrists, ophthalmologists, physician assistants, pharmacists, dentists, dental hygienists, and other oral health care professionals, allied health professionals, doctors of chiropractic, community health workers, health care paraprofessionals, direct care workers, psychologists and other behavioral and mental health professionals

⁴ Peter Toon, "What is Healthcare for?" *London Journal of Primary Care* 7, no. 6 (2015): 115-117, doi: 10.1080/17571472.2015.1113715.

(including substance abuse prevention and treatment providers), social workers, physical and occupational therapists, certified nurse midwives, podiatrists, the EMS workforce (including professional and volunteer ambulance personnel and firefighters who perform emergency medical services), licensed complementary and alternative medicine providers, integrative health practitioners, public health professionals, and any other health professional that the Comptroller General of the United States determines appropriate.⁵

A careful review of the above definition reveals a broad spectrum of health care disciplines in the United States that ranges from physicians and nurses to emergency medical service (EMS) workers such as volunteer ambulance personnel and firefighters.

U.S. Bureau of Labor and Statistics

Another federal resource worthy of review is the U.S. Bureau of Labor and Statistics (BLS). Established in 1884, the BLS is the principal fact-finding agency for the federal government responsible for measuring labor market activity, working conditions, and price changes in the economy.⁶ The BLS's ultimate mission is to "collect, analyze, and disseminate essential economic information to support public and private decision making."⁷ In fulfillment of its mission, the BLS chronicles national salary averages and growth projections on what it terms as "healthcare occupations."

⁵ 42 U.S.C. § 294q(i)(1). In addition to defining "health care workforce," this section of the Patient Protection and Affordable Care Act (ACA) established a National Health Care Workforce Commission, the purpose of which is to: (1) serve as a national resource for Congress, the President, and localities; (2) communicate and coordinate with the Departments of Health and Human Services, Labor, Veterans Affairs, Homeland Security, and Education on related activities administered by one or more such Departments; (3) develop and commission evaluations of education and training activities to determine whether the demand for health care workers is being met; (4) identify barriers to improve coordination at the Federal, State, and local levels and recommend ways to address such barriers; and (5) encourage innovations to address population needs, constant changes in technology, and other environmental factors. Currently Congress has not provided the necessary funding for the Commission to be convened. The ACA was also held unconstitutional as not severable in *Texas, et al., v. United States, et al.*, Civil Action No. 4:18-cv-00167-O (N.D. Tex.), filed Dec. 14, 2018. See page 14 for more on the ACA and *Texas, et al., v. United States, et al.*

⁶ United States Bureau of Labor and Statistics, (Feb. 16, 2018), <https://www.bls.gov/bls/infohome.htm>.

⁷ *Id.*

According to the BLS, the term “healthcare occupations”⁸ is composed of a large number of professions in the U.S. which include the following:

- Athletic trainers
- Audiologists
- Chiropractors
- Dental assistants
- Dental hygienists
- Dentists
- Diagnostic medical sonographers & cardiovascular technologists & technicians, including vascular technologists
- Dietitians & nutritionists
- EMTs and Paramedics
- Exercise physiologists
- Genetic counselors
- Home health aides & personal care aides
- Licensed practical & licensed vocational nurses
- Massage therapists
- Medical and clinical laboratory technologists and technicians
- Medical assistants
- Medical records & health information technicians
- Medical transcriptionists
- Nuclear medicine technologists
- Nurse anesthetists
- Nurse midwives
- Nurse practitioners
- Nursing assistants & orderlies
- Occupational health and safety specialists & technicians
- Occupational therapists
- Occupational therapy assistants & aides
- Opticians
- Optometrists
- Orthotists and prosthetists
- Pharmacists
- Pharmacy technicians
- Phlebotomists
- Physical therapist assistants and aides
- Physical therapists
- Physician assistants
- Physicians & surgeons

⁸ United States Department of Labor, Bureau of Labor and Statistics, Occupational Outlook Handbook, (Apr. 13, 2018), <https://www.bls.gov/ooh/healthcare/home.htm>.

- Podiatrists
- Radiation therapists
- Recreational therapists
- Respiratory therapists
- Surgical technologists
- Veterinary assistants & laboratory animal caretakers
- Psychiatric technicians and aides
- Radiologic and MRI technologists
- Registered nurses
- Speech-language pathologists
- Veterinarians
- Veterinary technologists & technicians

This list is vastly more specific and inclusive than the aforementioned statutory definition and includes veterinarians, phlebotomists, and even medical records and health information technicians.

U.S. Department of Health and Human Services

Alternatively, the U.S. Department of Health and Human Services (HHS) seems to provide a much more general and cursory list for what it terms the “health workforce.” HHS, the origins of which can be traced back to President John Adams in 1798, is the federal government’s principal agency tasked with enhancing and protecting the health and well-being of all Americans.⁹ Specifically, HHS catalogs minimum data standards for the following health workforce professions and occupations: dental hygienists; licensed professional counselors; nurses; occupational therapists; pharmacists; physical therapists; physician assistants; physicians; psychologists; and substance abuse/addiction counselors.¹⁰

Center for Health Workforce Studies

HHS partners with the Center for Health Workforce Studies (CHWS), an academic research center located at the State University of New York at Albany that assists health, professional, and educational organizations, policy makers, planners, and other stakeholders to understand issues related to the supply, demand, distribution, and use of health workers.¹¹ The activities performed by CHWS supports health workforce planning and policymaking at local, regional, state, and national levels, and is sponsored by the U.S. Human Resources and Services Administration.¹² The CHWS has opined that the health

⁹ United States Department of Health and Human Services, <https://www.hhs.gov/about/historical-highlights/index.html>. While the HHS’s origins can be traced back to 1798, the agency was formally established as the Department of Health, Education, and Welfare on April 11, 1953 and subsequently became the Department of Health and Human Services on May 4, 1980.

¹⁰ United States Department of Health and Human Services, <https://bhw.hrsa.gov/health-workforce-analysis/data>.

¹¹ Center for Health Workforce Studies, School of Public Health, SUNY Albany, (updated 2018), <http://www.chwsny.org/about-us/>.

¹² *Id.*

workforce “is made up of people working in a wide range of professions and occupations, both within and outside the health care sector.”¹³

Like the BLS definitions, the CHWS has determined that the workforce “goes well beyond doctors and nurses” to include “individuals who don’t provide the actual health services, but assist with the operation of healthcare or health related organizations.”¹⁴ Accordingly, the CHWS provides a small sample of professions and occupations in addition to HHS’s list and includes: psychiatrists; creative arts therapists; horticultural therapists; massage therapists; dietitians and nutritionists; EMTs and paramedics; social workers; home health aides; patient care coordinators; and medical billers.¹⁵

State Resources

Pennsylvania appears to differ from the federal agencies listed above when it comes to defining the health care workforce. One example of this can be found in the Commonwealth’s statutory definition of “professional health care provider.” According to the Pennsylvania Peer Review Protection Act under Title 63 Professions and Occupations (State Licensed), “professional health care provider” means “individuals or organizations who are approved, licensed or otherwise regulated to practice or operate in the health care field under the laws of the Commonwealth, including, but not limited to, the following individuals or organizations:

- Chiropractors
- Dentists
- Optometrists
- Pharmacists
- Physical therapists
- Physicians
- Podiatrists
- Psychologists
- Registered or practical nurses
- Administrator of a hospital, nursing or convalescent home or other health care facility
- A corporation or other organization operating a hospital, nursing or convalescent home or other health care facility
- Individuals licensed to practice veterinary medicine under the laws of this Commonwealth.”¹⁶

¹³ Center for Health Workforce Studies, (2018), <http://www.chwsny.org/the-health-workforce/whos-in-the-health-workforce/>.

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ 63 P.S. § 425.2.

The Pennsylvania Health Care Facilities Act (PHCF) defines “health care practitioner” as “an individual who is authorized to practice some component of the healing arts by license, permit, certificate or registration issued by a Commonwealth licensing agency or board.”¹⁷ Pennsylvania’s definition of “professional health care provider” provides a shorter list of professionals than the federal statutory definition of health care workforce, however, unlike the federal statute, the Commonwealth’s statute includes those professionals who practice veterinary medicine. Alternatively, the PHCF’s definition of “health care practitioner” is limited only to those health professionals practicing that require a license, permit, certificate or registration to practice.

Pennsylvania Department of Health

Other examples of Pennsylvania’s differing definition can be found within the Pennsylvania Department of Health (DOH) and the Pennsylvania Department of State (DOS). The DOH currently works to provide programs and services that benefit the health, safety, and well-being of all residents within the Commonwealth.¹⁸ Since 2002, the DOH, in conjunction with the DOS, has been publishing Health Care Workforce Reports that survey nurses, physicians, physician assistants, dentists, and dental hygienists working within the Commonwealth.¹⁹ The scope of these reports do not extend to other health services professions such as psychiatrists, pharmacists, social workers, massage therapists, medical billers, and many other professionals provided in the federal lists shown above.

Pennsylvania Department of State

It is important to note that the DOS provides licensing requirements and oversight for a number of health care professionals, many of which are not included in the DOH’s reports. The professionals required to obtain licensure from the DOS include:²⁰

- Acupuncturists
- Athletic trainers
- Behavior specialists
- Clinical nurse specialists
- Dental hygienists
- Anesthesia professionals
- Audiologists
- Chiropractors
- Clinical social workers
- Dentists

¹⁷ 35 P.S. § 448.103.

¹⁸ *Id.*

¹⁹ Pennsylvania Department of Health, Health Care Workforce Reports, (March, 2018), <https://www.health.pa.gov/topics/Health-Planning/Pages/Reports.aspx>.

²⁰ Pennsylvania Department of State, Bureau of Professional and Occupational Affairs, Pennsylvania Licensing Systems, (June 6, 2018), <https://www.pals.pa.gov/#/page/default>.

- Dietitian - nutritionists
- Marriage & family therapists
- Medical interim limited professionals
- Medical physicians and surgeons
- Nurse practitioners
- Optometrists
- Osteopathic acupuncturists
- Osteopathic physician acupuncturists
- Pharmacists
- Physician acupuncturists
- Practitioners of oriental medicine
- Prosthetists
- Provisional prosthetists
- Registered nurses
- Regular & temporary occupational therapy assistants
- Regular and temporary physical therapists and physical therapist assistants
- Social workers
- Temporary & Provisional pedorthists
- Graduate prosthetists
- Massage therapists
- Medical physician assistants
- Nurse-midwives
- Nursing home administrators
- Orthotists and orthoptist fitters
- Osteopathic genetic counselors
- Pedorthists
- Pharmacy interns
- Practical nurses
- Professional counselors
- Provisional and graduate orthotists
- Psychologists
- Regular & temporary occupational therapists
- Regular & temporary osteopathic respiratory therapists
- Regular & temporary respiratory therapists
- Speech-language pathologists and assistants
- Veterinarians & Veterinary technicians

The licensing list of the DOS is a bit more in harmony with the federal statutory definition and workforce lists because it also includes many professions that indirectly address human health and well-being, such as social workers, psychologists, occupational therapists, and massage therapists.

Scope of Health Care Workforce for this Study

Based on the language of House Resolution No. 754, read in conjunction with both federal and state resources, it would seem most appropriate to broadly define the scope of the health care workforce in Pennsylvania for the purpose of this study much like the

federal definition provided under §294q(i)(1) of the ACA. This definition includes just about all of the professionals included in the Commonwealth's statutory definition of professional health care providers and is expansive enough to go beyond the common health-associated professionals of physicians, nurses, and pharmacists to include professions that are both important, but less commonly viewed as health-associated professionals such as social workers and EMT professionals. This definition is also appropriately narrow enough to exclude professionals in both the veterinary field and the medical billing field, allowing a balance between the two extreme variations of the definitions.

With this scope in mind, the following report will not address every single health profession and every single need associated therewith. Instead, the report is intended to address major workforce needs associated with many health fields individually and collectively. Furthermore, many of these needs are those that were consistently raised by the professional representatives and organizations the Commission consulted with, along with those found through the Commission's own independent research.

HEALTH CARE WORKFORCE NEEDS AND RECOMMENDATIONS

Current State of Pennsylvania’s Health Care Workforce

In order to study and identify the long-term health care workforce and workforce training needs within the Commonwealth, it is important to first understand the current state of the health care workforce both nationally and in Pennsylvania, as well as the direction it has been heading in recent years.

The health care industry both across the country and within Pennsylvania is currently experiencing an observable shortage of health care professionals. Pennsylvania’s shortage stems from many sources, such as the increase in the Commonwealth’s senior population, the increase in insured Pennsylvanians through the federal Patient Protection and Affordable Care Act of 2010 (ACA),²¹ the increasing population affected by the opioid epidemic, financial and educational barriers for certain underserved and at-risk populations, and the lack of instructors and resources in many health care training institutions.

Pennsylvania’s senior population (age 65 and over) grew at a rate over 20 times that of the state’s general population – an increase of 16.3 percent from 2010 to 2017.

A Growing Senior Population

While there are a number of reasons for this growing health care workforce shortage, the primary cause is the aging of the Baby Boomer generation.²² To put this phenomenon into perspective, between 2010 and 2030, the population of Americans over the age of 65 will increase by 75 percent from fewer than 40 million to 69 million; roughly one in five Americans will be a senior citizen.²³ This increase in the aging population will be largely responsible for a projected increase in total number of office visits to primary care physicians from 462 million in 2008 to 565 million in 2025.²⁴

²¹ 42 U.S.C. § 18001 *et seq.*

²² Rebecca Grant, “The U.S. Is Running out of Nurses,” *The Atlantic*, (Feb. 3, 2016), <https://www.theatlantic.com/health/archive/2016/02/nursing-shortage/459741/>.

²³ *Id.*

²⁴ Stephen M. Petterson *et al.*, “Projecting US Primary Care Physician Workforce Needs: 2010-2025,” *Annals of Family Medicine* 10, no. 6 (Nov./Dec. 2012): 503-509, at 503. doi: 10.1370/afm.1431.

Pennsylvania's senior population (age 65 and over) grew at a rate over 20 times that of the state's general population – an increase of 16.3 percent from 2010 to 2017. According to the Pennsylvania State Data Center, Pennsylvania ranked seventh in the nation for the percent of its population that is 65 years of age or older as of 2017.²⁵

The National Council on Aging underscored the nexus between the aging population and the health care shortage in its determination that approximately 80 percent of older adults have at least one chronic condition, while 68 percent have at least two.²⁶ These figures are directly relevant to Pennsylvania residents. According to Julie Sochalski, Associate Professor at the University of Pennsylvania School of Nursing, “people with chronic diseases clearly use more health care services, and people who are older have more chronic diseases.”²⁷ Simply put, the disproportional increase in a population that is both aging and beset with chronic health problems is generating a much higher demand for health care services and ultimately presages a projected growth in the Commonwealth's shortage of health care professionals. This dearth of health care professionals will continue to expand commensurately with the aging population if the shortfalls are left unresolved.

The Patient Protection and Affordable Care Act

While the aging Baby Boomer generation has had a substantial impact on the demand for health care professionals, one cannot ignore the impact of the ACA. The implementation of the ACA has impacted every part of the U.S. health care system including the employer-sponsored and individual insurance markets, Medicare, Medicaid, and most pertinent to this report, health care providers and their employees.²⁸

Key aspects of reform found within the ACA were the expansion of insurance options for the uninsured and the individual mandate that requires most individuals to have a qualified insurance plan under the law.²⁹ The ACA also provides subsidized private individual coverage and expanded Medicaid benefits which has had the effect of turning “patients who couldn't afford care into paying customers, allowing hospitals to hire more nurses, medical technicians, doctors, and other caregivers to treat millions of newly insured Americans.”³⁰ The passage of the ACA was estimated to have expanded health insurance coverage to an additional 34 million people across the U.S.³¹

²⁵ Penn State Harrisburg, Pennsylvania State Data Center., “Population Characteristics and Change: 2010 to 2017,” <https://pasdc.hbg.psu.edu/Data/ResearchBriefs/PAPopulationEstimates/tabid/3047/Default.aspx>.

²⁶ National Council on Aging, “Chronic Disease Management,” (2018), <https://www.ncoa.org/healthy-aging/chronic-disease/>.

²⁷ Rebecca Grant, *supra* n. 22.

²⁸ Stephen T. Parente *et al.*, “Wage Growth for the Health Care Workforce: Projecting the Affordable Care Act Impact,” *Health Services Research* 52, no. 2 (Apr. 2017): 741-762, at 742, doi: 10.1111/1475-6773.12497.

²⁹ *Id.*

³⁰ Bruce Jaspens, “As Obamacare Repeal Looms, Hospitals Brace for Job Losses,” *Forbes*, (Jan. 8, 2017), <https://www.forbes.com/sites/brucejaspens/2017/01/08/as-obamacare-repeal-looms-hospitals-brace-for-job-losses/#6d3b9a08d3b0>.

³¹ Stephen M. Petterson *et al.*, *supra* n. 24 at p. 503.

Numerous studies have examined the expansion of private insurance coverage and its link to medical care utilization. Most of these studies are focused primarily on the impact of the ACA on health professional demand based on physician visits and potential shortages in the primary care workforce. For example, one study projected that after the insurance expansion implemented through the ACA is completed, the U.S. will require nearly 52,000 additional primary care physicians by 2025, of which 8,000 (a three percent increase to the current primary care physician workforce alone) will be directly attributable to the insurance expansion.³² However, the demand growth attributable to the ACA is not just occurring with primary care physicians. There has been overall growth in the health workforce across all occupations in health care delivery. The increase in demand associated with the ACA is aggravating the already severe shortage of health care professionals as a result of the aging Baby Boomers.

In addition to increased demand for health care professionals, the ACA is likely to result in annual and cumulative wage increases for physicians, registered nurses (RNs), licensed practical nurses (LPNs), medical technicians, medical aides, and home health aides.³³ Specifically, Health Services Research, a bimonthly health journal published by the Health Research and Educational Trust³⁴, has projected physician wages to increase 30 percent from 2014 to 2021 compared to a baseline with no ACA implementation growth of 10.6 percent.³⁵

In contrast, the study projected that RNs will see a growth of 20.4 percent from 2014-2021. Without ACA implementation, wage growth for RNs was projected at 8.4 percent; a growth primarily reflective of growing demand for nursing care due to changing population demographics.³⁶

The Health Services Research study also projected a six percent wage growth for home health aides from 2014 to 2021 compared to a 3.9 percent growth without the ACA implementation.³⁷ While increased wages for health professionals can be viewed as a positive for the health care workforce, the study cautioned that such increase is leading to rising reimbursements and insurance premiums for many Americans.³⁸

The future of the ACA has become uncertain as President Donald Trump and some Congressional leaders have expressed a desire to repeal the ACA. Further compounding the uncertainty surrounding the ACA's continued survival is a December 14, 2018, federal court ruling by the U.S. District Court for the Northern District of Texas holding that the individual mandate under Section 5000A(a) of the ACA is unconstitutional because the Tax Cuts and Jobs Act of 2017³⁹ eliminated the tax for non-compliance with the insurance

³² *Id.*

³³ Stephen T. Parente *et al.*, *supra* n. 28.

³⁴ Health Research and Educational Trust is a not-for-profit research and education affiliate of the American Hospital Association.

³⁵ Stephen T. Parente *et al.*, *supra* n. 28 at pp. 753-754.

³⁶ *Id.*

³⁷ *Id.*

³⁸ *Id.* at pp. 758-759.

³⁹ Tax Cuts and Jobs Act of 2017, Pub.L. 115-97, 131 Stat 2054.

mandate.⁴⁰ The court found that the individual mandate provision was “essential to and inseverable from the remaining portions of the law,” making those remaining sections invalid as well.⁴¹ Effectively, this sweeping decision invalidates the ACA in its entirety. Several states including California are in the process of appealing the decision and the law remains in effect while the appeal is pending.

A full-scale repeal of the ACA could be riddled with its own consequences for the health care workforce. If tax credits and Medicaid expansion end in 2019, repeal of the ACA would cut a projected \$61 billion in premium insurance tax credits and \$78.5 billion in grants to states for Medicaid expansion in a single year. According to the George Washington University Milken Institute of Public Health (Milken Institute), such federal cutbacks could have far broader impact, such as substantial job losses, reductions in state economic activity, and cuts in state and local tax revenues.⁴²

The Milken Institute’s study suggests that such impact would start with health care organizations and their workers, and would then ripple out into other businesses in multiple sectors of state economies. The result of falling income to health care providers would be the hiring of fewer health professionals, lower salaries, and a reduction in providers’ purchases of goods and services. The Milken Institute estimated that if both the ACA tax credits and the Medicaid expansions are repealed, about 912,000 health care jobs will likely be lost nationwide in 2019.⁴³ Further, the Milken Institute’s report indicated that Pennsylvania would be among one of the states with the highest overall job losses with an estimated 137,000 lost jobs in 2019.⁴⁴ The report did not identify how many of the 137,000 lost jobs in Pennsylvania would be purely health care jobs. While there is no way to precisely predict the ACA’s future, it is important to be cognizant of the fact that the law’s implementation has impacted the demand and supply of the health care workforce, and its possible repeal will likely have an impact as well.

⁴⁰ *Texas, et al., v. United States, et al.*, Civil Action No. 4:18-cv-00167-O (N.D. Tex.), filed Dec. 14, 2018; 26 U.S.C. §5000A(a).

⁴¹ *Id.*

⁴² Leighton Ku *et al.*, “The Economic and Employment Consequences of Repealing Federal Health Reform: A 50 State Analysis,” Milken Institute School of Public Health, The George Washington University, (Jan. 5, 2017), p. 1.

⁴³ *Id.*

⁴⁴ *Id.* at p. 2.

The Opioid Crisis

The growing opioid epidemic within the U.S. is also impacting the current landscape of the health care system by increasing the demand for health care resources and state expenditures.⁴⁵ Opioids are a class of drugs derived from or are pharmacologically similar to opiates that include the illegal drug heroin, synthetic opioids such as fentanyl, and pain relievers legally available by prescription, such as oxycodone, hydrocodone, codeine, morphine, and numerous others.⁴⁶

Despite accounting for less than five percent of the world's population, the U.S. consumes approximately 80 percent of the global opioid supply, including 99 percent of the hydrocodone supply.⁴⁷

The U.S. Health Resources and Services Administration (HRSA) has reported 116 opioid overdose-related deaths per day in America as of February 2019.

As the Commission noted in its 2017 report *Opioid Addiction Treatment in Pennsylvania*, U.S. health care providers wrote 259 million prescriptions for painkillers, which is enough to medicate every American adult around-the-clock for one month.⁴⁸ According to the National Institute on Drug Abuse, more than 130 people in the U.S. die every day after overdosing on opioids.⁴⁹ The U.S. Health Resources and Services Administration (HRSA) has reported 116 opioid overdose-related deaths per day in America as of February 2019.⁵⁰

Map 1 shows a depiction of the states' age adjusted overdose death rate per 100,000 in 2017. A careful review of this map reveals that Pennsylvania has a rate statistically higher than the U.S. rate.

⁴⁵ Joint State Government Commission (JSGC), "Opioid Addiction Treatment in Pennsylvania," (Jun. 2017), p. 20.

⁴⁶ National Institute on Drug Abuse, "Opioids," <https://www.drugabuse.gov/drugs-abuse/opioids>.

⁴⁷ JSGC, "Opioid Addiction Treatment in Pennsylvania," *supra*, n. 45 at p. 3 *citing* Laxmaiah Manchikanti and Angelie Singh, "Therapeutic Opioids: A Ten-Year Perspective on the Complexities and Complications of the Escalating Use, Abuse, and Nonmedical Use of Opioids," *Pain Physician Journal*, 2008.

⁴⁸ JSGC, "Opioid Addiction treatment in Pennsylvania," *supra*, n. 45 at p. 7.

⁴⁹ National Institute on Drug Abuse, "Opioid Overdose Crisis," (Jan. 2019), <http://www.drugabuse.gov/drugs-abuse/opioids/opioid-overdose-crisis>.

⁵⁰ United States Health Resources and Services Administration, "Opioid Crisis," (Feb. 2019), <https://www.hrsa.gov/opioids>.

The increase of the opioid epidemic has had a dramatic impact on the health care workforce. For example, emergency system resources that were already overloaded are being further taxed and drained by the increased 911 calls for overdose incidents.⁵¹ Many hospitals have also become filled with opioid addicted patients.⁵² The Centers for Disease Control and Prevention has been scaling up its efforts to assist states in addressing the opioid epidemic by offering Overdose Prevention in States (OPIS), which are programs that equip states with scientific expertise and resources aimed at preventing opioid addiction.⁵³ While these efforts help and are welcomed by states, the demand for health professionals and resources necessary to assist in the treating of current and new substance use disorder patients requires a larger body of health professionals and resources. According to a 2015 report by Matrix Global Advisors, LLC, Pennsylvania ranked eighth in total state expenditures on health costs for opioid abuse with a total of \$874 million spent in 2015. The U.S. average for that year according to the report was \$490 million, 56 percent of Pennsylvania's total expenditure.⁵⁴

Health Care Professional Shortages in the Face of Increased Demand

In the face of increasing demand for health care, many states, including Pennsylvania, are currently expected to see an increase in demand for employees within the health care industry. The Pennsylvania Department of Labor and Industry's Center for Workforce Information and Analysis (CWIA) prepares short-term industry forecasts in an effort to anticipate changes in employment within an industry over a two-year period. Industry forecasts are revised every year to incorporate economic changes that occur across the country and within the Commonwealth. CWIA's most recent forecast projected the health care and social assistance industry in general will experience a 3.2 percent increase of about 32,430 professionals between 2017 and 2019 alone.⁵⁵ However, the demand for health professionals appears to be outpacing their increases in supply, resulting in workforce shortages. There are many examples of current shortages within the health care workforce.

Physicians. On a national level, the U.S. could see a shortage of up to 120,000 physicians by 2030 according to the Association of American Medical Colleges (AAMC).⁵⁶ In Pennsylvania, the issue of physician shortfall is not a new phenomenon. The Commission previously addressed Pennsylvania's physician shortage in a report

⁵¹ Madhukar Kasarla, "The Opioid Epidemic and its Impact on the Health Care System," *The Hospitalist*, (Oct. 24, 2017), <https://www.the-hospitalist.org/hospitalist/article/149858/mental-health/opioid-epidemic-and-its-impact-health-care-system>.

⁵² *Id.*

⁵³ Centers for Disease Control and Prevention, "Helping Communities Take Action Against Opioid Crisis," (Sept. 4, 2018), <https://www.cdc.gov/features/prescription-drug-overdose/index.html>.

⁵⁴ Matrix Global Advisors, LLC, "Health Care Costs from Opioid Abuse: A State-by-State Analysis," (Apr. 2015), www.matrixglobaladvisors.com. *Id.*

⁵⁵ Pennsylvania Department of Labor and Industry, Center For Workforce Information and Analysis, <http://www.workstats.dli.pa.gov/Products/ShortTermIndustryForecasts/Pages/default.aspx>.

⁵⁶ Association of American Medical Colleges, "New Research Shows Increasing Physician Shortages in Both Primary and Specialty Care," (Apr. 11, 2018), https://news.aamc.org/press-release/article/workforce_report_shortage_04112018/.

completed in April of 2015 titled *The Physician Shortage in Pennsylvania*. This report pointed out that as of March 2015, there were 3,573 medically underserved areas (MUAs) and 400 medically underserved populations (MUPs) nationwide, and 142 MUAs and 12 MUPs in Pennsylvania.⁵⁷

MUAs and MUPs are designations determined by the U.S. Health Resources and Services Administration (HRSA), the primary federal agency responsible for working to improve access to health care to people who are geographically isolated, economically or medically vulnerable.⁵⁸ The HRSA applies the MUA or MUP designation to certain areas or populations that it determines to be medically underserved based on Index of Medical Underservice (IMU) calculated based on four variables: the ratio of primary care physicians per 1,000 people, the infant mortality rate, the percentage of the population with incomes below the poverty level, and the percentage of the population aged 65 or older.⁵⁹

An IMU can range from 0 to 100, with 0 representing the completely underserved. Areas or populations with IMUs of 62.0 or less qualify for designation as an MUA or MUP. An MUA may be a whole county, groups of contiguous counties, or groups of minor civil divisions or census tracts. MUPs are specific sub-groups of people living in defined geographic areas with a shortage of primary care health services such as individuals who are homeless, low-income, Medicaid-eligible, Native American, or migrant farmworkers.⁶⁰ As of June 2018, the number of MUAs alone in Pennsylvania had increased to 169.⁶¹

As noted in the Commission’s 2015 report, it was projected that by 2030, Pennsylvania will require an additional 1,039 primary care physicians, representing an 11 percent increase over the workforce from 2010.⁶² This increase in demand may be concerning considering the AAMC reported in 2014 that Pennsylvania ranked 37th in the nation for retaining only 57.5% of active physicians who completed their medical education and residency within Pennsylvania compared to the national average of 66.8 percent.⁶³ The projected demand for physicians shown above could go unmet if Pennsylvania does not find a way to increase its retention rate of new physicians graduating within the Commonwealth.

Pennsylvania ranked 37th in the nation for retaining only 57.5% of active physicians who completed their medical education and residency within Pennsylvania.

⁵⁷ JSGC, “The Physician Shortage in Pennsylvania,” (Apr. 2015).

⁵⁸ United States Department of Health and Human Services, Health Resources and Services Administration, “About HRSA,” <http://www.hrsa.gov/about/index.html>.

⁵⁹ United States Department of Health and Human Services, Health Resources and Services Administration, “Medically Underserved Areas and Populations (MUA/Ps),” <https://bhw.hrsa.gov/shortage-designation/muap>.

⁶⁰ *Id.*

⁶¹ United States Department of Health and Human Services, Health Resources and Services Administration, Data Warehouse, State Summary of Designated MUA/P, (June 22, 2018), <https://datawarehouse.hrsa.gov/tools/analyzers/MuaSearchResults.aspx>.

⁶² JSGC, “The Physician Shortage in Pennsylvania,” *supra* n. 57 at p. 21.

⁶³ Association of American Medical Colleges, 2014 Pulse of Pennsylvania’s Physician and Physician Assistant Workforce, Vol. 6, (Aug. 2017), pp. 17-18.

Nurse Professionals. Another health professional the Commonwealth is arguably undersupplied in is nurses. Nursing is currently the largest profession within the U.S. health care workforce with Registered Nurses (RNs) and Licensed Practical Nurses (LPNs) making up the largest occupations in the field.⁶⁴ According to the American Nurses Association, by 2022, there will be far more RN job openings than any other profession within the U.S., at more than 100,000 jobs per year.⁶⁵ However, it is important to note that projected job growth alone does not necessarily signal a professional shortage. This is especially true in light of the workforce data and analysis conducted by the National Center for Health Workforce Analysis of HRSA.

The HRSA publishes workforce data for supply and demand projections for health care workers. For supply modeling, the HRSA examines major components (beyond common labor-market factors like unemployment) including characteristics of the existing workforce in a given occupation, new entrants to the workforce (such as newly-trained workers), and workforce participation decisions (such as retirement and hours worked patterns). For demand modeling, the HRSA utilizes populations demographics, health care use patterns (which include the influence of increased insurance coverage), and demand for health care services (translated into requirements for full-time equivalents).⁶⁶

While the HRSA has projected a job growth of 39 percent for RNs nationwide, its projected increase in demand for RNs is only 28 percent.⁶⁷ In other words, its projections indicate that the supply of RNs in the U.S. will likely increase to 3,895,600 by 2030, outpacing their projected demand of 3,601,800 for a resulting surplus of 293,800 RNs.⁶⁸ According to the HRSA, only California, Texas, New Jersey, South Carolina, South Dakota, Georgia, and Alaska are estimated to have RN shortages by 2030.⁶⁹

Alternatively, the HRSA projects that LPNs will have a national supply growth of 26 percent.⁷⁰ However, unlike the RN projections, the projected supply of 1,016,700 LPNs by 2030 is not projected to outpace their projected 2030 demand of 1,168,200.⁷¹ This means that based on HRSA's projections, LPNs are likely to experience a shortfall of about 151,500 by 2030.⁷² Differing significantly from the RN figures, the HRSA projected that 33 states, including Pennsylvania, would see a shortfall for LPNs.⁷³

⁶⁴ United States Department of Labor, Bureau of Labor Statistics, "Occupational Outlook Handbook, 2012-13 Edition," (2012), <http://www.bls.gov/ooh/healthcare/registered-nurses.htm>; <http://www.bls.gov/ooh/healthcare/licensed-practical-and-licensed-vocational-nurses.htm>.

⁶⁵ American Nurses Association, "Workforce," <https://www.nursingworld.org/practice-policy/workforce/>.

⁶⁶ United States Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Workforce, National Center for Health Workforce Analysis, "Supply and Demand Projections of the Nursing Workforce: 2014-2030," (July 21, 2017), at p. 3, https://bhw.hrsa.gov/sites/default/files/bhw/nchwa/projections/NCHWA_HRSA_Nursing_Report.pdf.*Id.*

⁶⁷ *Id.* at p. 8

⁶⁸ *Id.*

⁶⁹ *Id.* at p. 10.

⁷⁰ *Id.* at p. 12.

⁷¹ *Id.*

⁷² *Id.* at p. 13.

⁷³ *Id.*

In Pennsylvania, the HRSA has projected a 5.1 percent RN surplus by 2030 in the amount of 8,200. The statewide projection for LPNs, however, showed a 27.8 percent shortfall of demand of 18,700 LPNs by 2030.⁷⁴ These 2017 projections illustrate a substantial decrease in RN surplus, along with a substantial increase in LPN shortfall of 17,600 and 16,390 respectively since the Commission completed its 2015 report, *Professional Bedside Nursing in Pennsylvania: A Staff Report*. That 2015 report cited the HRSA projections from 2014, which at the time, showed a surplus of 25,800 RNs by 2025 and a projected shortfall of 2,310 LPNs by the same year.⁷⁵ The substantial shift in these projections in such a short period of time has generated heavy skepticism among many health experts regarding nurse workforce projections in general.

However, it is not just the variation of the HRSA projections that is causing skepticism. Supply and demand projections for RNs have varied significantly in recent years depending on the forecaster. For instance, just five years prior to the 2017 HRSA projections, a forecast titled *United States Registered Nurse Workforce Report Card and Shortage Forecast* projected a national shortage of 923,631 RNs by 2030, a sharp contrast from the HRSA's projected RN surplus in 2017.⁷⁶ Another variation in projections can be found in a 2015 forecast from Georgetown University projecting a national shortage of 193,000 total nurses by 2020, of which 92,810 represented RNs.⁷⁷

Adding to widely divergent nurse projections is the possibility that the U.S. may be facing a mass exodus of nurses due to retirement. According to a 2013 survey conducted by both the National Council of State Boards of Nursing and The Forum of State Nursing Workforce Centers, more than half of the national RN workforce is 50 years of age or older.⁷⁸ Further, the American Nursing Association projects that more than one million RNs will reach the age of retirement within the next 10 to 15 years.⁷⁹ Further statistical data has indicated that over 500,000 seasoned RNs are anticipated to retire by 2022 and as a result, the BLS has projected that there will be a need for 1.1 million new RNs for the replacement of retirees.⁸⁰

More than half of the national RN workforce is 50 years of age or older.

The current economic and regulatory climate may also play a role in impacting nurse supply and demand. For example, recovery from the 2008-2009 economic recession could force health care institutions to reduce their RN workforce, resulting in a decrease in the number of available jobs for RN graduates and the possible discouraging of prospective

⁷⁴ "Supply and Demand Projections of the Nursing Workforce: 2014-2030," *supra* n. 66 at p. 9.

⁷⁵ JSGC, "Professional Bedside Nursing in Pennsylvania: A Staff Study," (April 2015), at p. 25.

⁷⁶ Stephen P. Juraschek *et al.*, "United States Registered Nurse Workforce Report Card and Shortage Forecast," *American Journal of Medical Quality* 27, no. 3 (2012): 241-249, at p. 244, doi: 10.1177/1062860611416634.

⁷⁷ Anthony P. Carnevale *et al.*, "Nursing Supply and Demand Through 2020," Georgetown University Center on Education and the Workforce, (2015), pp. 5-6.

⁷⁸ National Council of State Boards of Nursing, Inc., "National Nursing Workforce Study," <https://www.ncsbn.org/workforce.htm>.

⁷⁹ American Association of Colleges of Nursing, "Nursing Shortage Fact Sheet," (May 18, 2017), <https://www.aacnnursing.org/News-Information/Fact-Sheets/Nursing-Shortage>.

⁸⁰ American Nurses Association, "Workforce," *supra* n. 65.

nursing students in years to come. The ACA's expansion of health coverage to millions of uninsured Americans will continue to increase the demand for RN jobs, however, it may also limit compensation to health care providers and result in a potential reduction in RN salaries which could also discourage the number of individuals interested in pursuing a career in nursing. Despite these industrywide changes, the authors of the *United States Registered Nurse Workforce Report Card and Shortage Forecast* believe that there is a shortage of RNs and that it will persist.⁸¹

Another factor to consider regarding the nurse workforce supply is the current level of turnover occurring in health care facilities. A 2018 staffing report titled *2018 National Health Care Retention & RN Staffing Report* found that the U.S. is experiencing a national turnover average of 16.8 percent for bedside nurses, which has steadily increased since 2016. Moreover, national turnover for bedside RNs ranges from 6.6 percent to 28.7 percent depending on the state.⁸² The Nurses of Pennsylvania (NP), a non-profit advocacy group for nurses surveyed just over 1,000 bedside nurses across the Commonwealth in 2017. According to this survey, 94 percent of nurses opined that their facilities lack sufficient nursing staff and 87 percent further stated that staffing levels are affecting patient care.⁸³ Based on its survey report, the NP concluded that Pennsylvania is not necessarily experiencing a shortage of available nurses, but rather high job turnover and career attrition as a result of poor staffing decisions made by health facilities.⁸⁴ For instance, the NP's report claims that:

[T]he restructuring of the hospital industry over the last two decades and the evolution of hospitals – even nonprofits – as essentially big businesses has meant that hospitals are relentlessly pursuing ways to cut costs ever more deeply. Much of this cost cutting has come at the expense of what nurses need to provide the best bedside care, even while hospitals in Pennsylvania are experiencing increasing operating margins.⁸⁵

In support of its position, the NP cites the Pennsylvania Health Care Cost Containment Council's 2016 annual report (Figure 1), which shows that statewide operating incomes for state hospitals grew from 2.3 billion dollars in 2015 to 2.6 billion dollars in 2016.⁸⁶

⁸¹ Stephen P. Juraschek *et al.*, *supra* n. 76 at p. 246.

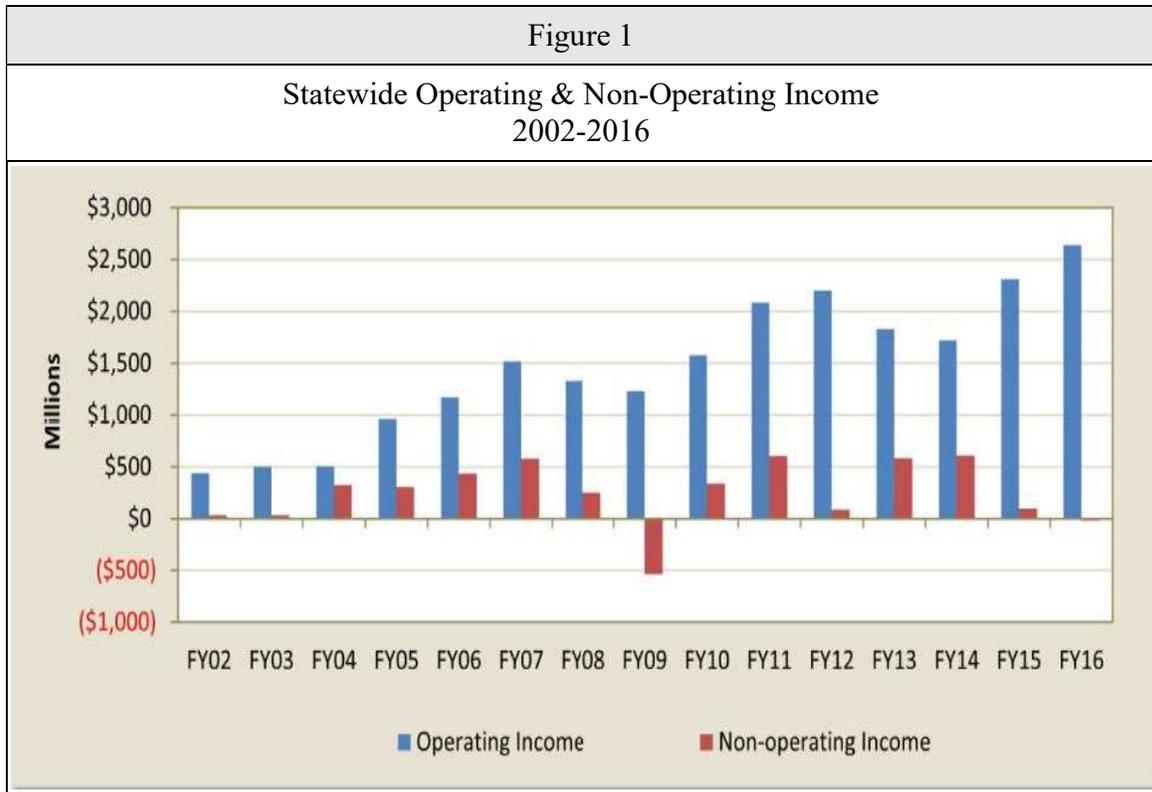
⁸² Brian Colosi, "2018 National Health Care Retention & RN Staffing Report," *NSI Nursing Solutions, Inc.*, (Mar. 2018), p. 7.

⁸³ Nurses of Pennsylvania, "Breaking Point: Pennsylvania's Patient Care Crisis Survey of 1,000 Pennsylvania Bedside Nurses," (Sept. 2017), p. 4, <https://www.nursesofpa.org/wp-content/uploads/2017/09/Nurses-of-Pa-Patient-Care-Crisis-Report.pdf>.

⁸⁴ *Id.* at p. 6.

⁸⁵ *Id.*

⁸⁶ *Id.*



Source: Nurses of Pennsylvania, “Breaking Point: Pennsylvania’s Patient Care Crisis Survey of 1,000 Pennsylvania Bedside Nurses,” (Sept. 2017), p. 6, <https://www.nursesofpa.org/wp-content/uploads/2017/09/Nurses-of-Pa-Patient-Care-Crisis-Report.pdf>,

According to the NP survey, about 84 percent of nurses reported a high rate of turnover in their facility.⁸⁷ Moreover, the NP opines that if the trend of “do more with less” continues, nurses will be increasingly stretched thin and an upward tick in nurses leaving the field due to burnout may continue.⁸⁸ This report will address nurse trend turnover and attrition in greater detail and will examine the perspectives of both nurses and hospital facilities in Recommendation #6.

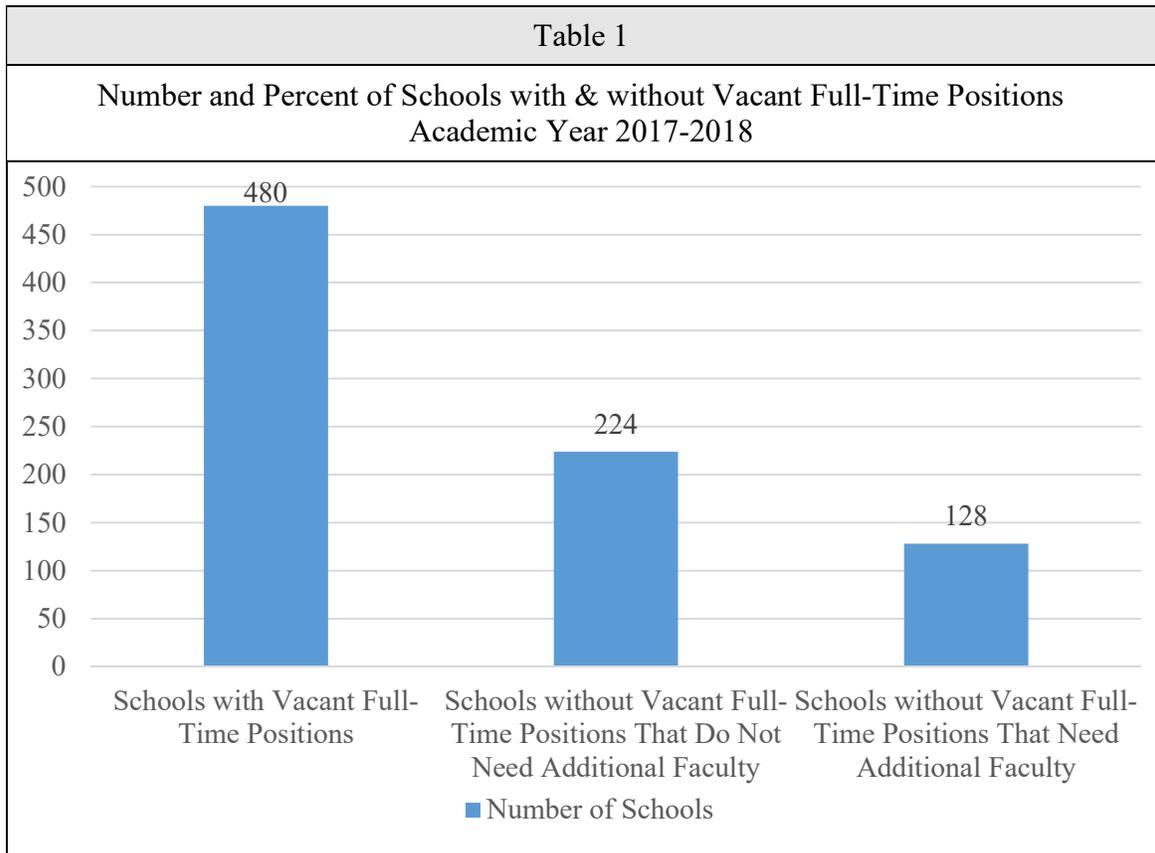
Another issue affecting Pennsylvania’s nursing supply is an increasing shortage of nursing faculty. According to the American Association of Colleges of Nurses’ (AACN) report, 2016-2017 Enrollment and Graduations in Baccalaureate and Graduate Nursing Programs in Nursing, U.S. nursing schools turned away 64,067 qualified applicants from baccalaureate and graduate nursing programs in 2016 due to a number of factors, including insufficient number of faculty, clinical sites, classroom space, clinical preceptors, and budget constraints.⁸⁹ A significant number of nursing schools have drawn attention to the faculty shortages as being the most significant reason for the failure to accept all qualified

⁸⁷ *Id.* at p. 4.

⁸⁸ *Id.* at p. 7.

⁸⁹ American Association of Colleges of Nursing, “2016-2017 Enrollment and Graduations in Baccalaureate and Graduate Programs in Nursing,” 2017, <http://www.aacnursing.org/News-Information/Fact-Sheets/Nursing-Faculty-Shortage>.

applicants into the programs.⁹⁰ Moreover, the AACN’s *Special Survey on Vacant Faculty Positions for Academic Year 2017-2018* identified a total of 1,565 faculty vacancies throughout 821 nursing schools with baccalaureate and/or graduate programs surveyed nationwide.⁹¹ Moreover, the survey also indicated a need to create an additional 133 faculty positions to accommodate student demand.⁹² A breakdown of the number and percentage of nursing schools nationwide with and without vacant full-time positions for academic year 2017-2018 is illustrated in Table 1.



Source: Compiled by the Commission from Yan Li, *et al.*, American Association of Colleges of Nursing, “Special Survey on Vacant Faculty Positions for Academic Year 2017-2018,” <https://www.aacnnursing.org/Portals/42/News/Surveys-Data/Vacancy17.pdf>.

Psychiatrists. A shortage of psychiatrists is also on the rise in Pennsylvania according to the National Council for Behavioral Health (NCBH).⁹³ According to the NCBH, an increasing demand for psychiatric services “is occurring at the same time as a

⁹⁰ *Id.*

⁹¹ Yan Li, *et al.*, American Association of Colleges of Nursing, “Special Survey on Vacant Faculty Positions for Academic Year 2017-2018,” <https://www.aacnnursing.org/Portals/42/News/Surveys-Data/Vacancy17.pdf>.

⁹² American Association of Colleges of Nursing, “Nursing Faculty Shortage Fact Sheet,” (Apr. 26, 2017), <https://www.aacnnursing.org/News-Information/Fact-Sheets/Nursing-Faculty-Shortage>.

⁹³ National Council for Behavior Health, “The Psychiatric Shortage: Causes and Solutions,” (March 28, 2017), https://www.thenationalcouncil.org/wp-content/uploads/2017/03/Psychiatric-Shortage_National-Council-.pdf.

growing shortage of outpatient and inpatient programs.”⁹⁴ Further, the NCBH report cites the HRSA projections based on 2013 health care delivery and staffing patterns that indicate the U.S. was 6.4 percent short of the psychiatrists needed to fill its demand. This deficit is predicted to increase to 12 percent by the year 2025.⁹⁵ The NCBH report notes that “under a different methodology based on survey data on the population identifying a treatment need, the demand for psychiatry will outstrip supply by 15,600 psychiatrists, or 25 percent, in 2025.”⁹⁶ In 2018, the HRSA reported that based on the 2016 supply of psychiatrists, the U.S. was experiencing a shortfall of 9,050 psychiatrists.⁹⁷ Under one scenario, the HRSA projected that this shortfall could increase to 17,430 by 2030.

In 2015, it was estimated that more than one million adults (age 18 and older) in Pennsylvania had experienced serious psychological distress within a 12-month period.⁹⁸ Statistics from the Substance Abuse and Mental Health Services Administration have shown that 17.98 percent of Pennsylvanians 18 years of age and older have experienced some form of mental illness in a 12-month period.⁹⁹ Of those individuals, only 16.39 percent received any mental health services¹⁰⁰ within the year prior to being surveyed.¹⁰¹ Map 2 further illustrates that Pennsylvania is among a number of states meeting only 38.73 to 51.71 percent of its demand for mental health professionals.¹⁰² Map 3 shows that Pennsylvania is among many other states with a severe shortage of practicing child and adolescent psychiatrists, having a ratio of between one and 17 psychiatrists per 100,000 residents.¹⁰³ Moreover, 14 percent of the total population of Pennsylvania, or 1,832,032 people, resides in designated mental health professional shortage areas.¹⁰⁴

Pennsylvania is among a number of states meeting only 38.73 to 51.71 percent of its demand for mental health professionals.

⁹⁴ *Id.* at p. 5.

⁹⁵ *Id.* at p. 15.

⁹⁶ United States Department of Health and Human Services, Health Resources and Services Administration, “State-Level Projections of Supply and Demand for Behavioral Health Occupations: 2016-2030,” (Sept. 2018).

⁹⁷ *Id.*

⁹⁸ Hanke Heun-Johnson, *et al.*, “The Cost of Mental Illness: Pennsylvania Facts and Figures,” USC Schaeffer Center for Health Policy & Economics, (Feb. 2017), p. 9.

⁹⁹ Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, “Natl Surveys on Drug Use and Health: Model-Based Prevalence Estimates (50 States and the District of Columbia) 2016-2017,” p. 57, <https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHsaePercentsExcelCSVs2017/NSDUHsaePercents2017.pdf>.

¹⁰⁰ “Mental health services” for the purposes of the referenced survey was defined as having inpatient treatment/counseling or having used prescription medication for problems with emotions, nerves, or mental health. Respondents in the survey were not to include treatment for drug or alcohol use.

¹⁰¹ Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality, *supra* n. 99 at p. 59.

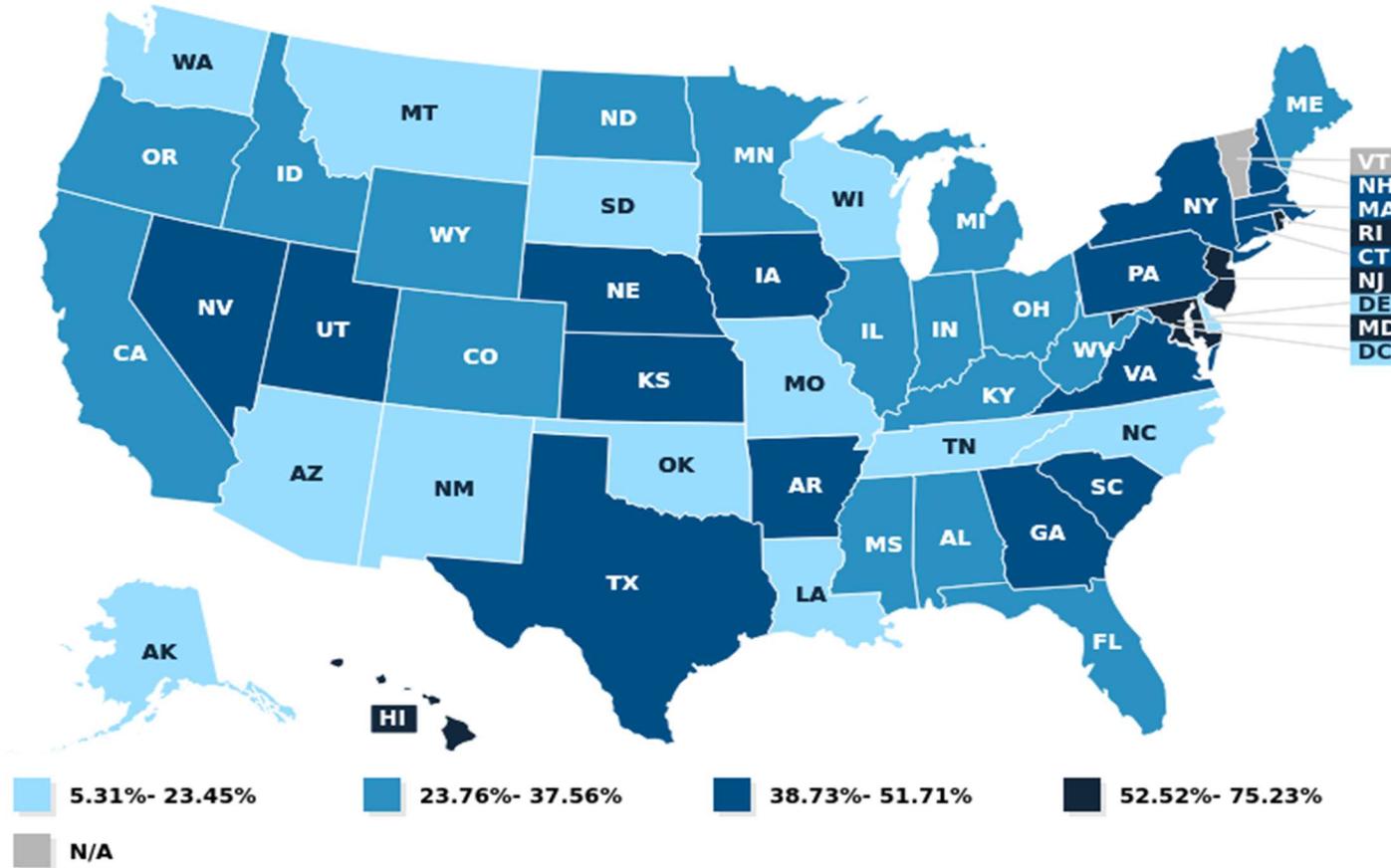
¹⁰² National Council for Behavior Health, “The Psychiatric Shortage: Causes and Solutions,” (March 28, 2017), p. 17, https://www.thenationalcouncil.org/wp-content/uploads/2017/03/Psychiatric-Shortage_National-Council-.pdf.

¹⁰³ *Id.* at p. 18.

¹⁰⁴ Health Professional Shortage Areas (HPSA), “HRSA Data Warehouse,” (July 31, 2016).

Map 2

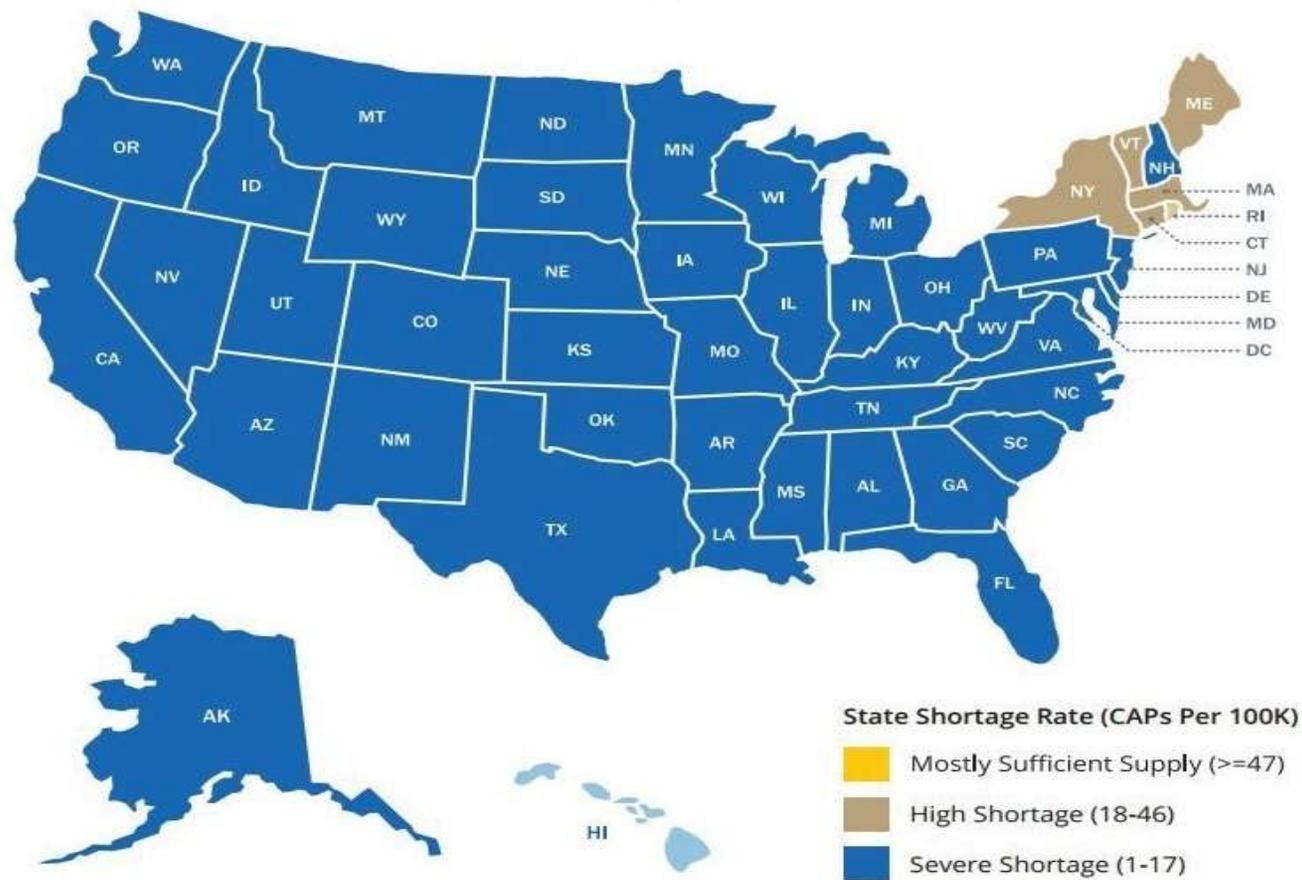
Mental Health Care Health Professional Shortage Areas (HPSAs):
Percent of Need Met, as of December 31, 2017



Source: National Council for Behavioral Health, "The Psychiatric Shortage: Causes and Solutions," (March 28, 2017) at p. 17, https://www.thenationalcouncil.org/wp-content/uploads/2017/03/Psychiatric-Shortage_National-Council-.pdf.

Map 3

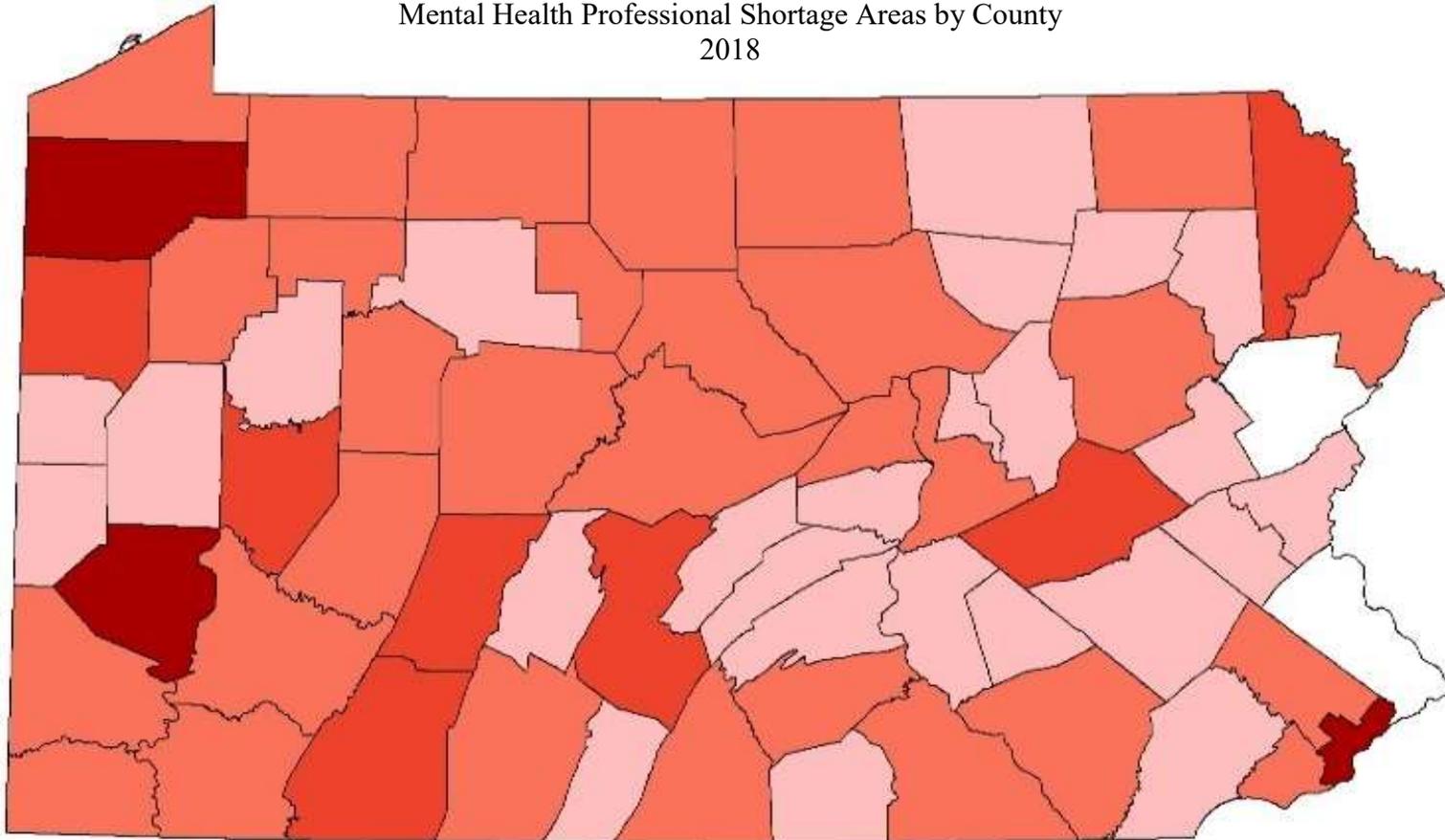
Practicing Child & Adolescent Psychiatrists by State 2015



Source: National Council for Behavioral Health, "The Psychiatric Shortage: Causes and Solutions," (Mar. 28, 2017), https://www.thenationalcouncil.org/wp-content/uploads/2017/03/Psychiatric-Shortage_National-Council-.pdf, at p. 18

Map 4

Mental Health Professional Shortage Areas by County
2018



HPSA Count 0 1 - 4 5 - 11 12 - 24 25 - 46

Source: United States Department of Health and Human Services, Health Resources and Services Administration, Data Warehouse, (July 2018), <https://datawarehouse.hrsa.gov/topics/shortageAreas.aspx#chart>.

Map 4 shows Pennsylvania’s mental Health Professional Shortage Areas (HPSAs) as of 2018.

A number of factors have contributed to the shortage, although one major factor in particular is the difficulty in attracting individuals to join the field of mental health in large part because mental health providers are frequently reimbursed at lower rates than physical health providers and are more frequently employed by institutions struggling to cover salaries.¹⁰⁵ Mental health professionals also face high levels of burnout within their field.¹⁰⁶

Dental Health Professionals. Pennsylvania is also seeing a shortage of dental health professionals, such as dentists and dental hygienists. According to the National Conference of State Legislatures, between 15 and 19.9 percent of the Commonwealth’s population is living in a dental HPSA. This shortage is not only found in Pennsylvania, as more than 45 million Americans nationwide live in dental HPSAs lacking enough dentists to adequately serve the needs of the population. An aging and dwindling dental workforce, coupled with a low number of graduating dental students who intend to practice in rural or urban underserved areas are some of the contributing factors to the dental HPSAs.¹⁰⁷ Map 5 illustrates the percentage of each state’s population living in dental HPSAs.

¹⁰⁵ National Council for Behavior Health, *supra* n. 93 at p. 19.

¹⁰⁶ *Id.* at p. 37.

¹⁰⁷ National Conference of State Legislatures, “Dental Health Professional Shortage Areas,” (May 2014).

Health Care Workforce Needs

The Commission staff has identified a number of needs facing Pennsylvania in light of the aforementioned shortages of health care professionals and disparities among Pennsylvanians' access to quality health care. This section is designed to serve as an introductory summary of these needs. The following sections will be discussed in greater detail and provide recommendations for addressing each need. It should be noted that while the recommendations in this report correspond to each individual need listed below, some of these needs can be addressed by more than one of the recommendations that will follow. To address the current state of its health care workforce, the General Assembly should be cognizant of the following needs.

Earlier educational exposure and preparation

Health care representatives in discussion with Commission staff have almost universally agreed that Pennsylvania must find new innovative ways to attract and incentivize health care professionals to not only practice in the Commonwealth, but to remain in Pennsylvania long term. There is a need to encourage and facilitate earlier educational exposure to and preparation for entrance into the health care field in order to attract more qualified individuals to pursue health care professions. In addition to attracting more individuals who are qualified to join Pennsylvania's health care workforce, earlier educational exposure to the health care field could also help eliminate the growing disparities in access to health care for rural and underserved areas.

Increase diversity

Another important need, largely intertwined with the need for earlier educational exposure and preparation, is the need to foster greater diversity within the health care workforce, most notably in the field of practicing physicians. Like most other states within the U.S., only a small portion of both medical school applicants and matriculants are minorities. In this report, the Commission staff addresses the extent to which greater diversity within the health care workforce can help close the gap in health care access to underserved communities and the potential mechanisms by which the General Assembly can achieve greater diversity. As will be explained in greater detail below, encouraging earlier educational exposure to and training for the health care field can help the Commonwealth address this need for greater diversity.

Reduce the financial burdens of student loan debt

Another common health care workforce need, consistently identified through the Commission staff's discussion with health care representatives as well as the staff's own supplemental research, was the need to address the growing student loan debt associated with

many health professions. Like earlier educational exposure and preparation, addressing the educational debt of health care practitioners could also serve as an incentivizing tool to eliminate or mitigate the disparities in access to health care for rural and underserved areas.

Retain and entice more physicians educated within the Commonwealth to practice in Pennsylvania

It may not be surprising that Pennsylvania has been ranked in the lower half of the country when it comes to retaining physicians given the fact that the Commonwealth is experiencing a significant shortage in physicians. Pennsylvania needs to find new ways to increase its retention rate of new physicians graduating from within the Commonwealth.

Encourage advanced nursing degrees and nurse faculty positions

Nurses play a significant role in the health care workforce both nationally and within the Commonwealth. The growing needs of patients have become increasingly more complex, resulting in a demand for highly skilled nurses. In addition, nurses, if trained and educated properly, can assist in filling certain gaps within the physician workforce shortage in Pennsylvania. For the foregoing reasons, the Commonwealth should help create new ways to incentivize nursing professionals to seek advanced nursing degrees and careers as nurse educators.

Attract more qualified physicians from outside the U.S.

Given Pennsylvania's growing physician shortfall, working to attract more qualified individuals from within Pennsylvania may not be enough to build a healthy physician workforce. Consequently, the Commonwealth should also focus on encouraging and incentivizing qualified physicians and medical school graduates from outside the U.S. to join its health care workforce.

Reduce nurse attrition and turnover

Nurses account for the nation's largest health-related labor force. Unfortunately, nurse supply fluctuates in many health facilities, and many newly licensed nurses entering the workforce find themselves changing jobs or leaving the nursing field altogether. Consequently, Pennsylvania needs to direct some of its attention to reducing the nurse attrition and turnover that is becoming a significant issue in many of its health care facilities and the impact on the quality of care those facilities provide. To ignore the current level of attrition and turnover among nurses could result in an even higher disparity of access to quality health care among Pennsylvanians.

Increase the role of non-physician practitioners

The Commonwealth should also encourage the increased use of non-physician practitioners, like nurse practitioners and physician assistants within its health care workforce. Many health experts agree that nurse practitioners and physician assistants have the skill and training to fill some of the treatment gaps existing in Pennsylvania as a result of a substantial undersupply of physicians. Moreover, filling some of these treatment gaps through increased use of qualified health professionals such as nurse practitioners and physician assistants can further strengthen the health care workforce by reducing the impact of Pennsylvania's physician shortage.

Encourage the expanded use of technology

Advances in technology have improved the speed in which people communicate, travel, and purchase consumer goods and services. Today, people can teleconference in on meetings with other individuals by using broadband networks and television monitoring devices without leaving the comfort of their home. Technology has also made it possible for people to purchase food, clothing, and other essential and non-essential products with the click of a button. Many health professionals agree that increased use of technology can help bridge the gap in health care access for many Pennsylvania residents in underserved areas. Keeping this in mind, Pennsylvania needs to encourage the expanded use of health-related technology among its health care providers.

Attract and retain more long-term care workers

Long-term care facilities, often referred to as nursing homes, employ registered nurses, licensed practical nurses, and certified nursing assistants. These facilities and their workforce provide important care to many of the Commonwealth's senior residents. However, these facilities are having a difficult time finding adequate staff to provide the care required for their patients. Pennsylvania needs to discover new methods to not only attract health care workers to work at long-term care facilities, but to also incentivize these workers to stay once they become employed. This is especially true given the growth of Pennsylvania's senior population.

Reduce deterrents to practicing psychiatry

In the U.S., the demand for mental health services is rapidly rising while the supply of licensed psychiatrists is struggling to keep up. With high levels of burnout and low reimbursement rates, many physicians have avoided a career in psychiatry. The Commonwealth must work to eliminate or reduce some of the issues that ultimately discourage qualified physicians from practicing in the field of psychiatry.

Reduce employer restrictions on physicians' mobility to practice

The increasing shortage of physicians in health care facilities in both rural and underserved areas of the Commonwealth should be a top priority for the General Assembly. Employers of physicians, such as hospitals and other health facilities often try to restrict the geographical area in which a physician can practice if the physician decides to end his or her employment. Such restrictions can result in physicians leaving the Commonwealth to practice medicine in another state in order to avoid running afoul of contractual restrictions on post-employment practice, especially in light of the multiple consolidations occurring between large health systems throughout Pennsylvania. In order to retain more physicians within the Commonwealth, the General Assembly needs to consider reducing employers' ability to restrict a physician's right to practice after terminating his or her employment with said employer.

Improve workforce data collection

If the General Assembly wants to employ serious efforts to strengthen the Commonwealth's health care workforce, it needs a more accurate and localized description of its health care workforce. Numerous health professionals within Pennsylvania have agreed that simply relying on state health care statistics collected by federal agencies such as the U.S. Health Resources and Services Administration, the Association of American Medical Colleges, and the Bureau of Health Planning is not enough to obtain a complete and reliable picture of Pennsylvania's own health care workforce. Exploring new ways to improve workforce data collection through statewide and localized efforts will help provide Pennsylvania with the necessary tools to ultimately improve the current state of its health care workforce and support it moving forward.

Health Care Workforce Recommendations

The following recommendations are intended to assist the Commonwealth in addressing the needs mentioned above to help improve its current health care workforce, which suffers from significant shortages of health care professionals as well as an increasing gap in access to health care. Moreover, many of these recommendations are also designed to specifically help the Commonwealth more adequately train, attract, and retain its health care professionals.

Recommendation #1:

Create State Pipeline Programs to Increase Minority Participation in the Health Care Workforce and Expand Support for Existing Pipeline Programs

As mentioned above, the growing shortfall of health professionals and the disparities in access to quality health care in Pennsylvania warrants a statewide push for earlier educational exposure and training to health-related professions. However, before evaluating

the potential method to make this possible, it is important to understand the underrepresentation occurring in the health field, most notably among physicians, that contribute to these shortages and disparities.

Disparities in Student Preparation within Minority Communities

In its 2015 report, *The Physician Shortage in Pennsylvania*, the Commission staff posited that many students are underprepared for careers in medicine, especially those students from rural areas, racial/ethnic minority groups, and disadvantaged students.¹⁰⁸ Moreover, there has always been a significant underrepresentation of minorities in health professions generally in the U.S. For example, the proportion of underrepresented minorities ranged from 9.9 percent among pharmacists in 2000 to 5.4 percent among dentists in 2003.¹⁰⁹

As mentioned previously, one of the most notable underrepresentation of minority individuals in health is occurring in the physician field. For the 2018-2019 academic year, there were 52,777 applicants applying to medical schools in the U.S. According to the Association of American Medical Colleges (AAMC), 21,622 students matriculated into medical schools across the country.¹¹⁰ Of this number, only 1,805 (or 8.3 percent) represented African American, Native American, and Hispanic students cumulatively.¹¹¹ In a recent report, the AAMC collected data for the 2018-2019 academic year indicating that, of the 1,646 applicants with legal residence in Pennsylvania, a total of 757 applicants matriculated to medical school.¹¹² Further, of those 789 matriculants, only 43 individuals were African American and only 15 were Hispanic, which equates to roughly a seven percent proportion of underrepresented minorities.¹¹³ The data also showed no American Indian or Alaskan Native matriculants, and no Native Hawaiian or other Pacific Islander matriculants. For a visual breakdown of the foregoing data, see Table 2.

¹⁰⁸ JSGC, *The Physician Shortage in Pennsylvania*, *supra*, n. 57 at p. 24.

¹⁰⁹ Kevin Grumbach and Rosalia Mendoza, "Disparities in Human Resources: Addressing the Lack of Diversity in the Health Professions," *Health Affairs* 27, no. 2 (Mar. /Apr. 2008): 413-422, at p. 414. doi: 10.1377/hlthaff.27.2.413.

¹¹⁰ Association of American Medical Colleges, "Table A-1: U.S. Medical School Applications and Matriculants by School, State of Legal Residence, and Sex, 2015-2016 Through 2018-2019," (Nov. 9, 2018), <https://www.aamc.org/download/321442/data/factstablea1.pdf>.

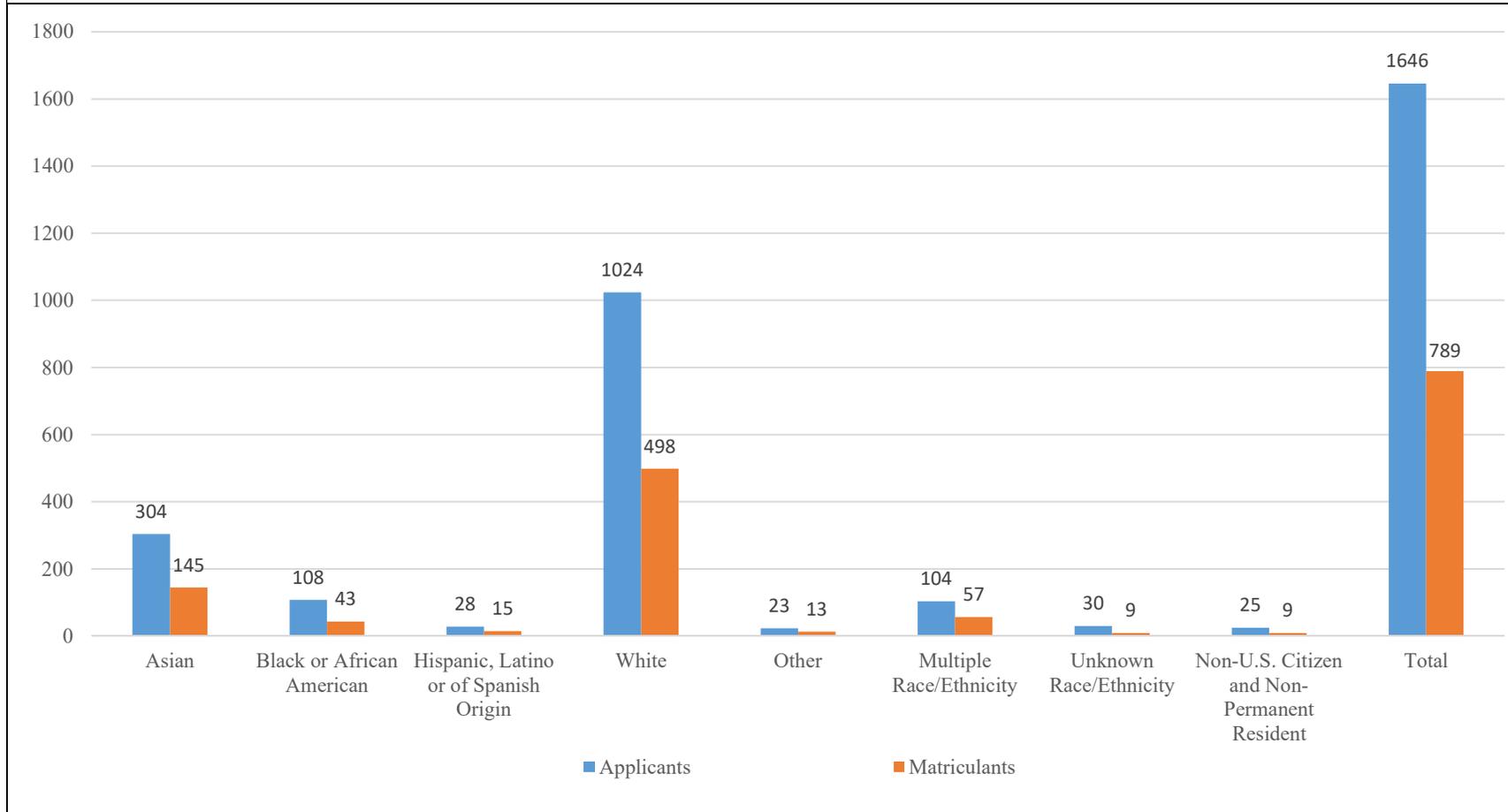
¹¹¹ Association of American Medical Colleges, "Table A-9: Matriculants to U.S. Medical Schools by Race/Ethnicity and State of Legal Residence, 2015-2016 Through 2018-2019," (Nov. 9, 2018), <https://www.aamc.org/download/321474/data/factstablea9.pdf>.

¹¹² Association of American Medical Colleges, "Table A-10: Applicants to U.S. Medical Schools by Race/Ethnicity and State of Legal Residence, 2018-2019," (Nov. 9, 2018), <https://www.aamc.org/download/321476/data/factstablea10.pdf>; Association of American Medical Colleges, "Table A-11: Matriculants to U.S. Medical Schools by Race/Ethnicity and State of Legal Residence, 2018-2019," (Nov. 9, 2018), <https://www.aamc.org/download/321478/data/factstablea11.pdf>.

¹¹³ Association of American Medical Colleges, "Table A-11: Matriculants to U.S. Medical Schools by Race/Ethnicity and State of Legal Residence, 2018-2019," (Oct. 22, 2018), <https://www.aamc.org/download/321478/data/factstablea11.pdf>.

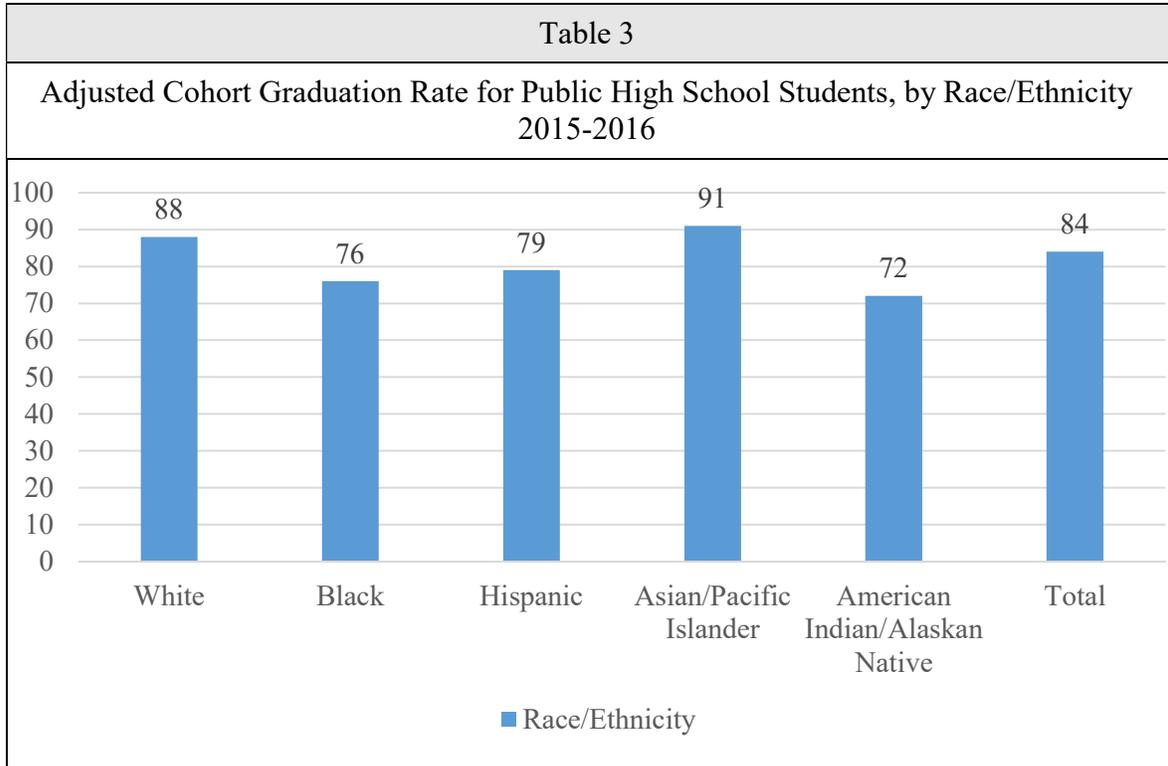
Table 2

Applicants & Matriculants to U.S. Medical Schools by Race/Ethnicity with Legal Residence in Pennsylvania
2018-2019



Source: Compiled by the Commission from Association of American Medical Colleges, “Table A-10: Applicants to U.S. Medical Schools by Race/Ethnicity and State of Legal Residence, 2018-2019,” (Nov. 9, 2018), <https://www.aamc.org/download/321476/data/factstablea10.pdf>; “Table A-11: Matriculants to U.S. Medical Schools by Race/Ethnicity and State of Legal Residence, 2018-2019,” (Nov. 9, 2018), <https://www.aamc.org/download/321478/data/factstablea11.pdf>.

Probably the largest impediment to a richer level of diversity in health professions is the general lack of sufficient primary education between kindergarten and 12th grade in the U.S., most notably within minority and low-income communities.¹¹⁴ This fact is supported by the adjusted cohort graduation rate (ACGR) data for U.S. public high school students collected by the National Center for Education Statistics, as shown in Table 3, which provides that African American and Hispanic graduation rates were 76 percent and 79 percent respectively, compared to their White counterparts who had a graduation rate of 88 percent.¹¹⁵ It is worth noting that this data is of a national scope and is not specific to Pennsylvania.



Source: Compiled by the Commission from National Center for Educational Statistics, “Figure 2, Adjusted cohort graduation rate (ACGR) for public high school students, by race/ethnicity: 2015-2016,” (May, 2018), https://nces.ed.gov/programs/coe/pdf/coe_coi.pdf.

¹¹⁴ Kevin Grumbach and Rosalia Mendoza, *supra* n. 109 at p. 416.

¹¹⁵ National Center for Educational Statistics, “Figure 2, Adjusted cohort graduation rate (ACGR) for public high school students, by race/ethnicity: 2015-2016,” (May, 2018), https://nces.ed.gov/programs/coe/pdf/coe_coi.pdf. State agencies calculate the ACGR by identifying the “cohort” of first-time 9th graders in a particular school year. The cohort is then adjusted by adding any students who transfer into the cohort after 9th grade and subtracting any students who transfer out, emigrate to another country, or die. The ACGR is the percentage of students in this adjusted cohort who graduate within 4 years with a regular high school diploma. The U.S. Department of Education first collected the ACGR in 2010-2011.

To alleviate Pennsylvania’s physician shortage and the disparities causing it, the Commission’s 2015 report recommended the creation of a state pipeline program designed to better prepare students for medical careers. As the report pointed out, such programs have been established in many different forms nationwide.¹¹⁶ Generally, these programs provide outreach to students in elementary schools, high schools dedicated to science education, rural communities, and baccalaureate students preparing for medical school admission. Studies have consistently shown that pipeline programs are associated with positive outcomes for racial and ethnic minority and disadvantaged students on several meaningful metrics such as academic performance and the likelihood of enrolling in a health professions school.¹¹⁷

Increasing the participation of minority and disadvantaged students in health professions is important to addressing the health care workforce shortages because there is strong data indicating that racial, ethnic, and linguistic diversity among health professionals is associated with better access to and quality of care for disadvantaged populations.¹¹⁸ For example, many medically underserved areas are minority communities. Moreover, research has demonstrated that racial and ethnic minority health care providers are more likely to serve these underserved minority communities than are their White counterparts. This trend is also true with dentists and psychologists, and underscores the notion that increasing the number of minority health professionals practicing in the Commonwealth could play a role in reducing the shortages of health professionals within Pennsylvania.¹¹⁹

To encourage more students to become physicians, the Advisory Committee formed pursuant to House Resolution No. 735 of 2014 advised the Commission’s staff that to implement such a pipeline program the state should offer grants to encourage schools to establish medical programs. According to the Advisory Committee, the grants should be available to schools or communities with demonstrated health care, academic, or financial needs, such as schools in rural or low-income areas, or with high minority populations, as opposed to schools that already have the resources to implement such programs. Specifically, the target grades for these programs were recommended to be the upper grades of nine through twelve and it was further recommended that these programs have highly

To encourage more students to become physicians, the Advisory Committee formed pursuant to House Resolution No. 735 of 2014 advised the Commission’s staff that to implement such a pipeline program the state should offer grants to encourage schools to establish medical programs.

rigorous and selective admissions processes to ensure that the students are of the caliber that will go on to practice medicine in Pennsylvania.¹²⁰ Pipeline

¹¹⁶ JSGC, “The Physician Shortage in Pennsylvania,” *supra* n. 57 at p. 24.

¹¹⁷ United States Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions and Department of Health and Human Services, Office of Public Health and Science, Office of Minority Health, “Pipeline Programs to Improve Racial and Ethnic Diversity in the Health Professions: An Inventory of Federal Programs, Assessment of Evaluation Approaches, and Critical Review of the Research Literature,” (Apr. 2009), at p. iii.

¹¹⁸ Kevin Grumbach and Rosalia Mendoza, *supra* n. 109 at p. 413.

¹¹⁹ Sonya G. Smith *et al.*, “Pipeline Programs in the Health Professions, Part 1: Preserving Diversity and Reducing Health Disparities,” *Journal of the Natl Medical Assn* 101, no. 9 (Sept. 9, 2009): 836-40, 845-51, at p. 836, <https://pdfs.semanticscholar.org/5836/4bf89dbeb6180f9c1e004a6e82cac433d734.pdf>.

¹²⁰ JSGC, “The Physician Shortage in Pennsylvania,” *supra* n. 57 at p. 25.

programs should be expanded beyond the physician workforce to include nursing, pharmacy, social workers, and other health related professions.

Existing Pipeline Programs Across the U.S.

Pipeline programs should also target college and graduate school levels. One example is the Health Professions Partnership Initiative, a summer program co-sponsored by the Robert Wood Johnson Foundation and the W.K. Kellogg Foundation which operated between 1995 and 2005. In an effort to increase minority participation in all health professions, the program sought to enhance the academic preparation of minority students and nurture their interest in health careers by engaging academic health centers to create partnerships with local school districts, colleges, and community organizations to develop strategies to increase minority participation in training for and entrance to health professions.¹²¹ A review of the program's results concluded that participants in the program had 70 percent greater odds than minority students who had not participated in gaining admission to medical school.¹²²

The Bureau of Health Professions (BHP), a part of the U.S. Health Resources and Services Administration (HRSA) within the U.S. Department of Health and Human Services (HHS), administers programs that work to expand opportunities for underrepresented minorities and disadvantaged students in health professions.¹²³ For example, the BHP coordinates a pipeline program known as Health Careers Opportunity Program (HCOP) which targets a wide range of health professions such as medicine, dentistry, nursing, public health, allied health, and pharmacy. The HCOP provides grants to eligible accredited health professions schools and public and private non-profit health or educational entities.¹²⁴

The purpose of the HCOP is to: promote the recruitment of qualified individuals (students and adult/non-traditional students, including veterans) from disadvantaged backgrounds into health professions programs; improve retention and matriculation rates by implementing tailored enrichment programs designed to address the academic and social needs of disadvantaged trainees; and provide opportunities for community-based health professions training, emphasizing experiences in underserved communities.¹²⁵

Some pipeline programs are designed to increase minority and disadvantaged students' participation in medical school by focusing specifically on the Medical College

¹²¹ MB Geisz, Health Professions Partnership Initiative, Robert Wood Johnson Foundation, "Program Results Report," (Sept. 9, 2009), <https://www.rwjf.org/en/library/research/2009/09/health-professions-partnership-initiative.html>.

¹²² Kevin Grumbach and Rosalia Mendoza, *supra* n. 109 at p. 417.

¹²³ United States Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions and Department of Health and Human Services, Office of Pub. Health and Science, Office of Minority Health, "Pipeline Programs to Improve Racial and Ethnic Diversity in the Health Professions: An Inventory of Federal Programs, Assessment of Evaluation Approaches, and Critical Review of the Research Literature," (Apr. 2009), at p. 2.

¹²⁴ United States Department of Health, Health Resources and Services Administration, Bureau of Health Professionals, "Health Careers Opportunity Program," (Mar. 2018), <https://bhwh.hrsa.gov/fundingopportunities/?id=7ac73271-d9de-49f3-b196-be1444208c90>.

¹²⁵ *Id.*

Admissions Test (MCAT), which has historically been a challenge and barrier for many disadvantaged students. The MCAT exam is a standardized, multiple-choice exam that has been a key part of the medical school admissions process for 90 years.¹²⁶ The MCAT is designed to test applicants on the skills and knowledge medical educators and physicians have identified as key prerequisites for success in medical school and the practice of medicine.¹²⁷ An example of this kind of pipeline program was conducted by the Indiana University School of Medicine. The school offered a ten-week intensive MCAT preparatory program for disadvantaged and underrepresented minority students. The goal of the program was to increase cognitive abilities that would improve the students' performance on the MCAT by engaging the students with weekly lectures covering biology, chemistry, organic chemistry, physics, and verbal reasoning for five days a week. In administering the program, the school surveyed four cohorts between 2003 and 2006 and found cognitive gains. On average, the participants raised their MCAT scores by three points.¹²⁸

Existing Programs in Pennsylvania

Some schools of medicine within Pennsylvania have begun implementing their own pipeline programs to increase the number of underrepresented populations within the field of medicine and more broadly, health care. For example, Penn State's College of Medicine administers a program known as the Short-Term Educational Program for Underrepresented Persons (STEP-UP). This program is primarily for underrepresented undergraduate students, including African American, Hispanic American, American Indian, Alaskan Native, Native Hawaiian, and other Pacific Islanders, who have completed at least their first year of college. Through the STEP-UP program, eligible students conduct basic or clinical research with experienced faculty throughout a ten week summer program. Focus areas in the program include diabetes, nutrition and obesity, and digestive, kidney, and hematological diseases.¹²⁹

Penn State's College of Medicine also administers a pipeline program called the Health Careers Exploration Program (HCEP). The HCEP program is intended to expose high school students to health care careers through observation, interactive seminars, problem-based learning sessions, and shadowing opportunities. Eligibility for the program is restricted to incoming seniors who attend schools in closer proximity to Penn State's Hershey Medical Center in central Pennsylvania. These schools include Central Dauphin, Central Dauphin East, Harrisburg, Harrisburg Sci-Tech, Hershey, Lower Dauphin, Middletown, and Steelton-Highspire.¹³⁰

¹²⁶ Association of American Medical Colleges, "The MCAT Essentials for Testing Year 2018," (Aug. 2017), p. 6, https://aamc-orange.global.ssl.fastly.net/production/media/filer_public/c3/de/c3de3536-7c7b-4318-99cc-431376ec23dc/essentials_2018_final_feb2018.pdf.

¹²⁷ *Id.*

¹²⁸ Obed Figueroa, Med Education Online, "The Significance of Recruiting Underrepresented Minorities in Medicine: An Examination of the Need for Effective Approaches Used in Admissions by Higher Education Institutions," (Sept. 4, 2014), <http://med-ed-online.net/index.php/meo/article/view/24891>. *Id.*

¹²⁹ Penn State College of Medicine, "Diversity, Equity and Inclusion," <https://med.psu.edu/diversity/pipeline-programs>.

¹³⁰ *Id.*

It is worth noting that the Pennsylvania Department of Health (DOH) does currently provide support in the form of grant funds to the Bridging the Gaps Community Health Internship Program (BTG CHIP), which provides a paid community-based summer internship program designed to help students representing health and social services disciplines gain a broader understanding of the factors that affect health in underserved and economically disadvantaged communities.¹³¹ The Philadelphia academic health centers including Drexel University, Philadelphia College of Osteopathic Medicine, Temple University, Thomas Jefferson University, and the University of Pennsylvania. The program is also available at Bryn Mawr College, the University of the Sciences, Lake Erie College of Osteopathic Medicine, and the University of Pittsburgh.¹³²

Summary

While the DOH does provide grant money to the BTG CHIP program, the General Assembly should consider the implementation of a statewide pipeline program that directly targets younger underrepresented students in high schools, as well as first-year college students. Such a program should be designed to foster development of underrepresented students into all fields of health care including physicians, nurses, pharmacists, and psychologists. The General Assembly should also consider expanding its issuance of grants to more educational institutions at the high school and college level to create and support pipeline programs that will expose more minority and underrepresented students from both low-income urban and rural areas to potential career options in health care like the HCEP program. Pipeline programs, if properly overseen could help bring more diversity to the health care workforce and could reduce the critical needs in underserved urban and rural areas in the Commonwealth.

Recommendation #2: Increase Length of Service Commitments and Repayment Award Amounts for Loan Repayment Programs

Another issue facing many of the Commonwealth's health care professionals is the large amount of student loan debt many accumulate during the course of their studies. In the U.S., aggregate student loan debt topped \$1.3 trillion in 2016.¹³³ By fall of 2018, student loan debt reached \$1.4 trillion and was surpassing all other forms of non-mortgage debt held by Americans.¹³⁴

By fall of 2018, student loan debt reached \$1.4 trillion and was surpassing all other forms of non-mortgage debt held by Americans.

¹³¹ E-mail from Edward Naugle, Dir., Div. of Health Professions Development, Pennsylvania Department of Health, Bureau of Health Planning; Bridging the Gaps, (2019), <https://www.med.upenn.edu/btg/#>.

¹³² Bridging the Gaps, (2019), <https://www.med.upenn.edu/btg/#>.

¹³³ Federal Reserve, "Student Loan Debt and Aggregate Consumption Growth," (Feb. 21, 2018). <https://www.federalreserve.gov/econres/notes/feds-notes/student-loan-debt-and-aggregate-consumption-growth-20180221.htm>.

¹³⁴ New York Federal Reserve Bank, "Quarterly Report on Household Debt and Credit 2018: Q3," (Nov. 2018), https://www.newyorkfed.org/medialibrary/interactives/householdcredit/data/pdf/HHDC_2018Q3.pdf.

One possible method of incentivizing more qualified students into the health care workforce would be to increase the financial support provided by Pennsylvania's loan repayment programs. Loan repayment programs are extremely enticing incentives for health care professionals given the high cost of health care education and training. In 2015, *The Physician Shortage in Pennsylvania* report recommended the increasing of financial support for the Pennsylvania's Primary Health Care Practitioners Program within the Department of Health.¹³⁵

To emphasize the need for increased funding to the program, the report cited the Association of American Medical Colleges (AAMC) statistics illustrating that the medical school class of 2012 reported a median education debt of \$170,000, with 86 percent of the class having education debt.¹³⁶ Unfortunately, this number has increased significantly since the 2012 statistics.

Educational Debt for Physicians

When adding on an average undergraduate balance of \$25,000, the average amount of student loan debt for a doctor was \$205,000.

According to the AAMC, the average medical school debt for physicians graduating in 2016 was just above \$190,000. When adding on an average undergraduate balance of \$25,000, the average amount of student loan debt for a doctor was

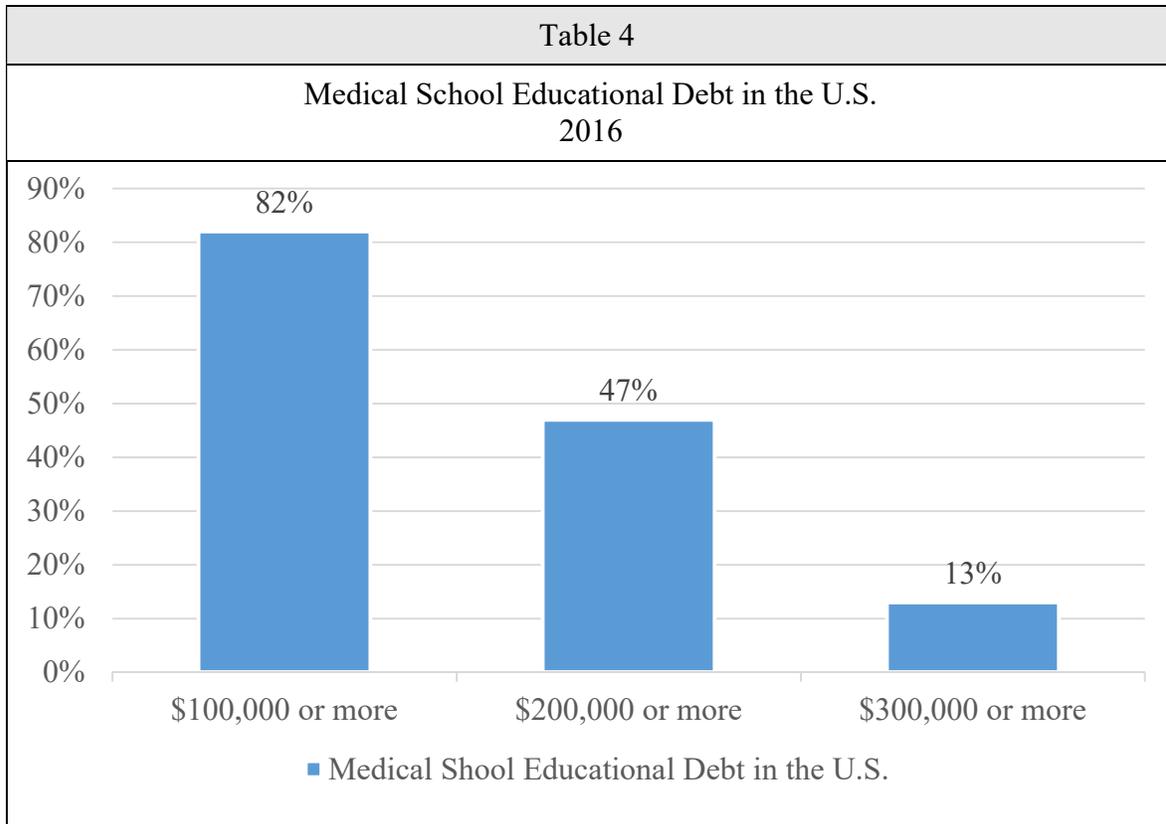
\$205,000.¹³⁷ A breakdown of the specific percentages of educational debt for physicians nationwide is illustrated in Table 4. Figures from the AAMC further indicate that 44 percent of graduating medical students are planning on entering loan forgiveness programs in hopes of alleviating this debt.¹³⁸

¹³⁵ JSGC, "The Physician Shortage in Pennsylvania," *supra* n. 57 at p. 37.

¹³⁶ *Id.*

¹³⁷ Association of American Medical Colleges, "Medical Student Education: Debt, Costs, and Loan Repayment Fact Card," (Oct. 2017), <https://members.aamc.org/iweb/upload/2017%20Debt%20Fact%20Card.pdf>.

¹³⁸ Assn of American Med. Colls., "2017 Education Debt Manager for Graduating Medical School Students," p. 3, <https://members.aamc.org/eweb/upload/Education%20Debt%20Manager%20for%20Graduating%20Medical%20School%20Students--2017.pdf>.



Source: Compiled by the Commission from Association of American Medical Colleges, 2017 Education Debt Manager for Graduating Medical School Students, p. 3, <https://members.aamc.org/eweb/upload/Education%20Debt%20Manager%20for%20Graduating%20Medical%20School%20Students--2017.pdf>.

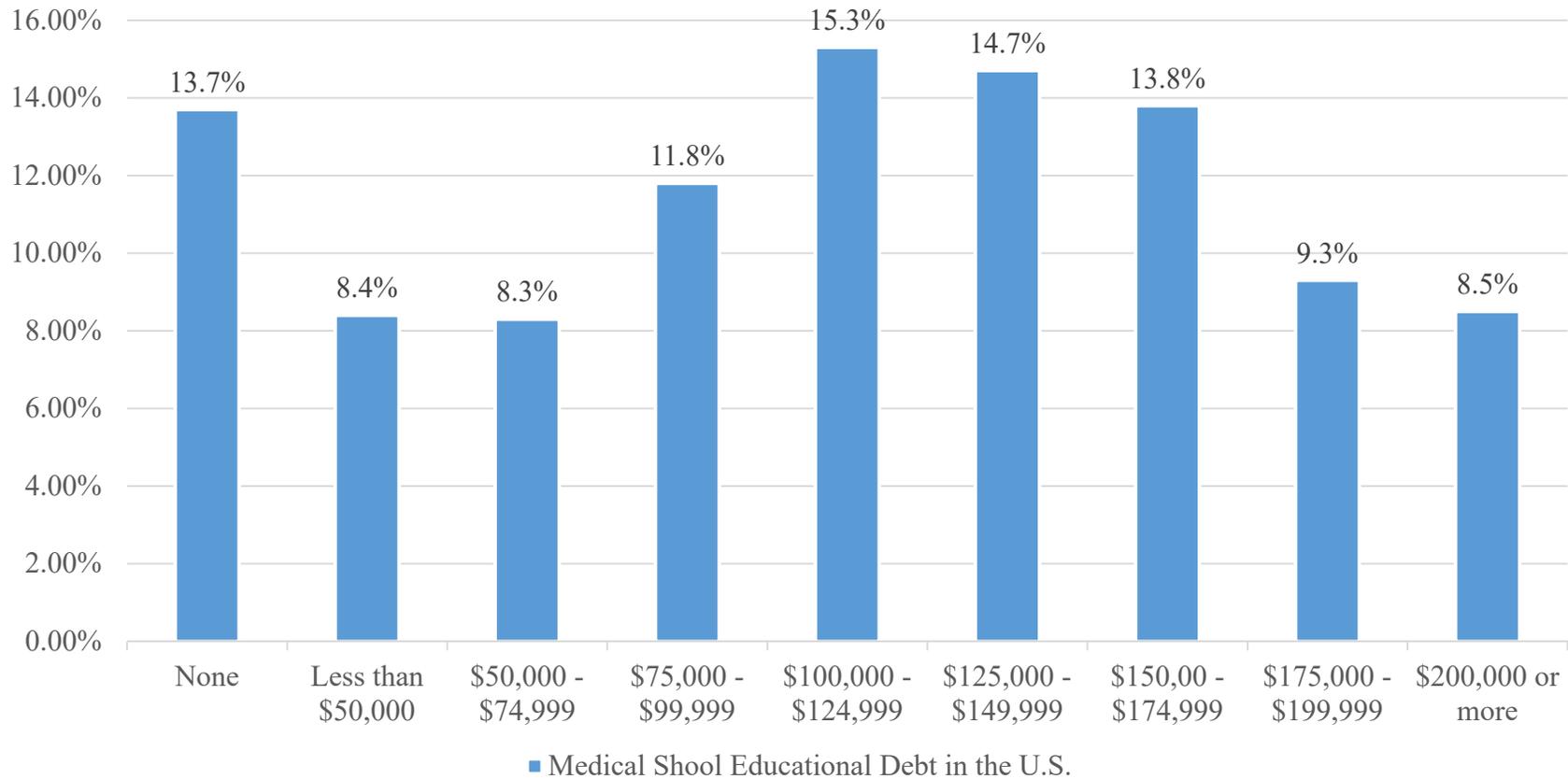
Educational Debt for Physician Assistants

While medical school graduates may have some of the highest educational debt, other health care professionals are also seeing an increase in the cost of the education and training necessary to practice in their field. For example, the National Commission on Certification of Physician Assistants (NCCPA) reported that in 2017, the average educational debt for recently certified physician assistants (PAs) was \$127,188 including all undergraduate debt.¹³⁹ A breakdown of the specific percentages of educational debt for PAs nationwide is illustrated in Table 5.

¹³⁹ National Commission on Certification of Physician Assistants, “2017 Specialty Report,” p. 9, <http://prodcmsstoragesa.blob.core.windows.net/uploads/files/2017StatisticalProfilebySpecialty.pdf>.

Table 5

Educational Debt Ranges of Recently Graduated PA's in the U.S. 2017



Source: Compiled by the Commission from National Commission on Certification of Physician Assistants, "2017 Specialty Report," p. 9, <http://prodcmsstoragesa.blob.core.windows.net/uploads/files/2017StatisticalProfilebySpecialty.pdf>.

Educational Debt for Dentists

Across the U.S., the student loan debt of an average dental school graduate has grown to \$200,000, with 41 percent of dental school seniors saying that their educational debt has a great influence on their professional choices after graduation.¹⁴⁰ In February 2019, House Bill 488 of 2019 (HB 488) was introduced in the Pennsylvania House of Representatives to provide up to \$200,000 in student loan forgiveness for dentists willing to work for three consecutive years in a health professional shortage area.¹⁴¹ The last action on HB 488 was a referral to the Education Committee on February 12, 2019.¹⁴²

Educational Debt for Nurses

Nursing students are also not immune to the burden of educational debt. According to a 2017 survey by *Nursing Economics*, 62 percent of nurses reported having student loan debt at some point in their careers. However, the survey included all nurses who were aged 60 and younger, and may have undercounted the number of newly minted nurses who have undergraduate nursing school debt.¹⁴³ An analysis of data collected by the National Student Nurses' Association, also published in *Nursing Economics*, showed that 74 percent of recent BSN (Bachelor of Science in Nursing) graduates had student loan debt in 2013, and that greater numbers of BSN graduates are accruing student loan debt to complete their college education. In 2010, that figure was 71 percent.¹⁴⁴ The average amount of student loan debt per indebted nursing graduate in 2013 was approximately \$30,000 – comparable to all other indebted college graduates.¹⁴⁵

Current Federal and State Financial Support Programs

The federal government and many states have financed efforts to encourage primary care physicians to work in underserved areas through offering scholarships, loan repayment, direct financial incentives, and resident support programs that include a service requirement for the

¹⁴⁰ Joel Diringer, *et al.* on behalf of the American Dental Association, “Critical Trends Affecting the Future of Dentistry: Assessing the Shifting Landscape,”

http://www.ada.org/~media/ADA/Member%20Center/Files/Escan2013_Diringer_Full.ashx.

¹⁴¹ Pennsylvania H.B. 488, P.N. 476 (Sess. of 2019).

¹⁴² Pennsylvania General Assembly, “Bill Information,”

<https://www.legis.state.pa.us/cfdocs/billInfo/billInfo.cfm?sYear=2019&sInd=0&body=H&type=B&bn=488>.

¹⁴³ Jan Jones-Schenck, *et al.*, “Addressing the Cost, Value, and Debt in Nursing Education,” *Nursing Economics* 35, no. 1 (Jan./Feb. 2017): 7-13 and 29, at p. 9, <https://web-a-ebSCOhost-com.proxy-stlib.klnpa.org/ehost/pdfviewer/pdfviewer?vid=4&sid=fe86a54b-9abd-43d2-bab5-0667ffe5590d%40sessionmgr4009>.

¹⁴⁴ Veronica D. Feeg, and Diane J. Mancino, “Nursing Student Loan Debt: A Secondary Analysis of the National Student Nurses' Association Annual Survey of New Graduates,” *Nursing Economics* 32, no. 5, (Sept. /Oct. 2014): 231-9, at p. 234, <https://www.nursingconomics.net/ce/2016/article3205231239.pdf>.

¹⁴⁵ *Id.* at p. 235.

recipients.¹⁴⁶ Each of these different programs share common goals and the requirement for service in exchange for financial support; however, they have some operational differences.

Scholarship programs obligate participants early in their training and require their participants “to provide service, and hefty penalties are used to discourage participants from buying out their service obligations should their career interests change.” Loan programs also target medical students but differ in that they offer participants a choice of performing service or repaying program funds at standard interest rates.¹⁴⁷

Loan repayment and direct financial incentive programs commit physicians much later, near the completion of their residency training. Unlike scholarship programs, these types of programs typically do not exact penalties on physicians for failure to complete a period of service. With loan repayment programs, physicians receive assistance repaying traditional education loans they acquired in previous years as students. Alternatively, financial incentive programs provide unrestricted funds. Resident support programs respond to the growing financial pressures on residents with assistance in the form of scholarships, loan repayment, and direct financial incentives.¹⁴⁸

The Commission’s *The Physician Shortage in Pennsylvania* report noted that there has been little research into the outcomes of the above-mentioned programs and their effectiveness. Despite this, according to a study comparing all five types of programs, physicians serving in all five types of programs were found to be far more likely to work in rural counties and counties with lower primary care physician to population ratios than physicians who were not obligated to service.¹⁴⁹ The study cited by the Commission staff found that “[e]ven in analyses run separately for rural and urban-situated physicians and in multivariate models adjusting for physicians’ rural versus urban location, specialty, and demographics, obligated physicians were still found to work in needier communities and with needier patients by all measures.”¹⁵⁰

An example of a federal program that has historically supported medical students and young health practitioners more broadly with scholarships and loan repayment incentives in exchange for a specified period of work in underserved locations is the National Health Service Corps (NHSC). The NHSC was established in 1970 pursuant to the Emergency Health Personnel Act, with the intended goal of providing health personnel to communities that are deemed “medically underserved.”¹⁵¹ This program essentially offers primary medical care clinicians an opportunity to have their medical educational loans repaid so long as the clinicians serve two years

¹⁴⁶ JSGC, “The Physician Shortage in Pennsylvania,” *supra*, n. 57 at p. 38.

¹⁴⁷ Donald E. Pathman *et al.*, “Outcomes of States’ Scholarship, Loan Repayment, and Related Programs for Physicians,” *Medical Care*, (June 2004), p. 561, <http://dhss.alaska.gov/ahcc/Documents/meetings/200905/outcomesII.pdf>.

¹⁴⁸ *Id.*

¹⁴⁹ JSGC, “The Physician Shortage in Pennsylvania,” *supra* n. 57 at p. 38-39.

¹⁵⁰ *Id.*

¹⁵¹ George M. Holmes, “Does the National Health Services Corps Improve Physician Supply in Underserved Locations?” *Eastern Economic Journal* 30, no. 4, (Fall 2004): 563-581 at p. 563.

of service in a medically underserved area. Further, the program allows its participants to renew their service commitments and continue to serve until all of their loans are paid off.¹⁵²

Current Pennsylvania Financial Support Programs

Like many other states, Pennsylvania also offers a program to encourage physicians and other health care professionals to work in underserved areas. The Pennsylvania Department of Health (DOH), Bureau of Health Planning, Division of Health Professions Development offers a loan repayment program known as the Pennsylvania Primary Care Loan Repayment Program (LRP) for the following eligible professionals:¹⁵³

- Allopathic (MD) or Osteopathic (DO) Physicians (Family Medicine, General Internal Medicine, General Pediatrics, Geriatrics, Obstetrics/Gynecology, Psychiatry)
- Certified Registered Nurse Practitioners (Adult, Family, Pediatrics, Geriatrics, Women's Health, Mental Health/Psychiatry)
- Certified Nurse Midwives
- General Dentists
- Licensed Clinical Social Workers
- Licensed Professional Counselors
- Marriage and Family Therapists
- Physician Assistants (Adult, Family, Pediatrics, Geriatrics, Women's Health, Mental Health/Psychiatry)
- Psychologists
- Registered Dental Hygienists

Established in 1992 and revised in 2014, the LRP essentially awards grant funding to eligible primary care practitioners to pay down qualifying educational loan debt in exchange for a two-year commitment to provide primary health care services to an LRP-approved practice site in an underserved area within the Commonwealth.¹⁵⁴ It is important to note that the primary purpose of the LRP is to increase access to primary care services in underserved areas, not the repayment of educational loans. As such, the LRP actively seeks practitioners who can demonstrate

¹⁵² United States Department of Health and Human Services, Health Resources and Services Administration, National Health Service Corps, "Loan Repayment Program," <http://nhsc.hrsa.gov/downloads/lrpatag glance.pdf>.

¹⁵³ Pennsylvania Department of Health, Bureau of Health Planning, Division of Health Professions Development, "Pennsylvania Primary Care Loan Repayment Program (LRP)," <https://www.health.pa.gov/topics/Health-Planning/Pages/Loan-Repayment.aspx>.

¹⁵⁴ Information provided to The Commission by Ed Naugle, Ph.D., Director, Division of Health Professions Development, Pennsylvania Department of Health, Bureau of Health Planning by electronic correspondence, July 27, 2018.

characteristics for and an interest in not only serving medically underserved populations, but also remaining in underserved areas beyond the service commitment.¹⁵⁵

In order to qualify to receive loan repayment under the program, primary care practitioners must meet eligibility requirements provided in the Repayment Forgiveness Application and must be currently employed at an LRP-approved practice site either (1) located in a federally designated HPSA or (2) serving a minimum of 30 percent low-income patients.¹⁵⁶ Additional eligibility requirements include the following:

- Applicant must be a U.S. citizen (either U.S. born or naturalized) or a U.S. National;
- Applicant must participate or be eligible to participate as a provider in the Medicare, Medicaid, and Children’s Health Insurance Program, as appropriate;
- Applicant must meet discipline and specialty-specific education, training and licensure requirements, as described above; and
- Applicant must have provided full-time or half-time primary health care services at an LRP-approved practice site since July 1, 2017.¹⁵⁷

Factors that make an individual ineligible for participation in the program include the following:

- Having any outstanding service obligation for health professional or other service to the federal government (for example, NHSC Loan Repayment Program obligation, NHSC Scholarship Program obligation or a NURSE Corps Loan Repayment Program obligation) or other entity (for example, a recruitment bonus that obligates you to remain employed at a certain site); or
- History of having breached a prior health professional service obligation to the Federal, state, or local government or other entity.¹⁵⁸

The LRP awards grants to eligible professionals based on the availability of funding.¹⁵⁹ Maximum grant awards for loan repayment for eligible full-time practitioners are as follows in Table 6.

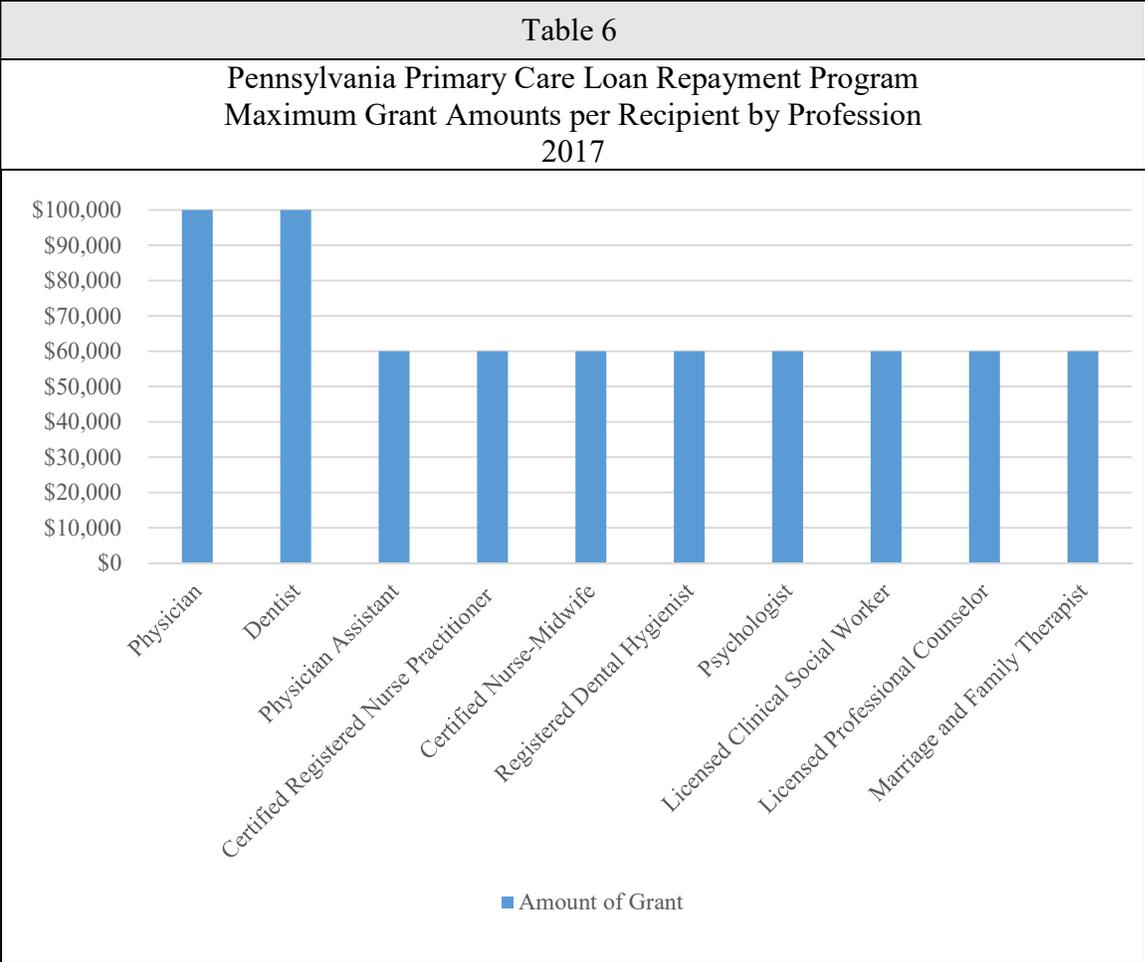
¹⁵⁵ Pennsylvania Department of Health, Bureau of Administrative and Financial Services, Division of Contracts, “Request for Applications, Primary Care Loan Repayment Program, Information for Practitioner Applicants, Application Procedures, and Application Instructions, RFA No. 67-75,” (Jan. 19, 2018), p. 2.

¹⁵⁶ *Id.*

¹⁵⁷ *Id.* at 4.

¹⁵⁸ *Id.* at 5.

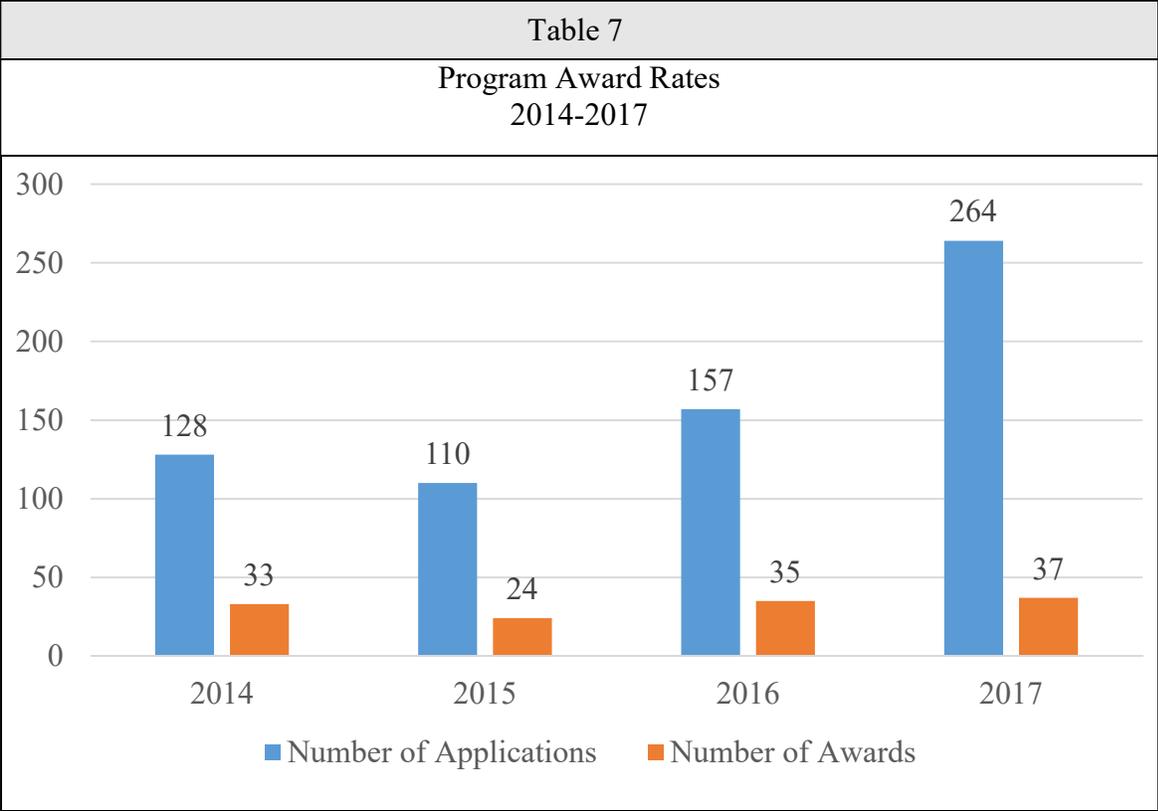
¹⁵⁹ *Id.* at 9.



Source: Compiled by the Commission from Request for Applications, Primary Care Loan Repayment Program, Information for Practitioner Applicants, Application Procedures, and Application Instructions, RFA No. 67-75, Pennsylvania Department of Health, Bureau of Administrative and Financial Services, Division of Contracts, p. 9, (Jan. 19, 2018)

A reduction of HRSA funding for the federal NHSC loan repayment program generated a large interest in the LRP among Pennsylvania health professionals, resulting in a highly competitive application process through the use of a Request for Application (RFA).¹⁶⁰ Due to the competitive application process for the LRP, many eligible applicants are not awarded loan repayment. Table 7 illustrates the program award rates from 2014 to 2017.

¹⁶⁰ Information provided to the Commission by Ed Naugle, Ph.D., Director, Division of Health Professions Development, Pennsylvania Department of Health, Bureau of Health Planning by electronic correspondence on July 27, 2018.



Source: Compiled by the Commission from Ed Naugle, Ph.D., Director, Division of Health Professions Development, Department of Health, Bureau of Health Planning by electronic correspondence on July 27, 2018.

As shown in Table 7, only a small percentage of applicants are awarded the loan repayment grants. The fact that the LRP is currently the only loan repayment program offered by DOH for health professionals in Pennsylvania, underscores the fact that loan repayment assistance and incentive to practice in underserved areas are extremely limited. A new Substance Use Disorder Loan Repayment Program (SUDLRP) is in the process of being introduced by the DOH. This program would allow eligible physicians and psychiatrists to receive up to \$100,000 of educational loan repayment in exchange for two years of past service and a commitment to two additional years of full-time service. For a half-time service commitment of two years, practitioners would be eligible for \$50,000 in loan repayment. The prospective program would also make certified alcohol and drug counselors, certified advanced alcohol and drug counselors, and other practitioners such as physician assistants, Certified Registered Nurse Practitioners, Psychologists, Licensed Clinical Social Workers, Licensed Social Workers, and Licensed Professional Counselors who provide behavioral health care and treatment for substance use disorder and opioid

addiction in designated HPSAs and designated high substance use areas, eligible for loan repayment.¹⁶¹

To add to the DOH's expansion of loan repayment eligibility in 2014 to include psychiatrists and behavioral health practitioners, and the DOH's prospective SUDLRP program, the General Assembly should consider appropriating more funds into these programs to further increase the monetary amount of loan forgiveness awards granted to professionals willing to commit to serving in underserved areas.¹⁶²

As mentioned in the Commission's 2015 report, at one time many physicians were leaving Pennsylvania for one of its neighboring states because they were offering more appealing loan repayment programs. According to the Commission's report, the state of Ohio offers its physicians who commit four years of service in an HPSA or HRSA, accept Medicare and Medicaid, and see patients regardless of ability to pay, the opportunity to receive up to \$120,000 of loan forgiveness.¹⁶³ New Jersey also offers up to \$120,000 over a four year period of service in state designated underserved areas or federally designated HPSAs for eligible primary care practitioners.¹⁶⁴

As such, the Commission restates its recommendation from its 2015 report, *The Physician Shortage in Pennsylvania*, that the General Assembly consider increasing the loan repayment amount beyond \$100,000 and the length of service commitment from two to four years for physicians and dentists, as well as consider increasing the loan repayment amount by \$20,000 for other qualifying professionals while extending their length of service commitment from two to four years.¹⁶⁵ The General Assembly should also increase funding to this program to allow for a greater number of loan repayment awards. In addition, the Commission would also restate the Advisory Committee recommendation from the 2015 report emphasizing the need to provide the Pennsylvania Department of Health (DOH) the continued authority to manage the loan repayment program and make changes as necessary, as opposed to a statutory amendment approach. This approach will allow the program to remain responsive to the market, and stakeholders and experts can more easily inform its policies.¹⁶⁶

Providing health care professionals, who often graduate with colossal student debt, with increased opportunity for loan repayment assistance will encourage more qualified individuals to practice in underserved areas in need of health care. Providing greater

¹⁶¹ Pennsylvania Department of Health, Bureau of Health Planning, "Substance Use Disorder Loan Repayment Program," www.health.pa.gov.

¹⁶² JSGC, "The Physician Shortage in Pennsylvania," *supra* n. 57 at p. 42

¹⁶³ *Id.*; see also Ohio Dept of Health, "Ohio Physician Loan Repayment Program," (Aug. 6, 2018), https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/primary-care-office/ohio-physician-loan-repayment-program/pco_oplrp.

¹⁶⁴ JSGC, "The Physician Shortage in Pennsylvania," *supra* n. 57 at p. 42; See also New Jersey Academy of Family Physicians, "NJ Primary Care Loan Redemption Program," <https://www.njafp.org/content/nj-primary-care-loan-redemption-program>.

¹⁶⁵ JSGC, "The Physician Shortage in Pennsylvania," *supra* n. 57 at p. 43.

¹⁶⁶ *Id.* at p. 42.

funding to increase the percentage of loan repayment awards may also generate more interest in the program. Furthermore, increasing not only the loan repayment amount but also the years of service requirements for eligible professionals may provide additional incentives to practice in underserved areas within the Commonwealth and not a neighboring state. The LRP and its ability to attract eligible health practitioners will also benefit from continued DOH management moving forward.

Summary

In order to attract more individuals to Pennsylvania's health care workforce, the General Assembly needs to address the high educational debt incurred by health care practitioners. A failure to address this issue may cause more qualified individuals to avoid careers in health care and the educational cost associated with those careers. As mentioned previously, increasing the level of funding to the LRP in order to increase the percentage of loan repayment awards may also generate more interest among health practitioners to practice in Pennsylvania's underserved areas. Increasing the years of service along with the loan repayment amounts for each field may incentivize more practitioners to not only practice in underserved areas, but to also remain practicing in these areas.

Recommendation #3: Expand Physician Residencies

One possible remedy to the growing shortage of physicians within the Commonwealth is the expansion of physician residencies inside Pennsylvania. With increasing number of enrollments in medical school, an increase in physician residencies could have the practical effect of more medical school graduates continuing the practice of medicine within the Commonwealth.

Current Federal Funding of Residencies

Upon graduation, medical students begin a period of graduate medical training known as a residency or graduate medical education (GME), where they practice under the supervision of an experienced attending physician.¹⁶⁷ Some medical specialties and subspecialties require fellowships after the completion of a residency.¹⁶⁸ While in their final year of medical school, students choose a residency based on their preferred medical

¹⁶⁷ Health Affairs, Health Policy Brief, "Graduate Medical Education," (Aug. 16, 2012), p. 1, https://www.healthaffairs.org/doi/10.1377/hpb20120816.311332/full/healthpolicybrief_73.pdf.

¹⁶⁸ Stanford Medicine, "Graduate Medical Education," <http://med.stanford.edu/gme/programs.html>, (detailing ACGME and non-ACGME accredited fellowships, which include such subspecialties as cardiothoracic surgery and sleep medicine).

specialty.¹⁶⁹ Some examples of residencies include emergency medicine, general surgery, family medicine, pediatrics, and psychiatry. The National Resident Matching Program (NRMP), also known as The Match, is a non-profit organization that conducts the matching of medical school students to available residency positions.¹⁷⁰ For the 2018 Match, of the 7,067 non-U.S. international medical graduates (IMGs) who applied for a residency, 3,962 matched into a position, a rate of 56.1 percent. Of the 5,075 U.S. IMGs who applied for a residency, 2,900 matched into a position, for a rate of 57.1 percent.¹⁷¹

The Department of Health and Human Services (HHS), through the Centers for Medicare and Medicaid (CMS), is the largest funding source for GME.¹⁷² In 1997, the number of residents funded by Medicare was effectively capped when the Balanced Budget Act of 1997 (BBA) limited CMS' financing to the total number of full-time equivalent (FTE) residents to the amount equivalent to the most recent cost reporting period ending on or before December 31, 1996.¹⁷³ This was done to constrain the growth in Medicare expenditures and in response to concerns about an oversupply of physicians.¹⁷⁴

Every year, the federal government commits \$9.5 billion in Medicare funds, plus \$2 billion in Medicaid funds, to pay for GME. The federal government also supports GME in children's hospitals through a program called Teaching Health Centers, which trains residents in community-based health centers.¹⁷⁵ The Department of Veterans Affairs (VA), the Department of Defense (DOD), the Health Resources and Services Administration (HRSA), and the National Institutes of Health also separately fund some GME positions.¹⁷⁶ States also contribute some support for GME through their Medicaid programs, however some states have ceased or are considering ending their Medicaid GME funding due to budget constraints.¹⁷⁷

To translate the GME financing figures into a number of residents, the VA supports 11,000 GME positions and a recent law passed by Congress will increase the number of VA-sponsored residencies by as many as 1,500, with an emphasis on positions that will improve veterans' access to primary care physicians and mental health services.¹⁷⁸ The

¹⁶⁹ National Resident Matching Program, "About," <https://www.nrmp.org/about-nrmp/>.

¹⁷⁰ *Id.*

¹⁷¹ The Match, "Results and Data 2018 Main Residency Match," (April 2018), <https://www.nrmp.org/wp-content/uploads/2018/04/Main-Match-Result-and-Data-2018.pdf>.

¹⁷² Health Policy Brief, Graduate Medical Education, *supra* n. 167 at p. 1.

¹⁷³ Balanced Budget Act of 1997, Pub.L. 105-33, Title IV, § 4623, 111 Stat. 251.

¹⁷⁴ Committee of the Governance and Financing of Graduate Medical Education, Board of Health Care Servs., Institute of Medicine, *Graduate Medical Education that Meets the Nation's Health Needs*, p. 72. J. Eden, D. Berwick, and G. Wilensky, eds. (Washington, D.C.: Natl Academies Press, 2014), https://www.ncbi.nlm.nih.gov/books/NBK248027/pdf/Bookshelf_NBK248027.pdf.

¹⁷⁵ Health Policy Brief, Graduate Medical Education, *supra* n. 167 at p. 1.

¹⁷⁶ *Id.* at pp. 1-2.

¹⁷⁷ Graduate Medical Education That Meets the Nation's Health Needs, *supra* n. 174 at pp. 78-79.

¹⁷⁸ American Association of Family Physicians, "VA Offers Funding for Residency Program Expansion," (April 12, 2017), <https://www.aafp.org/news/education-professional-development/20170412vagme.html>.

DOD supported an estimated 1,455 FTE residents in 100 specialties in fiscal year 2017.¹⁷⁹ This is down from an estimated 3,200 residents in 200 GME programs in 2012.¹⁸⁰ The GME positions supported by the DOD were generally located in DOD hospital facilities, but the DOD also partners with teaching hospitals where residents rotate for training in areas or populations not seen at its facility.¹⁸¹

The HRSA funds GME through the Teaching Health Centers GME program (THCGME) and the Children’s Hospital GME program (CHGME). THCGME provides payments to outpatient facilities to support the training of residents in primary care. THCGME began supporting residents starting with the 2012 academic year. The Affordable Care Act of 2010 included a five-year mandatory appropriation to support TCGME.¹⁸² Funding was then extended for two years through 2017 through the passage of the Medicare Access and CHIP (Children’s Health Insurance Program) Reauthorization Act of 2015.¹⁸³ However, per-resident funding was cut from \$150,000 to \$90,000, and no new THCGME residencies have been filled since that time.¹⁸⁴ Funding was restored by the Bipartisan Budget Act of 2018, providing funding for fiscal years 2018 and 2019.¹⁸⁵ Further, this recent funding appropriation will increase both the number of training programs in operation and the number of residents at existing programs.

According to the HRSA, a total of 732 residents in 57 primary care residency programs in 24 states are supported by the THCGME program as of the 2017-2018 academic year.¹⁸⁶ The Congressional Research Service tallied 771 residents in 59 residency programs during the 2016-2017 academic year.¹⁸⁷

Initially created by the Healthcare Research and Quality Act of 1999, CHGME trains residents in general pediatrics and pediatric subspecialties.¹⁸⁸ In the 2016-2017 academic year, the CHGME program supported 5,017 general pediatric residents, including residents from combined programs (*e.g.* internal medicine/pediatrics), plus 2,713 pediatric subspecialty residents and 285 pediatric surgical subspecialty residents.¹⁸⁹

¹⁷⁹ Congressional Research Serv., “Federal Support for Graduate Medical Education: An Overview,” (February 12, 2016), p. 22, <http://archive.is/jCc33>.

¹⁸⁰ Graduate Medical Education That Meets the Nation’s Health Needs, *supra* n. 174 at p. 88.

¹⁸¹ Federal Support for Graduate Medical Education: An Overview, *supra* n. 179 at p. 22.

¹⁸² *Id.* at p. 20.

¹⁸³ Medicare Access and CHIP Reauthorization Act of 2015, Pub.L. 114-110, 129 Stat. 87.

¹⁸⁴ American Association of Family Physicians, “Teaching Health Funding Drop Felt in Family Medicine Residency Growth,” (May 18, 2017), <https://www.aafp.org/news/education-professional-development/20170518thcfunding.html>.

¹⁸⁵ Bipartisan Budget Act of 2018, Pub.L. 115-123, Title IX § 50901, 123 Stat. 64.

¹⁸⁶ United States Department of Health and Human Services, Health Resources and Services Administration, “Teaching Health Center Graduate Medical Education (THCGME Program),” <https://bhwh.hrsa.gov/grants/medicine/thcgme>.

¹⁸⁷ Federal Support for Graduate Medical Education: An Overview, *supra* n. 179 at p. 20.

¹⁸⁸ Healthcare Research and Quality Act of 1999, Pub.L. 106-129, 113 Stat. 1653; Federal Support for Graduate Medical Education: An Overview, *supra* n. 179 at p. 18.

¹⁸⁹ Federal Support for Graduate Medical Education: An Overview, *supra* n. 179 at p. 19.

Additionally, CHGME program funds supported 3,120 adult medical and surgical specialty residents, such as those training in family medicine residencies, who rotate through children’s hospitals.¹⁹⁰ The program was most recently reauthorized through fiscal year 2023, with an appropriation of \$325 million in fiscal year 2019.¹⁹¹

State Funding through Medicaid Payments

More than 40 states financed GME programs for a total cost of \$3.78 billion in 2009.¹⁹² Additionally, some private insurers offer some support to GME programs through agreements they make with teaching hospitals.¹⁹³ According to a survey by the Association of American Medical Colleges (AAMC), 42 states and Washington, D.C. made payments for GME under their Medicaid program in 2015. Pennsylvania is among the states which provide GME funding under the Medicaid fee-for-service structure, spending a total of \$118.7 million for GME in 2015.¹⁹⁴

The CMS calculates the amount of Medicare funds used for GME through two methodologies – direct payments and indirect payments. Direct medical education payments (DGME) pay the salaries of the medical residents and compensate senior physicians for their time spent overseeing residents. Indirect medical education payments (IME) are used to subsidize other expenses associated with running a training program, such as longer inpatient stays and increased use of tests.¹⁹⁵

Until the enactment of the BBA, Medicare support for GME was open-ended. This created a financial incentive for hospitals to add new residency slots because each new position generated additional Medicare revenues. Congress’s decision to “cap” the number of residency slots funded by Medicare was partially in response to concerns about an oversupply of physicians, and partially in response to concerns about rapidly increasing Medicare costs. Currently, hospitals may add residents beyond their cap, but these residents will not generate additional Medicare revenues for the hospital.¹⁹⁶ However, hospitals that did not have residency slots on or after January 1, 1995, are eligible to add Medicare-funded residency programs.¹⁹⁷

¹⁹⁰ *Id.*

¹⁹¹ Dr. Benjy Frances Brooks Children’s Hospital GME Support Reauthorization Act of 2018, Pub.L. 115-241, 132 Stat. 2892.

¹⁹² Health Policy Brief, Graduate Medical Education, *supra* n. 167 at p. 1.

¹⁹³ *Id.* at p. 2.

¹⁹⁴ Association of American Medical Colleges, “Medicaid Graduate Medical Education Payments: A 50-State Survey,” Table 10, Medicaid GME Payment Amounts, 2015, (2016), https://members.aamc.org/eweb/upload/Medicaid_Graduate_Medical_Education_Payments--A_50_State_Survey.docx.pdf.

¹⁹⁵ Health Policy Brief, Graduate Medical Education, *supra* n. 167 at p. 2.

¹⁹⁶ *Id.* at p. 72.

¹⁹⁷ *Id.* at p. 73

Since the cap on Medicare funding was set at each hospital's resident count in the cost reporting period ending on or before December 31, 1996, the geographic distribution of Medicare-supporting residencies could not be altered to account for future changes in local health care workforce needs or the geography of the U.S. population.¹⁹⁸ As a result, the Northeast has the highest concentration of Medicare-supported GME positions and the majority of Medicare GME funding.¹⁹⁹

Despite the cap on Medicare GME funding, many hospitals have increased the number of GME slots available. According to the Accreditation Council for Graduate Medical Education, the number of accredited GME programs grew from 8,490 in the 2007-2008 academic year to 10,672 in the 2016-2017 academic year.²⁰⁰ Pennsylvania has the third highest number of GME programs, at 680, behind only California and New York.²⁰¹ In the 2016-2017 academic year, there were a total of 129,720 active residents, a 16.9 percent increase in total active residents since 2007-2008, when there were 107,851 total active residents. Pennsylvania is fourth in total number of active residents, behind New York, California, and Texas.²⁰²

Pennsylvania is fourth in total number of active residents, behind New York, California, and Texas.

Increasing Funding for Residencies

Data from the Association of American Medical Colleges (AAMC) indicate that medical school enrollments have increased by 30 percent nationally since 2002 while the 1997 cap on Medicare-funded GME positions remains. According to the AAMC, this Medicare funding cap has limited the number of GME positions available to new medical school graduates, creating a chokepoint for the entry of new physicians into the profession. As such, the AAMC recommends gradually increasing the number of new Medicare-funded residencies by 15,000 over five years.²⁰³

For its part, the American Medical Association (AMA) also supports increasing the number of medical residency positions. The AMA recognizes that funding for medical residencies can no longer be put at the feet of Medicare and the federal government, and advocates that private partnerships and medical schools create and fund GME programs that can accommodate an increasing number of medical school graduates. According to

¹⁹⁸ *Id.*

¹⁹⁹ *Id.*

²⁰⁰ Accreditation Council for Graduate Medical Education, "Data Resource Book: Academic Year 2016-2017," p. 11, <https://acgme.org/About-Us/Publications-and-Resources/Graduate-Medical-Education-Data-Resource-Book>.

²⁰¹ *Id.* at p. 31.

²⁰² *Id.* at p. 45.

²⁰³ American Association of Medical Colleges, AAMCNews, "GME Funding and Its Role in Addressing the Physician Shortage," (May 29, 2018), <https://news.aamc.org/for-the-media/article/gme-funding-doctor-shortage/>.

the AMA, the number of U.S. medical school graduates is now growing at a faster rate than the number of GME positions.²⁰⁴ If this trend continues, the number of new medical school graduates seeking residency positions will exceed the number of positions available for future graduates.²⁰⁵

The number of U.S. medical school graduates is now growing at a faster rate than the number of GME positions.

However, some observers disagree with the conventional wisdom that increasing GME funding will result in more physicians. An article published in the *New England Journal of Medicine* (NEJM) posits that DME payments do not offset the cost of training physicians and that the residents essentially pay the full cost of their training while the DME program transfers money from the residents to the hospital. The reasoning behind this assertion is that residents accept a lower salary during their training period to offset the cost of their training. However, while simultaneously providing services to patients, residents generate substantial revenues for their hospitals.²⁰⁶

The authors point out that after the 1997 BBA was passed, DME payments decreased by \$1 billion over five years and IME payments were decreased by \$8 billion over the same time frame, yet these changes in program funding had no effect on the salaries of residents. Further, after the BBA capped the number of residencies that would be funded by Medicare, the number of new residencies created continued to increase. This evidence points to residents being a source of revenue-generation by hospitals and the DME and IME funds being seen as general monies going to the institutions. In other words, the hospitals would create residencies even if there were no Medicare funding for them, simply because it would make economic sense to do so. The authors of the NEJM article concluded that, if the policy of government financing of residencies is to mitigate physicians' debt load and attract more physicians to primary care, other solutions such as loan forgiveness may be more effective. Simply lifting the cap on Medicare-funded GME positions would not necessarily result in the creation of new GME programs.²⁰⁷

Summary

Regardless of the economics surrounding GME, it is clear that residencies are a cornerstone of a physician's education, and that to produce more practicing physicians, there must be more residencies. However, it does appear that the residencies themselves act as a sort of bottleneck to entry into the profession. According to 2018 NRMP data,

²⁰⁴ American Medical Association, "AMA Builds on Efforts to Expand Funding for Graduate Medical Education," (June 14, 2018), <https://www.ama-assn.org/ama-builds-efforts-expand-funding-graduate-medical-education-0>.

²⁰⁵ *Id.*

²⁰⁶ Amitabh Chandra *et al.*, "Economics of Graduate Medical Education," *New England Journal of Medicine* 370, no. 25 (June 19, 2014): 2357-60, at p. 2357, doi: 10.1056/NEJMp1402468.

²⁰⁷ *Id.* at p. 2359.

1,078 U.S. medical school graduates did not match into a GME position, 2,175 U.S. IMGs (American citizens who attend non-U.S. medical schools), and 3,105 non-U.S. IMGs also failed to match.²⁰⁸

Although already possessing a disproportionate number of GME positions as a result of the Medicare cap and funding structure, the Pennsylvania Department of Health and other governmental bodies of the Commonwealth should make a concerted effort to expand residencies within Pennsylvania. Setting up residencies in primary care disciplines which are reserved for graduating medical school students who did not match into a GME position, perhaps in rural or other underserved areas, could help more physicians enter the profession and entice them to stay in Pennsylvania after completion of their residency.

**Recommendation #4:
Create Easier Educational Pathways to Pursue Advanced Nursing
Degrees and Careers as Nurse Educators**

Nurses are a critical component of the American health care workforce and certain advanced degree nurses can help fill gaps in the physician shortage under certain circumstances. In addition, the growing needs of patients have become significantly more complex, causing an increase in demand for highly skilled nurses. For these reasons, Pennsylvania needs to incentivize nursing professionals to seek advanced nursing degrees and to seek careers in nursing education.

Education and Training for Nurses

Before someone can become a nurse, they must receive some form of education, which can range from on-the-job training to a Masters-level degree depending on their specific nursing role. In Pennsylvania, the State Board of Nursing sets and oversees the training requirements for several different nursing professions.

Licensed Practical Nurses. Licensed practical nurses (LPNs) are those who administer medication and carry out the therapeutic treatment ordered for the patient. Their scope of practice is more limited than a registered nurse, and an LPN may initiate and maintain IV therapy only under the direction and supervision of a licensed professional nurse or health care provider authorized to issue orders for medical therapeutic or corrective measures.²⁰⁹ Their education typically consists of a non-degree program at a technical or vocational school. The Pennsylvania Department of State (DOS) maintains a

²⁰⁸ National Resident Matching Program, “Results and Data: 2018 Main Residency Match,” (April 2018), p. 15, <https://www.nrmp.org/wp-content/uploads/2018/04/Main-Match-Result-and-Data-2018.pdf>.

²⁰⁹ 49 Pa. Code § 21.145.

list of the educational programs approved by the Board of Nursing. There are 55 approved programs as of August 2018.²¹⁰

Registered Nurses. The title of registered nurse (RN), also called “graduate registered nurse,” applies to those who have graduated from an approved program of professional nursing in this Commonwealth or a comparable program in another state.²¹¹ The approved program an RN must complete can be a diploma program (mostly run by hospitals), an associate’s degree program, or a bachelor’s degree program. The DOS maintains a list of programs approved by the Board of Nursing. As of August 2018, there were 25 associate degree programs approved, 41 baccalaureate degree programs approved, and 16 diploma programs approved in Pennsylvania.²¹²

According to the 2008 National Sample Survey of Registered Nurses, the latest of such surveys conducted by the U.S. Department of Health Resources and Services Administration (HRSA), 45.4 percent of U.S. RNs were educated in an associate’s degree program, while 20.4 percent are initially educated in a diploma program, and 34.2 percent receive a bachelor’s degree. These statistics do not include RNs who are first trained in an associate’s or diploma program who later go on to receive a bachelor’s degree.²¹³ Another study by the National Council of State Boards of Nursing (NCSBN) indicated that by 2015, 39 percent of RNs had received a bachelor’s degree as their initial education, and that overall, 65 percent of nurses throughout the country held a bachelor’s degree.²¹⁴

Certified Registered Nurse Practitioner. A Certified Registered Nurse Practitioner (CRNP) is a professional nurse who is certified by the Board of Nursing in a specialty and who performs acts of medical diagnosis or prescription of medical therapeutic or corrective measures in collaboration with a physician.²¹⁵ A CRNP must possess a master’s or post-master’s level degree from an approved, board-accredited program.²¹⁶ As with the approved RN programs, the DOS maintains a list of approved CRNP programs. The

²¹⁰ Pennsylvania Department of State, “Approved Nursing Programs – Practical Nursing,” (August 21, 2018),

<https://www.dos.pa.gov/ProfessionalLicensing/BoardsCommissions/Nursing/Documents/Applications%20and%20Forms/PN%20Programs.pdf>.

²¹¹ 49 Pa. Code § 21.1.

²¹² Pennsylvania Department of State, “State Board of Nursing Approved Programs,” (August 21, 2018),

<https://www.dos.pa.gov/ProfessionalLicensing/BoardsCommissions/Nursing/Documents/Applications%20and%20Forms/RN%20Programs.pdf>.

²¹³ United States Department of Health and Human Services, Health Resources and Services Administration, “The Registered Nurse Population: Findings from the 2008 National Sample Survey of Registered Nurses,” (September 2010), p. xxvii,

<https://bhw.hrsa.gov/sites/default/files/bhw/nchwa/rnsurveyfinal.pdf>.

²¹⁴ National Council of State Boards of Nursing, “The 2015 National Nursing Workforce Survey: Executive Summary,” <https://www.ncsbn.org/2015ExecutiveSummary.pdf>.

²¹⁵ 49 Pa. Code § 21.251.

²¹⁶ 49 Pa. Code § 21.271.

programs span multiple nursing specialties and institutions. In total, there are 79 board-accredited programs offered throughout the Commonwealth.²¹⁷

Clinical Nurse Specialist. A Clinical Nurse Specialist (CNS) is an individual who is certified by the Board of Nursing and who meets the educational and examination or equivalency requirements of the Professional Nursing Law.²¹⁸ Under the Commonwealth's Professional Nursing Law, a CNS is required to possess a master's, doctoral, or post-master's level education as well as a current national certification as a clinical nurse specialist in a designated specialty by the American Nurses Association or the American Nurses Credentialing Center.²¹⁹ A CNS differs from a CRNP in that a CNS may not perform acts of diagnosis or prescribe medical therapeutic or corrective measures while a CRNP can.²²⁰

Availability of Nurse Faculty and Preceptors

Nursing education is a holdup in the creation of a nursing workforce. All nurses (except certified nursing assistants) must go through some type of formal education in order to practice as a nurse. One of the factors slowing the production of new nurses is that demand for space in a nursing program by prospective nursing students outstrips the supply of seats in collegiate nursing programs. As mentioned previously, the American Association of Colleges of Nursing (AACN) reported that nursing schools throughout the U.S. had to turn away approximately 64,000 qualified applicants from baccalaureate and graduate nursing programs in 2016. According to the AACN, this is largely due to insufficient numbers of faculty, clinical sites, classroom space, and budget constraints.²²¹

The American Association of Colleges of Nursing reported that nursing schools throughout the U.S. had to turn away approximately 64,000 qualified applicants from baccalaureate and graduate nursing programs in 2016.

However, a 2012 survey of nursing programs in the Commonwealth conducted by the Pennsylvania Coalition for the Advancement of Nursing Education (PCANE) and the Pennsylvania Action Coalition (PA-AC) found that the surveyed nursing programs have adequate nursing faculty to meet current needs. Further, the PCANE survey found that the majority of nursing programs do not reject qualified candidates for admission on the basis

²¹⁷ Pennsylvania Department of State, "Board Approved Certified Registered Nurse Practitioner Programs," (July 2018),

<https://www.dos.pa.gov/ProfessionalLicensing/BoardsCommissions/Nursing/Documents/Applications%20and%20Forms/CRNP%20Programs.pdf>.

²¹⁸ 49 Pa. Code § 21.801.

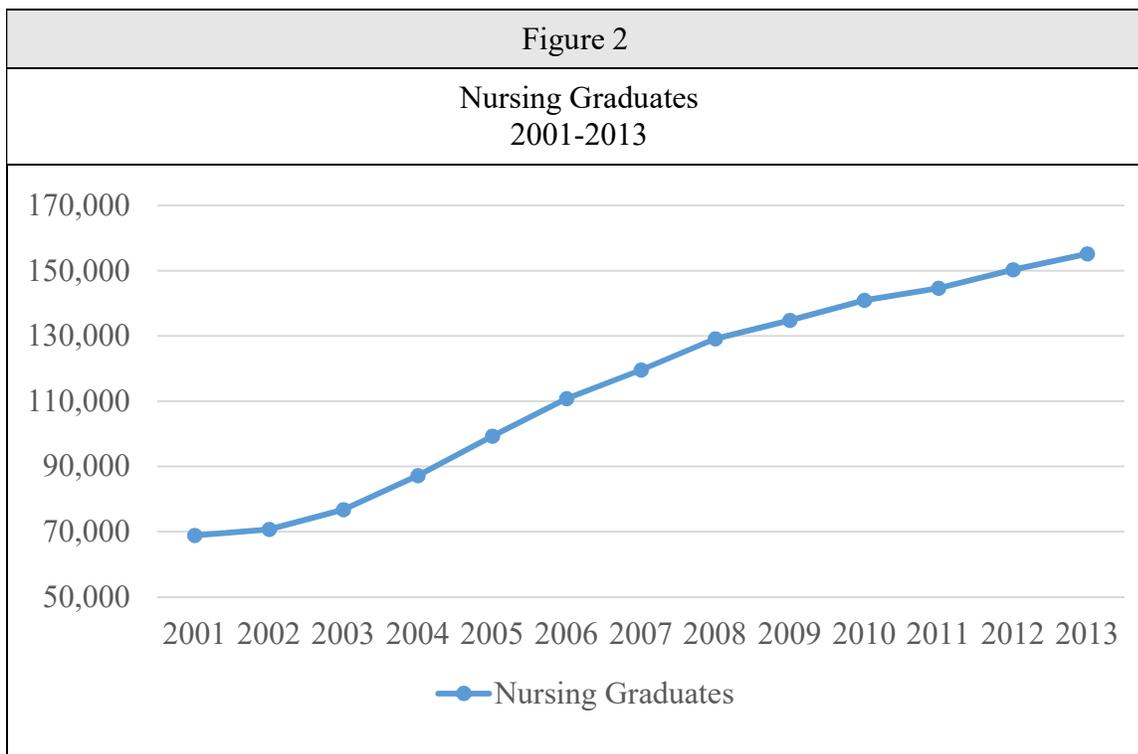
²¹⁹ Act of May 22, 1951, (P.L. 317, No. 69, § 8.5); 63 P.S. § 218.5.

²²⁰ Act of May 22, 1951, (P.L. 317, No. 69, § 8.6); 63 P.S. § 218.6.

²²¹ American Association of Colleges of Nursing, "Nursing Shortage Fact Sheet," (May 18, 2017), <https://www.aacnursing.org/News-Information/Fact-Sheets/Nursing-Shortage>.

that they lack adequate faculty. However, some graduate nursing programs preparing advanced practice nurses reported that they would need additional voluntary clinical preceptors (skilled practitioners who supervise students in clinical settings) in order to admit additional qualified applicants.²²²

Since the turn of the millennium, enrollment in nursing programs has grown considerably. In 2001, approximately 68,759 students graduated from a nursing program in the U.S. By 2013, 155,098 graduated. In other words, nursing programs more than doubled their number of graduates in slightly more than a decade.²²³

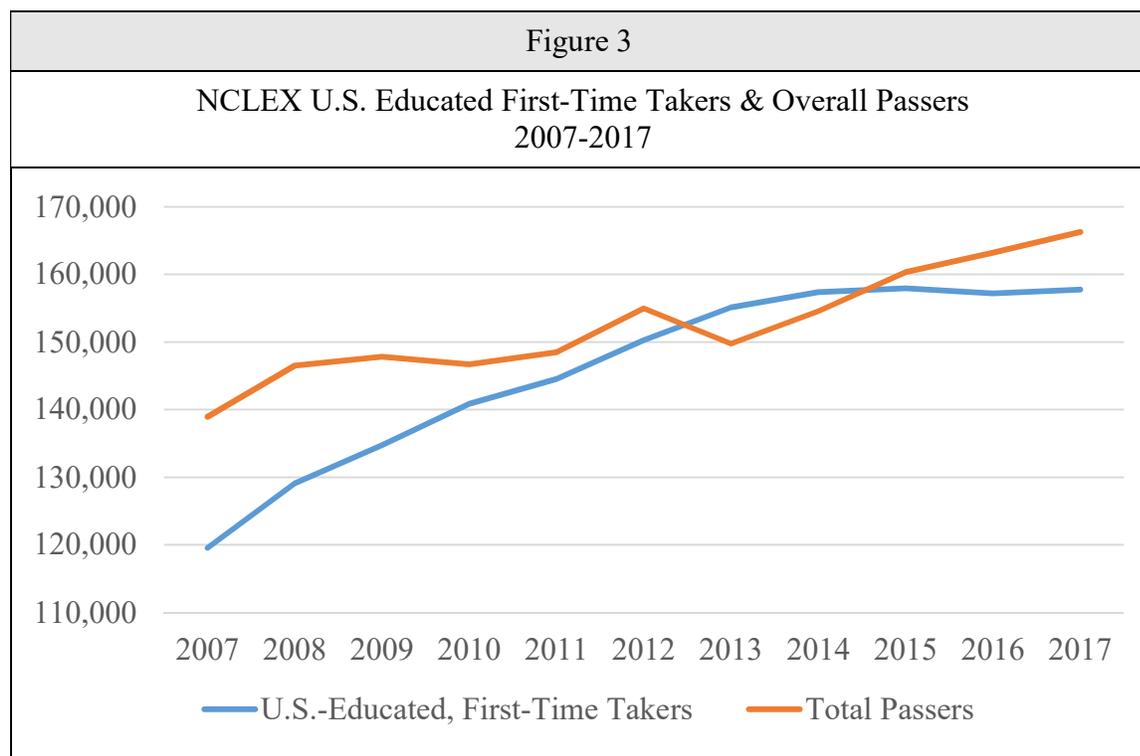


Source: Compiled by the Commission from United States Department of Health and Human Services, Health Resources and Services Administration, “The Future of the Nursing Workforce: National- and State-Level Projections, 2012-2025,” (December 2014), p. 6, <https://bhwh.hrsa.gov/sites/default/files/bhw/nchwa/projections/nursingprojections.pdf>.

²²² Pennsylvania Coalition for the Advancement of Nursing Education and the Pennsylvania Action Coalition, “Nursing Education Surveys, Report of Findings, Executive Summary,” (April 30, 2013), p. 2.

²²³ United States Department of Health and Human Services, Health Resources and Services Administration, “The Future of the Nursing Workforce: National- and State-Level Projections, 2012-2025,” (December 2014), p. 6, <https://bhwh.hrsa.gov/sites/default/files/bhw/nchwa/projections/nursingprojections.pdf>.

This evidence is bolstered by figures from NCSBN on National Council Licensing Examination (NCLEX) exam takers. In 2017, there were approximately 157,000 U.S. first-time exam takers.²²⁴ This is up roughly 24 percent from a decade prior, when there were 119,565 U.S. first-time exam takers in 2007.²²⁵ See Figure 3.



Source: Compiled by the Commission from “Nurse Licensure and NCLEX Exam Statistics, 2007-2017,” <https://www.ncsbn.org/1236.htm>.

The number of U.S.-educated first-time NCLEX takers is a good proxy for the number of nursing graduates in that year and an approximation of future nurses. Total NCLEX passers is a good proxy for the number of new nurses entering the workforce. However, comparing the number of U.S.-educated first-time NCLEX takers in 2017 to the number of students graduating from a nursing program in 2013 indicates that growth in the number of nursing graduates has slowed. In the four years from 2013 to 2017, nursing graduates only increased by about 2,700 graduates, or approximately 1.3 percent, whereas

²²⁴ National Council of State Boards of Nursing, “2017 NCLEX Examination Statistics,” (Jun. 2018), p. 20, https://www.ncsbn.org/2017_NCLEXExamStats.pdf.

²²⁵ National Council of State Boards of Nursing, “NCBSN Research Brief – 2007 Nurse Licensee Volume and NCLEX Examination Statistics,” (Jan. 2009), p. 19, https://www.ncsbn.org/WEB_08_2007LicExamRB_Vol35_CS3.pdf.

in the four year period of 2009 to 2013, the number of nursing graduates increased by 20,390, or approximately 13 percent.²²⁶

Beyond simply increasing the number of nurses, the role of nurses in the health care team is changing and requiring a higher level of education, both at the time of entry into the profession and throughout their careers. Patient needs have become more complex, with more patients presenting with chronic conditions such as diabetes, cardiovascular disease, and mental health issues. As such, nurses are being asked to fill an expanding role within the health care delivery team.²²⁷

Beyond simply increasing the number of nurses, the role of nurses in the health care team is changing and requiring a higher level of education, both at the time of entry into the profession and throughout their careers.

In 2010, the National Academy of Medicine (NAM), then known as the Institute of Medicine, recommended that in order to address these changes nurses should achieve higher levels of education. NAM recommended that 80 percent of RNs possess a bachelor's degree by 2020. According to NAM, more education would give nurses a better range of skills in areas such as leadership, systems thinking, evidence-based practice, health policy, and teamwork and collaboration.²²⁸

Further, NAM recommended that nurses be educated in an education system that promotes seamless academic progression. Thus, nurses should be able to transition from LPN to associate's or bachelor's degrees, and from bachelor's degrees to master's and PhDs or DNP (Doctor of Nursing Practice) degrees without upsetting their ability to continue working in their current role. According to NAM, all nursing schools should be required to offer defined academic pathways that promote seamless access to higher education. Additionally, NAM recommended that nurses be educated alongside physicians and other health care staff.²²⁹ However, the issue becomes how to provide academic pathways that promote seamless access to higher education for young nurses.

²²⁶ Compiled by the Commission from "Nurse Licensure and NCLEX Exam Statistics, 2007-2017," <https://www.ncsbn.org/1236.htm>.

²²⁷ National Academy of Medicine, *Assessing Progress on the Institute of Medicine Report "The Future of Nursing,"* (Washington D.C.: The National Academies Press, 2016), pp. 57-58.

²²⁸ Institute of Medicine of the National Academies, Report Brief, "The Future of Nursing: Focus on Education," (Oct. 2010), p. 6,

<http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2010/The-Future-of-Nursing/Nursing%20Education%202010%20Brief.pdf>.

²²⁹ *Id.*

Increased Role of Community Colleges

One proactive measure being undertaken by other states is to allow community colleges to award baccalaureate degrees.²³⁰ This is particularly relevant to nursing, where RNs (or others who wish to become RNs through a baccalaureate program) who are limited in their collegiate options due to work or family obligations can benefit from having BSN options closer to where they reside. In Pennsylvania, community colleges may only award two-year associates' degrees.²³¹

Since NAM's 2010 call for more baccalaureate-educated nurses, hospitals and other employers have been shifting to a preference for nurses who possess a bachelor's degree. According to a 2017 survey by the AACN, 49 percent of hospitals and other health care settings are requiring new hires to hold a baccalaureate degree, and 86 percent expressed a strong preference for BSN candidates.²³² This phenomenon is putting pressure on current RNs without baccalaureate degrees to attend collegiate nursing programs and in turn putting further pressure on college nursing programs to accept more students who require a more flexible course schedule. With the option of a local community college, more RNs may have an easier pathway to obtaining a BSN. Many of the Commonwealth's community colleges maintain articulation agreements with nearby baccalaureate-degree granting institutions, allowing nursing students to seamlessly transition from the community college to the four-year college to obtain their BSN degrees.

Bridge Programs

Another aspect of the recommendation from NAM to accelerate the education of nurses is for more institutions to implement "bridge" programs allowing nurses to complete higher education while continuing to work. For example, the RN/ADN (Associate Degree in Nursing) to MSN model provides RNs who already possess an associate's degree a shorter and quicker route to obtain an advanced degree and enter advanced practice nursing.²³³

These "bridge" programs also include RN to BSN programs for nurses who obtained their initial nursing education through a diploma program and who would like to go back to school to obtain a bachelor's degree, as well as ADN to BSN programs for RNs with an associate's degree to complete their bachelor's degree. As noted above, nurses

²³⁰ Elaine S. Popovich, The Pew Charitable Trusts, Stateline, "More Community Colleges Are Offering Bachelor's Degrees – And Four-Year Universities Aren't Happy About It," (Apr. 26, 2018), <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2018/04/26/more-community-colleges-are-offering-bachelors-degrees>.

²³¹ 22 Pa. Code § 35.22.

²³² American Association of Colleges of Nursing, AACN Research Brief, "Employment of New Nurse Graduates and Employer Preferences for Baccalaureate-Prepared Nurses," (Dec. 2017), <https://www.aacnnursing.org/Portals/42/News/Position-Statements/Research-Brief-12-17.pdf>.

²³³ Assessing Progress on the Institute of Medicine Report, *supra* n. 227 at p. 60.

without baccalaureate degrees may face barriers to obtaining higher education due to competing priorities, and a seamless educational pathway which eliminates duplicative course requirements or requirements for students to manage unfulfilled prerequisites could be part of the solution.²³⁴

To better implement such bridge programs, NAM recommends developing shared statewide or regional curriculum. Under this model, universities and community colleges form partnerships to collaborate on shared curriculum and could also share faculty, increasing the availability of nursing programs and reducing faculty load. A shared curriculum model would also allow nurses to take some courses at a community college and then finish their degree in a university setting.²³⁵ The Center to Champion Nursing in America, an organization set up by the Robert Wood Johnson Foundation and the American Association of Retired Persons, also endorses these policy recommendations as part of its five models of education to increase the proportion of nurses with a baccalaureate degree.²³⁶

Aside from the barriers faced by nurses to further their education, hospitals and health systems have identified their own barriers to offering flexible education options to their nurses. These barriers include lacking sufficient funds for incentives such as tuition reimbursement, promotions, pay differentials, and bonuses, as well as a lack of available baccalaureate programs in the surrounding community.²³⁷ Generally, those facilities which do offer such incentives to increase educational attainment are the larger hospital systems. It is important to note that these facilities, which also tend to be the employers who prefer baccalaureate-educated nurses, therefore have the tendency to siphon off the most educated nursing workforce, channeling nurses with an associate's degree or less into other care settings, such as long-term care facilities and home health.²³⁸

Online Nursing Education

In addition to (or as a complement to) these bridge programs, expanded use of online courses may be one way to address barriers related to cost, scheduling, and convenience. Citing a 2015 survey of accredited nursing programs, NAM points out that most now incorporate some form of online education into their programs.²³⁹

²³⁴ *Id.* at p. 62.

²³⁵ *Id.* at p. 61.

²³⁶ The Center to Champion Nursing in America, Campaign for Action, "Transforming Nursing Education," <https://campaignforaction.org/issue/transforming-nursing-education/>.

²³⁷ Assessing Progress on the Institute of Medicine Report, *supra* n. 227 at p. 71.

²³⁸ *Id.* at p. 72.

²³⁹ *Id.* at pp. 71-72.

Nurse Residency Programs

The NAM also recommended implementing transition-to-practice or “residency” programs for nurses who have completed a pre-licensure or advanced practice degree program. To support greater adoption of the nursing residency or transition-to-practice model, NAM recommended that the Secretary of the Department of Health and Human Services redirect any funding for nursing diploma programs into nurse residency programs.²⁴⁰

Generally, nurse residency programs are established and funded by the institutions that hire nurses with the intention of increasing the retention of new nurses and enhancing their on-the-job training. The University HealthSystem Consortium (UHC) and the AACN have developed a standardized program for such residencies. It is a one-year program designed for nurses in hospital or acute care settings. According to NAM, more than 130 hospitals and health systems participate in the UHC/AACN program, and more than 45,000 nurses have completed the program as of 2016.²⁴¹

The AACN has also partnered with Vizient, a private health care consultancy, to create the Nurse Residency Program – a trademarked brand name that is implemented in participating hospitals. Like the UHC/AACN program, it offers a one-year residency curriculum. Additionally, it requires an academic partner, includes monthly seminar sessions, and complements the institution’s existing nursing orientation and specialty training programs. The Nurse Residency Program has been adopted as a statewide model in the Commonwealth, as well as in Hawaii and Maryland.²⁴²

Although not mandated by law, it is a required part of on-the-job training for new nurses in many hospitals. For example, Penn State Hershey Medical Center mandates that “all new graduates without experience are required to be licensed and complete our Graduate Nurse Residency program,” and to be eligible for the Graduate Nurse Residency program, they must possess a baccalaureate degree. Nurses with an associate’s degree will be given four years to complete their bachelor’s degree.²⁴³ The hospital networks and health systems which utilize the Nurse Residency Program include the following:

- Allegheny Health Network
- Einstein Healthcare Network
- Lehigh Valley Health Network
- Children’s Hospital of Philadelphia
- Hanover Hospital
- Main Line Health System

²⁴⁰ *Id.* at p. 75.

²⁴¹ *Id.* at p. 76.

²⁴² American Association of Colleges of Nursing, “Vizient/AACN Nurse Residency Program,” <https://www.aacnnursing.org/Portals/42/AcademicNursing/NRP/Nurse-Residency-Program.pdf>.

²⁴³ Penn State Health Milton S. Hershey Medical Center, “Nursing – Graduate Nurse Residencies,” <https://hmc.pennstatehealth.org/for-health-care-professionals/nursing/careers/graduate-nurse-residencies>.

- Penn State Hershey Medical Center
- Reading Hospital and Medical Center
- Temple University Health System
- University of Pennsylvania Health System
- Pinnacle Health System
- St. Luke’s University Health Network
- Thomas Jefferson University Hospital
- UPMC Health System.²⁴⁴

Student Debt

As mentioned previously, nurses are among many health care professionals facing costly student loan debt. Moreover, the specter of expenses and debt may be holding back nurses from increasing their level of educational attainment. One survey published in the journal *Nursing Economics* concluded that debt influenced education planning for nurses, and prior college debt and the cost of furthering education was holding back some nurses from continuing their education.²⁴⁵ Analyzing the survey data, the authors noted that younger nurses with higher debt and lower incomes were more likely to take educational debt into consideration when deciding on pursuing further studies. In effect, the high amount of debt required to be undertaken in order to pursue a bachelor’s or master’s degree alters the potential value for obtaining such a degree.²⁴⁶

Many hospitals and health care facilities within the Commonwealth offer tuition reimbursement to attract nursing talent. For example, Penn State Hershey Medical Center has a nursing educational assistance program which provides “educational privileges” at Penn State for its existing employees who wish to become RNs. Under this program, any full-time employee can enroll in any Penn State campus and receive a 75 percent tuition discount. Additionally, Penn State Hershey Medical Center will reimburse 85 percent of an employee’s tuition up to \$5,250 per calendar year if the employee attends a school other than Penn State.²⁴⁷

In addition to tuition-reimbursement incentives from employers, the federal government offers several loan repayment assistance programs. The Nurse Corps Loan Repayment Program recruits RNs and advanced practice nurses to work in eligible health care facilities that have a severe shortage of nurses. In return, the Nursing Education Loan Repayment Program will pay 60 percent of their total qualifying loan balance after two years of service, and an additional 25 percent if the nurses serve for a third year. The

²⁴⁴ Pennsylvania Action Coalition, “PA Nurse Residency Collaborative,” <http://www.paactioncoalition.org/initiatives/residency>.

²⁴⁵ Jan Jones-Schenck, Addressing the Cost, Value, and Debt in Nursing Education, *supra* n. 143 at p. 8.

²⁴⁶ *Id.* at p. 10.

²⁴⁷ Penn State Health Milton S. Hershey Medical Center, “Nursing – Professional Education and Development,” https://hmc.pennstatehealth.org/for-health-care-professionals/nursing/professional-education#_tabs_WAR_coreuiportlet_INSTANCE_4X8OtnWFEMId_tab-0.

eligible health care facilities are non-profit hospitals, clinics, and other facilities which are designated as a mental health or primary medical care Health Professional Shortage Area under federal law.²⁴⁸

The Perkins Loan Cancellation and Discharge Program is a broader program which applies to several other professions, such as teachers and law enforcement officers, in addition to nurses. The Perkins program allows a nurse employed full-time to completely discharge the principal loan amount and the interest accrued over a five year period. During the first and second years, the program will discharge 15 percent of the original principal loan amount plus interest accrued during those years, then 20 percent of the original principal loan amount plus interest accrued in the third and fourth years, and then finally the remaining 30 percent of the principal amount plus interest accrued in the fifth year. Application for the Perkins program must be made to the school which disbursed the loan.²⁴⁹

Another option for nurses with student loan debt is to apply for the Public Service Loan Forgiveness Program. Under this program, a debtor can apply to have certain federal student loans forgiven after making 120 payments toward their student debt under a qualified plan while working full-time for a qualified employer. Qualified employers are non-profits or the government – those employed by for-profit hospitals or health care facilities are not eligible. Further, this program does not apply to Perkins loans. The 120 payments requirement of this program generally means that a debtor must wait 10 years before applying to have their debt forgiven, and is therefore only useful to those who cannot fully pay off their loans within ten years of working full-time.²⁵⁰

The HRSA also offers the Nurse Faculty Loan Program. This program offers funds to accredited schools of nursing to provide loans for students who will become nursing school faculty. To be eligible, the students must be enrolled in an advanced nursing degree program. In exchange for working full-time as a nursing faculty member after graduation, the program authorizes cancellation of up to 85 percent of the original loan amount, plus accrued interest on the cancelled amount.²⁵¹

There is also a separate loan repayment program authorized by the Public Health Service Act which permits the Administrator of the HRSA to enter into agreements with individuals to repay \$10,000 per year and up to \$40,000 total to repay their debt if they are

²⁴⁸ United States Department of Health and Human Services, “Nurse Education Loan Repayment Program,” <https://www.benefits.gov/benefits/benefit-details/449>.

²⁴⁹ United States Department of Education, Federal Student Aid, “Perkins Loan Cancellation and Discharge.” <https://studentaid.ed.gov/sa/repay-loans/forgiveness-cancellation/perkins>.

²⁵⁰ United States Department of Education, Federal Student Aid, “Public Service Loan Forgiveness,” <https://studentaid.ed.gov/sa/repay-loans/forgiveness-cancellation/public-service>.

²⁵¹ United States Department of Health and Human Services, Health Resources and Services Administration, “Nurse Faculty Loan Program,” <https://bhwh.hrsa.gov/fundingopportunities/Default.aspx?id=e7eb501a-80da-40ae-9941-964dce07b3c5>.

employed as a full-time faculty member of an accredited nursing school.²⁵² The individual must hold at least a master’s degree and hold an unrestricted nursing license. If the individual possesses a doctorate degree in nursing or a Ph.D., the loan repayment figure is set at \$20,000 per year and \$80,000 in total.²⁵³ Funding was last appropriated for this program in 2010 through the 2014 fiscal year.²⁵⁴ Although it appears that the appropriations were not renewed in fiscal year 2015, the U.S. House of Representatives has passed the Nurse Workforce Reauthorization Act of 2017, which would “extend[] advanced education nursing grants to support clinical nurse specialists and clinical nurse leaders” and reauthorize loan repayments, among other things.²⁵⁵ As of October 2018 the bill is awaiting action in the Senate Health, Education, Labor, and Pensions Committee.²⁵⁶

Summary

The increase in demand for highly skilled nurses requires a greater push for nurses to obtain higher levels of education and training. In order to facilitate access to educational opportunities for nurses, the Commonwealth should consider allowing community colleges to expand into offering baccalaureate degrees in nursing. Many community colleges throughout the Commonwealth already offer associate’s degrees, and allowing community colleges the option to expand their programs will increase the options available for nurses to further their education.

Alternatively, the State Board of Nursing, as part of its duties to establish standards for the operation and approval of nursing education programs, should seek to standardize a BSN curriculum across the Commonwealth and encourage educational institutions to accept transfer credits from other schools’ BSN programs. This would simplify the process of obtaining a BSN for nurses who already have associates-level education by avoiding potential duplicative pre-requisites or other coursework. Providing easier pathways for nurses to obtain baccalaureate degrees may also encourage more nurses to pursue CRNP and CNS programs.

²⁵² Public Health Service Act, Pub.L. 78-410, Ch. 373, Title VIII, § 873, 58 Stat. 672, (July 1, 1944); 42 U.S.C. § 297o *et seq.*

²⁵³ *Id.*

²⁵⁴ Patient Protection and Affordable Care Act of 2010, Pub.L. 111-148, Title V, § 5311(b), 124 Stat. 632; 42 U.S.C. § 297o(g).

²⁵⁵ H.R. 959, 115th Congress (July 23, 2018).

²⁵⁶ United States Congress, “H.R. 959 – Bill Summary,” <https://www.congress.gov/bill/115th-congress/house-bill/959>.

Recommendation # 5:
Continue to Utilize Recruitment Tools for International
Medical Graduates and Foreign Nurses

Another potential remedy to the shortfall of physicians in Pennsylvania’s health care workforce is to hire more international medical graduates (IMGs) to fill open positions for which there are not enough U.S.-trained physicians. Unfortunately, difficulties faced by non-U.S. IMGs in finding a residency as well as caps on a visa waiver program limit the number of non-U.S. IMGs available to work in the Commonwealth.²⁵⁷

Non-U.S. IMGs are permitted entry into the U.S. pursuant to a J-1 visa, a non-immigrant category for individuals approved to participate in work- and study-based exchange programs. Because the primary goal of the J-1 visa is to allow cultural exchange and engage the J-1 visa holder in job or skills-based training, non-U.S. IMGs who receive a J-1 visa to participate in a residency must return to their home country at the end of the residency for two years before they may return to the U.S., unless they receive what is known as a Conrad 30 Visa Waiver.²⁵⁸ To be eligible to receive the waiver, the non-U.S. IMG physician must agree to be employed full-time on an H-1B nonimmigrant visa at a health care facility located in an area designated by the U.S. Department of Health and Human Services (HHS) as a Health Professional Shortage Area, Medically Underserved Area, or Medically Underserved Population.²⁵⁹

The Conrad 30 Visa Waiver allows states to waive up to 30 non-U.S. IMG physicians each year. In the Commonwealth, the Pennsylvania Department of Health (DOH) administers and oversees the waiver program.²⁶⁰ The DOH’s priority for Conrad 30 J-1 Waivers are primary care physicians, specifically in family practice, general internal medicine, pediatrics, obstetrics-gynecology, and psychiatry, who practice in outpatient ambulatory care sites. The non-U.S. IMG must agree to serve for at least three years in their position.²⁶¹

²⁵⁷ The term “international medical graduates” encompasses what used to be called foreign medical graduates – foreign nationals educated in their home countries – as well as Americans who go abroad, usually to the Caribbean, to obtain a medical education. For purposes of this report, they will be distinguished by the terms “U.S. IMG” and “non-U.S. IMG.” - Educational Commission for Foreign Medical Graduates, “Definition of IMG,” (Sept. 13, 2018), <https://www.ecfmg.org/certification/definition-img.html>.

²⁵⁸ United States Department of State, “J-1 Visa Basics.” <https://j1visa.state.gov/basics/>.

²⁵⁹ United States Citizenship and Immigration Services, “Conrad 30 Waiver Program.” <https://www.uscis.gov/working-united-states/students-and-exchange-visitors/conrad-30-waiver-program>.

²⁶⁰ Pennsylvania Department of Health, “Conrad State 30 J-1 Visa Waiver Program Fact Sheet.” <https://www.health.pa.gov/topics/Documents/Administrative/State%2030%20J-1%20Visa%20Waiver%20Fact%20Sheet%202010-10.pdf>.

²⁶¹ Pennsylvania Department of Health, “J-1 Visa Waiver Program (Conrad State 30) Statement of Policy,” <https://www.health.pa.gov/topics/Documents/Administrative/Revised%20State%2030%20J-1%20Visa%20Waiver%20Program%20Policy.pdf>.

Additionally, the DOH participates in the Appalachian Regional Commission's (ARC's) J-1 Waiver Program. The goal of the ARC's waiver program is to provide primary medical care in an HPSA in one of Pennsylvania's 52 counties that are within the Appalachian region as defined by the ARC. The DOH requires that the sponsor of the non-U.S. IMG demonstrate that it has made a reasonable good faith effort to recruit a U.S. physician for the job opportunity in the same salary range without success during the six months immediately preceding the request for waiver.²⁶²

As of March 4, 2019, the DOH received 28 applications for the Conrad 30 J-1 Visa Waiver for the 2018-2019 application period, of which 12 applications were recommended for approval leaving 18 remaining slots. As of the same date, there were three applications received for the ARC J-1 Visa Waiver, and one application was recommended for approval. There is no limit on the number of positions for the ARC J-1 waiver, however it is unclear if lack of knowledge about the program on the part of applicants or an unwillingness on the part of employers to sponsor their non-U.S. IMGs for this visa waiver program contribute to its underutilization.²⁶³

Non-U.S. IMGs may complete their residencies while on an H-1B visa instead of a J-1, as long as the employer is willing to sponsor them for such a visa.²⁶⁴ Pursuant to State Board of Medicine regulations, graduates of unaccredited medical schools (which generally tend to be non-U.S. IMGs) may obtain an unrestricted license to practice medicine after the third year of graduate medical training.²⁶⁵

Nursing and Other Professions

Under federal immigration law, foreign nationals seeking admission to perform labor as health care workers, other than physicians, are only admissible to the U.S. if they present certification from a U.S. Citizenship and Immigration Services-approved credentialing organization verifying that the worker has met the minimum

²⁶² Pennsylvania Department of Health, "J-1 Visa Waiver Program (Appalachian Regional Commission – ARC) Statement of Policy,"

<https://www.health.pa.gov/topics/Documents/Health%20Planning/DOH%20ARC%20J-1%20Visa%20Waiver%20Revised%20Policy%203-24-14%20.pdf>.

²⁶³ Pennsylvania Department of Health, "J-1 and National Interest Waiver Programs,"

<https://www.health.pa.gov/topics/Health-Planning/Pages/J-1-and-National-Interest-Waivers.aspx>.

²⁶⁴ United States Citizenship and Immigration Services, "H-1B Specialty Occupations,"

<https://www.uscis.gov/working-united-states/temporary-workers/h-1b-specialty-occupations-dod-cooperative-research-and-development-project-workers-and-fashion-models>.

²⁶⁵ 49 Pa. Code § 17.1(a)(4)(iii).

requirements for training, licensure, and English proficiency in their field.²⁶⁶ The health care workers covered by the certification requirement are:²⁶⁷

- Audiologists
- Licensed Practical and Licensed Vocational Nurses
- Medical Technicians (Clinical Laboratory Technicians)
- Medical Technologists (Clinical Laboratory Scientists)
- Occupational Therapists
- Physical Therapists
- Physician Assistants
- Registered Nurses
- Speech and Language Pathologists

The certification itself is not done by the U.S. Citizenship and Immigration Services (USCIS), the agency within the Department of Homeland Security which is responsible for administering the country's immigration system and issuing visas. Instead, three organizations are authorized by the USCIS to issue certifications. The Commission on Graduates of Foreign Nursing Schools (CGFNS) is authorized to issue certifications to all listed health care occupations, the National Board for Certification in Occupational Therapy is authorized to issue certifications for occupational therapists, and the Foreign Credentialing Commission on Physical Therapy is authorized to issue certifications for physical therapists.²⁶⁸

In order to work as a registered nurse (RN), foreign-educated nurses must also take and pass the National Council Licensure Examination (NCLEX) exam, administered by the National Council of State Boards of Nursing (NCSBN). Since 2004, foreign nurses have been able to take the NCLEX in several international locations, including India, the Philippines, Hong Kong, Canada, and Japan.²⁶⁹

From 1999 to 2009, foreign nurses who wanted to work in the U.S. had their own visa category – the H-1C visa. The H-1C non-immigrant visa was introduced specifically to address the shortage of nurses in the U.S. The number of H-1C visas was capped at 500 per fiscal year. States with populations in excess of nine million were capped at 50 foreign

²⁶⁶ United States Citizenship and Immigration Services, "Health Care Worker Certification," <https://www.uscis.gov/working-united-states/temporary-workers/health-care-worker-certification>; 8 C.F.R. § 212.15.

²⁶⁷ 8 C.F.R. § 212.15(c).

²⁶⁸ 8 C.F.R. § 212.15(e).

²⁶⁹ Nurse.org, "How to Work in the U.S. as a Foreign-Educated Nurse," (Feb. 6, 2018), <https://nurse.org/articles/work-in-us-as-foreign-educated-nurse/>.

nurses while states with populations of nine million or less were capped at 25.²⁷⁰ The H-1C visa program was initially authorized to last for four years.²⁷¹ However, it was re-authorized in 2006 for an additional three years.²⁷²

Since the end of the H-1C program in 2009, foreign nurses must find a U.S. employer willing to sponsor them for a visa. Typically, foreign nurses looking for employment in the U.S. and employers looking to hire foreign nurses utilized recruitment agencies to place the nurses. The hospitals or other facilities pay the recruitment agencies for each nurse hired, as well as sponsor the foreign nurses' visas.

Nurses and other non-physician health care workers may also obtain an EB-3 visa. The EB-3 visa is an immigrant visa for skilled workers or professionals, as well as all other workers. A skilled worker is defined under federal statute as "persons whose job requires a minimum of 2 years training or work experience, not of a temporary or seasonal nature." "Professional workers" are defined as "persons whose job requires at least a U.S. baccalaureate degree."²⁷³ Further, nursing and physical therapy are considered by the U.S. Department of Labor (DOL) to be "Schedule A" shortage occupations.²⁷⁴ As such, they do not require DOL certification.

Employment-based non-immigrant visas are difficult for nurses and other similar health care staff to obtain. For example, in 2015, the USCIS issued guidance stating that RNs and licensed practical nurses (LPNs) were not eligible to receive H-1B visas because their professions generally did not require a bachelor's degree. However, it should be noted that if a particular employer could prove that they generally required their RNs to possess a bachelor's degree, or if the foreign nurse had obtained a bachelor's degree and would work in a nursing sub-specialty, then that employer may be eligible to sponsor foreign nurses under the H-1B visa program.²⁷⁵

The number of foreign-educated RNs as a percentage of all RNs fluctuates. In 2008, the Organization for Economic Cooperation and Development estimated that foreign RNs made up 16 percent of new U.S. nurses in 2006 based on the number of passing

²⁷⁰ United States Citizenship and Immigration Servs., "H-1C Registered Nurse Working in a Health Professional Shortage Area as Determined by the United States Department of Labor," <https://www.uscis.gov/working-united-states/temporary-workers/h-1c-registered-nurse/h-1c-registered-nurse-working-health-professional-shortage-area-determined-department-labor>.

²⁷¹ Nursing Relief for Disadvantaged Areas Act of 1999, Pub.L. 106-95, 113 Stat. 1317.

²⁷² Nursing Relief for Disadvantaged Areas Reauthorization Act of 2005, Pub. L. 109-423, 120 Stat. 2900.

²⁷³ United States Immigration and Citizenship Services, "Employment-Based Immigration: Third Preference EB-3," <https://www.uscis.gov/working-united-states/permanent-workers/employment-based-immigration-third-preference-eb-3>.

²⁷⁴ 20 C.F.R. § 656.5; 8 C.F.R. § 656.15.

²⁷⁵ United States Immigration and Citizenship Services, Policy Guidance, "Adjudication of H-1B Petitions for Nursing Occupations," (Feb. 18, 2015), https://www.uscis.gov/sites/default/files/files/pressrelease/NurseMemo_112702.pdf.

international NCLEX scores as a percentage of all passing NCLEX results.²⁷⁶ In 2013, the NCSBN, the organization which administers the NCLEX, estimated that approximately six percent of all RNs working in the U.S. were foreign-educated. In 2010, HRSA estimated that this figure stood at five percent for RNs licensed before 2004, and eight percent for RNs licensed since then.²⁷⁷

To the extent that a nursing shortage exists (as projections tend to vary), foreign nurses have historically been viewed as a solution to such shortage, however, it is important to note that the number of foreign nurses working in the U.S. has been increasing at the same time as more U.S. students have been graduating from domestic nursing programs. Despite this increase, many believe a nationwide nursing shortage still persists. To illustrate, in 1988, during an acute nursing shortage, there were 3.7 foreign-trained nurses for every 100 U.S.-trained nurses. By 1996, amid a growing supply of domestically-educated nurses and a deceleration in demand for nurses, the ratio had risen to 5.1.²⁷⁸ By 2000, the U.S. Health Resources and Services Administration estimated that the supply of RNs still fell short of demand by employers by approximately 111,000.²⁷⁹

Further dampening foreign-educated nurses as a solution for any nursing shortage is the fact that the annual shortage of nurses as estimated by the previously-cited American Nurses' Association (ANA) report greatly exceeds the number of foreign-educated nurses who take and pass the NCLEX exam. The ANA predicts that by 2022, there will be 100,000 more RN positions opening per year than new RNs to fill those positions.²⁸⁰ Meanwhile, in 2017, 31,332 foreign registered nurses took the NCLEX examination for U.S. licensure and only 9,950 passed.²⁸¹ Although NCLEX passage is a good proxy for gauging the nursing workforce, not every foreign nurse who passes the NCLEX will be sponsored for or receive a visa to work in the U.S.

Foreign-educated nurses are a small part of the nursing workforce, and foreign-educated NCLEX passers numbered far less than the 150,000 U.S. graduates of nursing programs.²⁸² In addition to the low number of foreign-educated NCLEX passers relative to

²⁷⁶ Linda H. Aiken and Robyn Cheung, "Nurse Workforce Challenges in the United States: Implications for Policy," OECD Health Working Papers, (Oct. 2008), http://www.who.int/hrh/migration/Case_study_US_nurses_2008.pdf.

²⁷⁷ Jill S. Budden *et al.*, "Highlights of the National Workforce Survey of Registered Nurses," *Journal of Nursing Regulation* 4, no. 2 (Jul. 2013): 5-14, at p. 8.

²⁷⁸ Barbara L. Brush, *et al.*, "Imported Care: Recruiting Foreign Nurses to U.S. Health Care Facilities," *Health Affairs* 23 no. 3 (May/Jun. 2004): 78-87. doi: 10.1377/hlthaff.23.3.78.

²⁷⁹ Nurse Workforce Challenges in the United States: Implications for Policy, *supra* n. 276.

²⁸⁰ American Nurses' Association, "Workforce," n. 75 at (CHAPTER 2).

²⁸¹ National Council of State Boards of Nursing, "2017 NCLEX Examination Statistics," (Jun. 2018), p. 9, https://www.ncsbn.org/2017_NCLEXExamStats.pdf.

²⁸² United States Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Workforce, National Center for Health Workforce Analysis, "The Future of the Nursing Workforce: National- and State-Level Projections, 2012-2025," (Dec. 2014), p. 2, <https://bhw.hrsa.gov/sites/default/files/bhw/nchwa/projections/nursingprojections.pdf>. The 150,000 figure is from 2013.

the number of new U.S.-educated graduates, foreign nurses generally enter the country on EB-3 or H-1B visas, which are costly and can take months to years to obtain.

Congress did not foresee using foreign-educated nurses as a permanent and singular solution to a shortage of nurses. As part of the statute that enacted the H-1C visa program for foreign-educated nurses, Congress directed HHS and the DOL to jointly submit a report to Congress detailing recommendations for an alternative remedy for the nursing shortage, and specifically requested recommendations to eliminate the dependency of hospitals and other health care facilities on nonimmigrant nurses as well as “providing for a permanent solution to the shortage of registered nurses who are United States citizens or aliens lawfully admitted for permanent residence.”²⁸³

Summary

While using foreign-educated or trained physicians or nurses is not a long-term or permanent solution to any shortage of these workers in the health care field, IMGs can serve as a useful addition to the physician workforce to help mitigate the increasing physician shortage and add a level of cultural and academic diversity within the field. For the physician workforce, a solution must originate in addressing the root causes of such a shortage. This can include the multiple barriers to entry into the profession for prospective medical students, such as the length of time it takes to become a doctor, the potential lack of residency positions, and the extreme amount of educational debt medical school students accrue during their education. These issues are discussed in greater depth in Recommendations #1 and #2. Further, IMGs already make up almost 25 percent of all physicians in the U.S., yet there is still a shortage of physicians.²⁸⁴ This would indicate that there has been some structural issue with the health care system at large in producing a shortage, rather than simply a lack of supply of qualified physicians at the present time.

The solutions to the nursing shortage must also come from addressing the underlying reasons for such a shortage, including a backlog in nursing education (discussed in Recommendation #4) and turnover and attrition of qualified nurses (addressed in Recommendation #6). While investing resources to utilize foreign nurses may not be an overwhelmingly promising solution to the nursing shortage, outreach to attract foreign-educated nurses to the Commonwealth could be a component of an overall larger strategy for ensuring that the health care workforce in the Commonwealth is fully staffed. Currently, most foreign-educated nurses are employed in California, Texas, Florida, Illinois, New Jersey, Michigan, and New York.²⁸⁵

²⁸³ Nursing Relief for Disadvantaged Areas Act of 1999, Pub.L. 106-95, 113 Stat. 1317.

²⁸⁴ Association of American Medical Colleges, “Active Physicians Who Are International Medical Graduates (IMGs) by Specialty, 2015,” <https://www.aamc.org/data/workforce/reports/458506/1-7-chart.html>.

²⁸⁵ Barbara L. Brush, *et al.*, *supra* n. 278 at p. 3.

**Recommendation #6:
Reduce Nurse Attrition and Turnover by Improving
Nurse Working Environment and Staffing**

As previously mentioned, the U.S. Health Resources and Services Administration (HRSA) has been projecting that Pennsylvania will experience an RN surplus by the year 2030. However, the surplus projections have decreased considerably leading up to HRSA's latest data projections published in 2017. Also mentioned previously were HRSA's 2017 projections showing an increase in Pennsylvania's expected LPN shortfall by 2030. Amid this projected decrease in RN surplus and increase in LPN shortfall, coupled with the fact that nurses account for the nation's largest labor force within the health care industry, retention of nurses will still remain an important issue in Pennsylvania.²⁸⁶

In 2010, an estimated 30 to 50 percent of all newly licensed RNs either changed jobs within th nursing field or left the profession altogether within their first three years of clinical practice.

Nurse Attrition and Turnover

To those who hold the profession, nursing can be both highly rewarding and exceedingly stressful and demanding. The stress and demand that comes with the nursing profession not only impacts the attendant nurse, but also his or her family. Consequently, the nursing profession has a high attrition and turnover rate, especially among newly licensed RNs.²⁸⁷ In 2010, an estimated 30 to 50 percent of all newly licensed RNs either changed jobs within the nursing field or left the profession altogether within their first three years of clinical practice.²⁸⁸ According to a 2014 study, an estimated 17.5 percent of newly-licensed RNs leave their first nursing job within the first year, and 33.5 percent leave within two years.²⁸⁹ According to the *2018 National Health Care Retention & RN Staffing*

²⁸⁶ United States Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Workforce, National Center for Health Workforce Analysis, "Supply and Demand Projections of the Nursing Workforce: 2014-2030," (Jul. 21, 2017), p. 9, https://bhw.hrsa.gov/sites/default/files/bhw/nchwa/projections/NCHWA_HRSA_Nursing_Report.pdf; JSGC, "Professional Bedside Nursing in Pennsylvania: A Staff Study," *supra* n. 75 at p. 25.

²⁸⁷ References to attrition apply to nurses who leave the nursing profession, whereas references to turnover apply to nurses who change jobs within the nursing field.

²⁸⁸ Carol Issac *et al.*, "Why are Nurses Leaving? Findings from an Initial Qualitative Study on Nursing Attrition," *Medsburg Nursing* (Nov./Dec. 2010), p. 335.

²⁸⁹ "RN Work Project," Policy, Politics & Nursing Practice, (2014), <https://www.rwjf.org/en/library/articles-and-news/2014/09/nearly-one-in-five-new-nurses-leave-first-job-within-a-year--acc.html>.

Report, the total national turnover average for bedside RNs is 16.8 percent, a 2.2 percent increase from 2016.²⁹⁰

In light of these statistics, identifying what causes this high attrition and turnover among nurses is critical. Generally, there are two top issues nurses identify as affecting their intention to leave or stay at a job; better working conditions and wages.²⁹¹ In fact, studies have found that nurse retention efforts should be focused primarily on improving work environments.²⁹²

The research shows that nurse frustrations with work environment stem from interpersonal conflict among staff and emotional distress caused by fatigue and exhaustion.²⁹³ Higher patient workloads responsible for this fatigue and exhaustion have been linked to negative nurse outcomes, such as low job satisfaction and burnout which often makes the satisfaction that typically resonates from providing good quality care to patients far less attainable.²⁹⁴ Moreover, higher nurse-to-patient ratios are often associated with higher patient workload.²⁹⁵ Supporting evidence is a 2017 nursing survey of 1,000 bedside nurses in Pennsylvania mentioned previously. According to the survey, 94 percent of nurses surveyed believed their current health facilities lacked sufficient nursing staff, with 87 percent claiming that their inadequate staffing levels were affecting patient care.²⁹⁶ The same survey indicated that 84 percent reported a high rate of turnover in their facility, which the Nurses of Pennsylvania organization attributes to staffing policies rooted in a “do more with less” philosophy.²⁹⁷

Another work problem issue often associated with low job satisfaction and higher nurse attrition is lack of structural empowerment, which, includes nurse staff involvement in structures of an organization that result in an empowered nursing professional practice.²⁹⁸ In other words, nurse involvement in the facility or organization’s decision making roles regarding staffing may give nurses a sense of empowerment and control over

²⁹⁰ Brian Colosi, “2018 National Health Care Retention & RN Staffing Report,” *NSI Nursing Solutions, Inc.*, (Mar. 2018), p. 7.

²⁹¹ K. Lynn Wieck *et al.*, “What Nurses Want: The Nursing Incentives Project,” *Nursing Economics*, (May-Jun. 2009), p. 171.

²⁹² Carol Issac *et al.*, *supra* n. 288 at p. 339.

²⁹³ *Id.*

²⁹⁴ Matthew McHugh, *et al.*, “Contradicting Fears, California’s Nurse-to-Patient Mandate Did Not Reduce the Skill Level of the Nursing Workforce in Hospitals,” *Health Affairs* (Millwood) 30, no. 7 (July 2011): 1299-1306, doi: 10.1377/hlthaff.2010.1118, <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3209821/#>; Matthew McHugh and Chenjuan Ma, “Wage, Work Environment, and Staffing: Effects of Nurse Outcomes,” *Policy Politics & Nursing Practice* 15, no. 3-4, (Aug. 13, 2014): 72-78, doi: 10.1177/1527154414546868.

²⁹⁵ Matthew McHugh and Chenjuan Ma, “Wage, Work Environment, and Staffing: Effects of Nurse Outcomes,” *Policy Politics & Nursing Practice* 15, no. 3-4, (Aug. 13, 2014): 72-78, doi: 10.1177/1527154414546868.

²⁹⁶ Nurse of Pennsylvania, *supra*, n. 83 at p. 4.

²⁹⁷ *Id.* at p. 4, 7.

²⁹⁸ Nurse.com, “Structural Empowerment,” <https://www.nurse.com/ce/structural-empowerment>.

their work environment. A study that interviewed Chief Nursing Officers (CNOs) in Belgium hospitals found that a lack of structural empowerment often occurs when hospitals and other health facilities permit little to no involvement of bedside nurses in hospital affairs.²⁹⁹ For example, many hospitals and facilities with lower nurse retention rates have little to no bedside nurses represented in committees or working groups.³⁰⁰ According to one CNO interviewed in the study, “[e]veryone operates at his own level. Bedside nurses are not involved in the strategic management of the hospital...”³⁰¹

Addressing the negative work environment issues experienced by nurse professionals, may help improve nurse retention. In fact, biennial national surveys conducted since 2002 have consistently shown that more than 80 percent of RNs agree that improving the quality of the work environment is the most important way to resolve nursing shortages.³⁰²

Current Regulation of Nurse Staffing

The staffing of both the nurses and other health care personnel is regulated to some extent on federal and state levels. Federal regulation currently mandates that hospitals certified to participate in Medicare must provide nursing service having “adequate numbers of licensed registered nurses, licensed practical (vocational) nurses, and other personnel to provide nursing care to all patients as needed.”³⁰³ The regulations further require that hospitals provide “supervisory and staff personnel for each department or nursing unit to ensure, when needed, the immediate availability of a registered nurse for bedside care of any patient.”³⁰⁴ The lack of specificity in those regulations has led some states to craft their own laws to address nurse staffing.

Pennsylvania is one of those states that has regulatory language that addresses nurse staffing. The Commonwealth’s language also lacks specificity. For instance, Pennsylvania’s Health Care Facilities Act (HCFA) delineates requirements for hospital licensure and regulations for nursing services under Title 28, Chapter 109 of the Pennsylvania Code. With respect to nursing services, the regulations provide:

A sufficient number of registered professional nurses shall be on duty at all times to plan, assign, supervise, and evaluate nursing care as well as to give patients such nursing care as requires the judgment

²⁹⁹ Koen Van den Heede *et al.*, “Effective strategies for nurse retention in acute hospitals: A mixed method study,” *International Journal of Nursing Studies*, (Dec. 5, 2011), pp. 190-191.

³⁰⁰ *Id.* at p. 191.

³⁰¹ *Id.*

³⁰² Peter I. Buerhaus *et al.*, “Registered Nurses’ Perceptions of Nurse Staffing Ratios and New Hospital Payment Regulations,” *Nursing Economics*, (Nov/Dec. 2009), p. 375.

³⁰³ 42 C.F.R. §482.23(b).

³⁰⁴ *Id.*

and specialized skills of a registered nurse. A graduate nurse, or graduate practical nurse, providing care shall be under the supervision of a registered nurse.³⁰⁵

The language provides no explanation as to what constitutes a “sufficient number of registered professional nurses” and essentially leaves the discretion to each hospital falling within the scope of the HCFA. The language allows hospitals to make decisions based on what they determine is best for their patients.

Several states have enacted legislation providing more specific requirements related to nurse staffing. In general, state staffing laws nationwide typically fall into the following three categories:

- Mandated staffing committees, which essentially create staffing initiatives reflective of the needs of the patient population and a matching of the skills and experience of the staff;
- Mandated specific nurse-to-patient ratios per statute or regulations; and
- Required health facility reporting of its staffing levels to the public and/or a regulatory body.³⁰⁶

Fourteen states currently have enacted nurse staffing laws and regulations. Of those fourteen states, eight have existing laws that mandate the establishment of staffing committees responsible for governing staffing policy or creating core staffing plans.³⁰⁷ California is the lone state to enact a minimum nurse-to-patient ratio across all nursing units. Massachusetts passed a law in 2014 specifically mandating a nurse-to-patient ratio only applicable to the nurses in ICUs.³⁰⁸ In November of 2018, the Massachusetts electorate roundly rejected a referendum on expanding mandatory staffing ratios for nurses in all units, much like California.³⁰⁹ Minnesota law requires a chief nursing officer or designee to develop a core staffing plan with input from other professionals within its hospitals.³¹⁰ Five states currently require some form of disclosure or public reporting

³⁰⁵ Act of July 19, 1979, (P.L. 130, No. 48); 28 Pa. Code §109.4.

³⁰⁶ JSGC, “Professional Bedside Nursing in Pennsylvania: A Staff Study,” *supra* n. 75 at p. 16.

³⁰⁷ Lippincott Solutions, “Update on Nursing Staff Ratios,” (Mar. 8, 2018), http://lippincottolutions.lww.com/blog.entry.html/2018/03/08/update_on_nursingst-HJoe.html.

³⁰⁸ Mass. General Law c. 111, §231; Anica C. Law *et al.*, “Patient Outcomes After the Introduction of Statewide ICU Nurse Staffing Regulations,” *Critical Care Medicine*, (Oct. 2018), https://journals.lww.com/ccmjournals/Fulltext/2018/10000/Patient_Outcomes_After_the_Introduction_of.2.aspx.

³⁰⁹ Jennifer Thew, “Massachusetts Voters Say ‘No’ to Mandatory Nurse-Patient Ratios,” *Health Leaders*, (Nov. 7, 2018), <https://www.healthleadersmedia.com/nursing/massachusetts-voters-say-no-mandatory-nurse-patient-ratios>.

³¹⁰ Lippincott Solutions, *supra* n. 307.

regarding its nurse staffing levels.³¹¹ Table 8 provides a breakdown of the current states with staffing regulations.

Table 8	
State Staffing Laws	
Types of Regulation	States
Staffing committees and/or staffing plans	Connecticut, Illinois, Nevada, Ohio, Oregon, Texas, Washington, Minnesota
Nurse-to-patient ratios	California, Massachusetts*
Disclosure and/or public reporting	Illinois, New Jersey, New York, Rhode Island, Vermont
*Only pertains to ICU	

Source: Compiled by the Commission from American Nurses Association, "Nurse Staffing," <https://www.nursingworld.org/practice-policy/advocacy/state/nurse-staffing/>

Nurse-to-Patient Ratios

Nurse-to-patient ratios are a possible way to address concerns over inadequate staffing and its contribution to nurse attrition and turnover. For many years, nurses nationwide have raised concerns about inadequate staffing and how it threatens the health and safety of their patients, as well as the negative impact it has on nurses themselves. To allay these concerns, the state of California passed the Nurse-to-Patient Ratio Law (often referred to as A.B. 394) in 1999. This law required the California Department of Health Services to adopt regulations establishing minimum nurse-to-patient ratios for hospitals.³¹² A.B. 394 was the first comprehensive legislation in the U.S. to mandate minimum staffing ratios for RNs.³¹³ Shortly after enactment, the California Department of Health Services developed staffing ratios for registered and licensed vocational nurses and after regulations were formally adopted, the law went into effect in January 2004 and remains in effect.³¹⁴

³¹¹ *Id.*

³¹² 1999 Cal. Legis. Serv. Ch. 945 (A.B. 394).

³¹³ Jean Ann Seago *et al.*, "Minimum Staffing Ratios: The California Workforce Initiative Survey," *Nursing Economics*, (Mar./Apr. 2003), p. 65; Cal.Health & Safety Code § 1276.4.

³¹⁴ California Healthcare Foundation, "Assessing the Impact of California's Nurse Staffing Ratios on Hospitals and Patient Care," (Feb. 2009), p. 1.

Given the fact that nurse staffing is a challenging and complex issue, the enactment of California's law was met with firm support from nurses and their associations, and vehement consternation from hospitals and their associations. The law's opponents cited the significant concern that hospitals would ultimately struggle to comply with the regulation, even if funding was available.³¹⁵ Without available funding, it was feared that hospitals would discontinue useful health programs and services in order to have the financial resources necessary for compliance with the staffing ratios. This concern was based partly on evidence showing that pressure to constrain nurse personnel expenditures plays a significant role in hospitals' budgets.³¹⁶

Another concern was that hospitals would respond to the law by disproportionately hiring LPNs (called Licensed Vocational Nurses in California), due in part to a provision of the law allowing hospitals to be in compliance with the mandate if up to 50 percent of their required nursing staff were LPNs, who have less intensive training and have a more limited scope of practice than RNs.³¹⁷ Since California was the first (and only state thus far) to mandate staffing ratios, researchers extensively studied the impact of the law on California hospitals to determine whether the collection of fears had been validated.

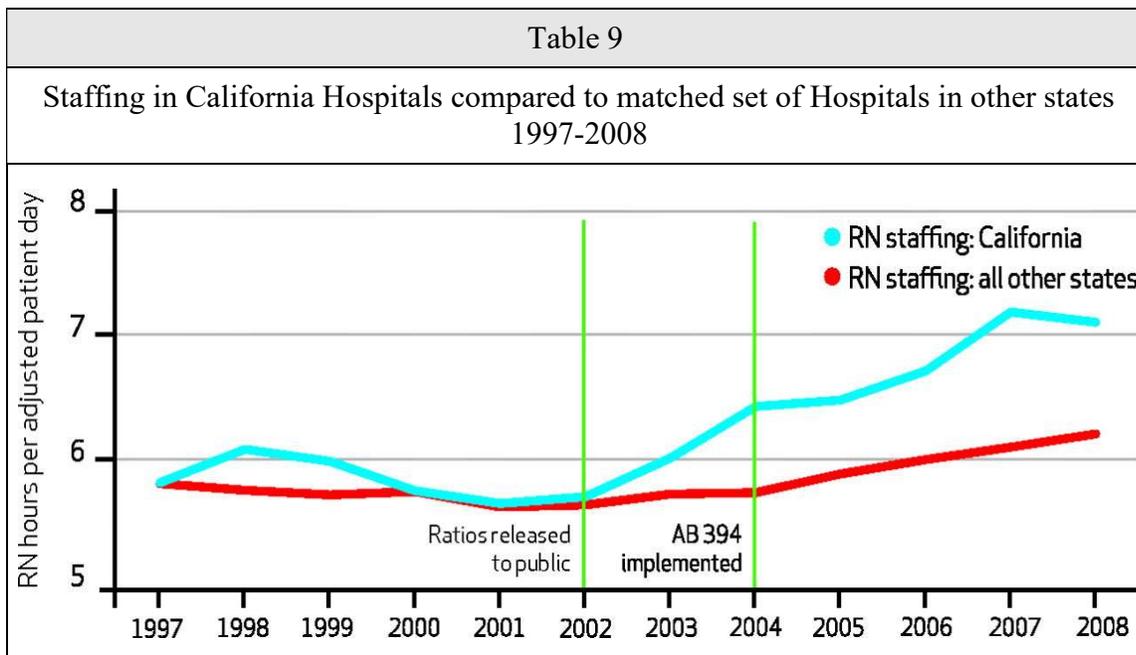
Researchers found its implementation to be associated with improvements in multiple areas. For example, California has seen a large increase in nurse staffing (measured as RN hours per patient day) compared to a sample of hospitals from other states that were matched based on hospital characteristics.³¹⁸ This increase is further illustrated in Table 9.

³¹⁵ Jean Ann Seago *et al.*, *supra* n. 313 at p. 65.

³¹⁶ *Id.* at p. 66.

³¹⁷ Matthew D. McHugh, *et al.*, *supra* n. 294 at pp. 1299-1306.

³¹⁸ *Id.*



Source: Compiled by the Commission from Matthew McHugh, *et al.*, “Contradicting Fears, California’s Nurse-to-Patient Mandate Did Not Reduce the Skill Level of the Nursing Workforce in Hospitals,” *Health Affairs* (Millwood) 30, no. 7 (July 2011): 1299-1306, doi: 10.1377/hlthaff.2010.1118, <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3209821/#>;

Specifically, research on the staffing mandate’s impact yielded evidence of an implementation effect on staffing of nearly one additional hour of nursing time per patient day compared to similar hospitals in other states. While RN staffing increased considerably as a consequence of implementation of the mandate, there was no supporting evidence to confirm previous fears that the mandate would erode the overall nursing skill level in hospitals and compromise patient safety goals. That is, hospitals did not begin filling positions with an increasing proportion of LPNs.³¹⁹ In fact, to the contrary, as the Commission reported in its 2015 *Professional Bedside Nursing in Pennsylvania: A Staff Study*, the studies showed that skill mix increased in California hospitals, following the same trend of improving skill mix as other hospitals nationally.³²⁰

With respect to patient outcomes, the effect of the staffing ratio mandates showed multiple improvements. For example, research conducted by University of Pennsylvania School of Nursing professor Dr. Linda Aiken and several of her colleagues evaluated the relationship between staffing and outcomes in California hospitals compared to Pennsylvania and New Jersey hospitals. Their research found that after implementation of the law, California nurses, on average, cared for one less patient per day than nurses in Pennsylvania and New Jersey.³²¹ Their findings demonstrated that in some cases,

³¹⁹ *Id.*

³²⁰ *Id.*; JSGC, “Professional Bedside Nursing in Pennsylvania: A Staff Study,” *supra* n. 75 at p. 16.

³²¹ JSGC, “Professional Bedside Nursing in Pennsylvania: A Staff Study,” *supra* n. 75 at p. 17.

increased nurse staffing in California hospitals was linked to better outcomes, compared to the outcomes for patients treated in hospitals in other states without similar regulations.

Their research also concluded that surgical mortality rates and death rates among surgical patients with complications, known as “failure to rescue,” in hospitals in New Jersey and Pennsylvania would be greatly reduced if those hospitals were to increase their staffing to a level on par with California’s mandated ratios.³²² Moreover, another study compared other states’ staffing and patient outcomes to California’s staffing and patient outcomes before and after implementation of the ratio law and demonstrated that California experienced a significant decrease in infections.³²³

Nurse-to-patient ratio mandates that may result in increased costs directly and indirectly associated with the increasing number of nurses employed in hospitals may be offset by avoiding the costs of poor outcomes and adverse events. Further, it has been argued that potential for offsets and savings may be increased as value-based purchasing programs are implemented in response to the Affordable Care Act of 2010. For example, higher nurse staffing levels have been linked to fewer of the hospital-acquired conditions and infections that the Centers for Medicare and Medicaid Services (CMS) no longer pays for (unless the complication was present when the patient was first admitted).³²⁴

Not every aspect of patient care improved, however, as the study also revealed that improvements in respiratory infections and post-surgical infections were not significantly different between California hospitals and hospitals in other states.³²⁵ Another study comparing Medicare surgical patient discharge data, a multi-state nurse survey from California, Florida, New Jersey, and Pennsylvania, and American Hospital Association data found that each additional surgical patient per nurse increased the odds of readmission by three percent.³²⁶ Opponents of mandated nurse-to-patient ratios acknowledge the foregoing outcome improvements, but argue that they alone do not constitute a significant increase in patient outcomes attributable to increased nurse staffing.

Another positive outcome of California’s ratio law was a reduction in occupational injury and illness rates for both RNs and LPNs. A study performed at the University of California, Davis, examined the change in injury rates among hospital nurses after implementation of the law and compared it to the change in 49 other states and the District of Columbia combined. In doing so, the study extracted data from the U.S. Bureau of

³²² *Id.*

³²³ Linda Aiken, *et al.*, “Effects of Nurse Staffing and Nurse Education on Patient Deaths in Hospitals with Different Nurse Work Environments,” *Med Care* 49, no. 12, (Dec. 2011): 1047-53, doi: 10.1097/MLR.0b013e3182330b6e.

³²⁴ Matthew D. McHugh, *et al.*, *supra* n. 294 at pp.1299-1306.

³²⁵ Linda Aiken, *et al.*, “Effects of Nurse Staffing and Nurse Education on Patient Deaths in Hospitals with Different Nurse Work Environments,” *supra* n. 323.

³²⁶ Chenjuan Ma, *et al.*, “Organization of Hospital Nursing and 30-day Readmissions in Medicare Patients Undergoing Surgery,” *Med Care* 53, no. 1, (Jan. 2015): pp. 65-70, doi: 10.1097/MLR.000000000000258.

Labor and Statistics (BLS) and the California Employment Development Department. Upon completion, the study found that California's ratio law was associated with 55.57 fewer occupational injuries and illnesses per 10,000 RNs per year, which translates to a rate 31.6 percent lower than would be in the absence of the law. The reduction for LPNs was determined to be 33.6 percent.³²⁷

The study concluded that workplace illnesses and injuries are often linked to factors such as hazards, physical demands (such as repositioning patients), and complexity in the workplace. According to the study, these factors were likely mitigated with increased nursing staff attributable to the nurse-to-patient ratio law.³²⁸ A logical argument can be made that reducing occupational injuries and illnesses and their contributing factors would be another positive effect of a nurse-to-patient ratio on nurse working conditions, while also mitigating staffing shortages. In fact, the study found that its findings related to improvements in occupational safety are consistent with numerous other studies of the implementation of the California ratio mandate and the robust literature linking job satisfaction to injuries.³²⁹ However, the study acknowledged that the projected reductions occurred in the context of well-established downward trends in national occupational illnesses and injury rates in hospitals and the health care industry in general which have also been linked to new workplace standards and attention for safety and health. Some observers also noted that California's workers compensation benefits were reduced in the first decade of the 2000s, leading some to speculate that reported injury rates for all occupations within the state would drop.³³⁰

The implementation of California's ratio law has also been associated with an increase in nurses' wages.³³¹ Support for this claim can be found in a study that reviewed data from four ongoing national surveys – the National Sample Survey of Registered Nurses, the Current Population Survey, the National Compensation Survey, and the Occupational Employment Statistics Survey, in order to estimate short-term changes in RNs' wages in California metropolitan areas compared to urban regions in other states lacking such legislation.³³² The study excluded rural nurses from its analysis in part because wage data was unavailable for them and in part because many rural hospitals

³²⁷ J. Paul Leigh *et al.*, "California's Nurse-to-Patient Ratio Law and Occupational Injury," University of California, Davis, (Sept. 3, 2014), p. 477.

³²⁸ *Id.* at p. 478.

³²⁹ *Id.* at p. 482.

³³⁰ *Id.*

³³¹ Mark Barbara *et al.*, "California's Minimum – Nurse – Staffing Legislation and Nurses' Wages," *Health Affairs*, (Mar./Apr. 2009), <https://doi.org/10.1377/hlthaff.28.2.w326>.

³³² *Id.* at p. w329. The National Sample Survey of Registered Nurses is sponsored by the Bureau of Health Professions at the United States Health Resources and Services Administration. The Current Population Survey is conducted by the United States Bureau of Census. The National Compensation Survey is produced by the United States Bureau of Labor and Statistics (BLS), and the Occupational Employment Statistics Survey is a cooperative program operated by the BLS and state workforce agencies.

received a waiver from the ratio regulations from the California Department of Health Services.³³³

The results of the study indicated that, from 2000 through 2006, RNs employed within metropolitan area hospitals experienced a wage growth as much as 12 percentage points higher than the growth in the wages of nurses employed in metropolitan areas outside of California.³³⁴ However, the study pointed out that the increased demand for RNs resulting from California's ratio law occurred in the midst of a severe shortage of RNs, and the combination of both the increased demand attributable to the ratio law and the shortage would be expected to put upward pressure on RN wages. The study further opined that while a strong economic argument can be made that the minimum-staffing regulations helped to raise nurse wages, policymakers and planners who considered the regulations likely underestimated, at least in the short run, the potential costs associated with the ratio law because the potential effects on nurses' wages were not considered.³³⁵ The study also noted that California hospitals are faced with high financial pressures on personnel expenditures, such as compliance with stringent seismic safety standards (regarding earthquakes), which are estimated to cost \$110 billion by 2030, a large proportion of uninsured nonelderly patients, and negative operating margins. Given these demands, hospitals' ability to increase wages to compete for much needed RNs may be more limited in California than in other states.³³⁶

Mandated nurse-to-patient ratios in California have also had an impact on nurse job satisfaction. In general, job satisfaction has been significantly associated with attitudes regarding staffing ratios.³³⁷ For example, a 2008 national survey sent to a random sample of 3,500 RNs revealed that RNs who reported low levels of job satisfaction were significantly more likely to support ratio mandates at the federal level (61 percent among those very or somewhat dissatisfied with their jobs) than were RNs who reported satisfaction with their jobs (35 percent among those very or somewhat satisfied RNs).³³⁸ RNs employed outside of California, in states that have been actively pursuing nurse staffing legislation, were significantly more likely to agree that ratios should be mandated at the federal or state level as compared to RNs in states that were not engaged in nurse staffing regulation. Furthermore, RNs employed in California were significantly more likely to say that ratios should be mandated at the federal or state level compared to RNs in other states.³³⁹ Overall, the survey results showed that out of all RNs surveyed, six in ten believed that minimum staffing ratios should be mandated.³⁴⁰ However, RN support

³³³ *Id.*

³³⁴ *Id.* at p. w326.

³³⁵ *Id.* at p. w327.

³³⁶ *Id.* at p. w333.

³³⁷ Peter I. Buerhaus *et al.*, *supra* n. 302 at p. 374.

³³⁸ *Id.* at pp. 373-374

³³⁹ *Id.* at p. 374.

³⁴⁰ *Id.* at p. 373.

for nurse-to-patient ratios was not universal, as many RNs are still unsure as to whether staffing ratios should be mandated.³⁴¹

Studies seeking to determine whether nurse-to-patient ratios actually increased job satisfaction among nurses have produced mixed results. A 2010 study conducted by researchers at the University of Pennsylvania found that a significantly lower proportion of California nurses were experiencing high burnout (29 percent) when compared with 34 and 36 percent in New Jersey and Pennsylvania hospitals, respectively. These data were acquired through a 2006 survey of nearly 80,000 RNs in California, New Jersey, and Pennsylvania.³⁴² Another study prepared in 2011 found that when staffing was consistent with California's mandated ratios, nurses generally reported lower levels of burnout and job dissatisfaction.³⁴³

On the other hand, Buerhaus' 2008 survey found that when examining the nursing workforce in California hospitals, the implementation of the staffing ratios did not appear to increase job satisfaction among its nurses.³⁴⁴ Further, the study concluded that:

[G]iven this disconnect between nurses' emphasis on improving their work environment and the evidence indicating that ratios have not delivered this change in the one state that has implemented the ratios, hospitals might be better off initiating a dialogue with their nursing workforce aimed at identifying the problems in nurse staffing in their organization.³⁴⁵

While there are examples of how a mandatory nurse-to-patient ratio can improve the nurse work environment and nurse retention, it is important to keep in mind that the debate over nurse staffing ratio laws has been polarized for quite some time. Some health experts have argued that there are potential adverse and unintended consequences that could occur as a result of implementing a nurse-to-patient ratio law. For example, hospital associations contend that ratio laws would have the effect of imposing steep fiscal costs on hospitals and "would ultimately deprive hospital administrations of the right to make staffing decisions about their own wards."³⁴⁶

Increased costs to hospitals have always been a large concern in connection with nurse-to-patient ratio mandates, especially when considering that nurse personnel

³⁴¹ *Id.* at p. 375.

³⁴² Linda H. Aiken *et al.*, "Implications of the California Nurse Staffing Mandate for Other States," *Health Services Research* 45, no. 4, (Aug. 2010): 904-921, doi: 10.1111/i.1475-6773.2010.01114x.

³⁴³ *Id.* at p. 17; Matthew D. McHugh, *et al.*, *supra* n. 294 at pp.1299-1306,

³⁴⁴ Peter I. Buerhaus *et al.*, *supra* n. 302 at p. 375.

³⁴⁵ *Id.* at p. 375.

³⁴⁶ "Nurse Staffing Ratio Law: Debating the merits of a nurse-staffing ratio law," <https://www.nursinglicensure.org/articles/nurse-staffing-ratios.html>.

expenditures are a significant part of a hospital's budget. The expected RN spending per hospital to comply with the California mandate was estimated to be between \$700,000 and \$800,000. Furthermore, evidence has suggested that these costs have come, in part, as a result of increased nurse wages in California associated with the ratio law as well as a consequence of the state's severe nursing shortage.³⁴⁷ According to an article in the *Journal of Nursing Regulation*, the District of Columbia Hospital Association estimated that mandating nurse-to-patient ratios would cost their membership more than \$90 million dollars annually.³⁴⁸

In 2018, the Massachusetts Health Policy Commission (MHPC) estimated that universal mandatory nurse staffing ratios in Massachusetts would result in a \$676 million to \$949 million annual increase in statewide health care spending once fully implemented. The MHPC cautioned that despite California's moderate success with its mandatory ratios, potential steep fiscal increases, could result in reductions in hospital margins or assets, reduced capital investments, closure of unprofitable or other services, reduction in non-health care workforce staffing levels, and potentially higher commercial prices for hospital care, leading to potentially higher premiums.³⁴⁹

Some health experts also argue that mandatory nurse staffing ratios are too rigid, impractical, and are essentially a "one size fits all solution" that can make work environments more arduous for nurses. Moreover, opponents contend that "health care changes rapidly, and stagnant ratios in statutes would not be flexible to account for the changes in technology, design, and innovation."³⁵⁰ Based on its own experience in grappling with California's nurse-to-patient ratio law, the California Hospital Association (CHA) has argued that it is impractical for any hospital to keep the ratio of nurses to patient within a set limit in light of all the inevitable ups and downs of hospital life. To illustrate its point, CHA provides the scenario where a disaster or violent crime occurs and results in the sudden inrush of many patients needing urgent care. According to CHA, an inrush could be met with non-compliant nurse-to-patient ratios, resulting in a hospital's violation of the law.³⁵¹

The CHA put forth another scenario where patients might experience increased wait times for treatment. Such a situation could inevitably occur with a nurse who has four patients in his or her ward, with more waiting in the lobby. Of the four in the ward, two may not require attention at the moment, for example, one may be having imaging done

³⁴⁷ Matthew D. McHugh, *et al.*, *supra* n. 294 at pp.1299-1306.

³⁴⁸ Nicole Livanos, "A Broadening Coalition: Patient Safety Enters the Nurse-to-Patient Ratio Debate," *Journal of Nursing Regulation*, (Apr. 2018), p. 68.

³⁴⁹ Massachusetts Health Policy Commission, "Mandated Nurse-To-Patient Staffing Ratios in Massachusetts Research Presentation: Analysis Of Potential Cost Impact," (Oct. 3, 2018), p. 33, https://www.mass.gov/files/documents/2018/10/16/NSR%20Cost%20Impact%20Analysis_final%202.pdf.

³⁵⁰ Nicole Livanos, *supra* n. 348 at p. 68.

³⁵¹ NurseLicensing.org, "Nurse Staffing Ratio Law: Debating the merits of a nurse-staffing ratio law," <https://www.nursinglicensure.org/articles/nurse-staffing-ratios.html>.

and one may be simply waiting for a bed to open up. In this scenario, the nurse may want to step away from those two and bring in another patient from the waiting room. However, as CHA pointed out, the nurse would not be able to attend to new patients under the ratio law and patients would be left to continue waiting for treatment.³⁵²

Opponents of nurse-to-patient ratios also highlight the robust improvements that have been made to the hospital work environment for nurses by the American Nursing Credentialing Center (ANCC) Magnet Recognition Program.³⁵³ The ANCC Magnet Program (Magnet Program) is a program that was established in December of 1990 by the American Nursing Association Board of Directors that designates organizations globally where nursing leaders successfully align their strategic nursing goals to improve the organization's patient outcomes.³⁵⁴ Studies have found that in Magnet Program-recognized hospitals, nurses had lower burnout rates and higher levels of job satisfaction than did nurses at hospitals originally selected as American Academy of Nursing (AAN) magnet hospitals. In particular, one study found that only 16 percent of nurses in ANCC Magnet Program hospitals reported being dissatisfied in comparison to 28 percent of nurses in AAN Magnet Program hospitals. Nurses in ANCC Magnet Program hospitals were also more likely to report being "very satisfied" than AAN Magnet Program hospital nurses, at 33 percent to 22 percent respectively.³⁵⁵ Opponents of nurse staffing ratios argue that work

Nurses in ANCC Magnet Program hospitals were also more likely to report being "very satisfied" than AAN Magnet Program hospital nurses, at 33 percent to 22 percent respectively.

environment improvements attributable to the Magnet Program are proof that, while there is still much work to do in improving nurse work environment, the progress made thus far demonstrates that mandatory ratios are not needed.

Pennsylvania legislators have considered adopting mandated nurse-to-patient ratios in the last two biennial sessions of the General Assembly.³⁵⁶ At the federal level, two bills were introduced in 2017. Among other things, both bills sought to mandate nurse-to-patient ratios similar to California's law by amending the Public Health Service Act.³⁵⁷ To date however, there is still no federal or Pennsylvania mandated nurse-to-patient ratios.

³⁵² *Id.*

³⁵³ Chenjuan Ma, *et al.*, *supra* n. 326.

³⁵⁴ American Nurses Credentialing Center, "ANCC Magnet Recognition Program History," *Nursing World*, <https://www.nursingworld.org/organizational-programs/magnet/history/>.

³⁵⁵ Linda H. Aiken *et al.*, "The Magnet Nursing Services Recognition Program a Comparison of Two Groups of Magnet Hospitals," *Journal of Nursing Administration* 39, no. 7-8 Suppl., (Jul.-Aug. 2009): S5-14, doi: 10.1097/NNA.0b013e3181aeb469.

³⁵⁶ Pennsylvania S.B. 214, P.N. 198 (Sess. of 2017); Pennsylvania H.B. 1500, P.N. 2030 (Sess. of 2017).

³⁵⁷ United States S.B. 1063 (115th Cong. 2017-2018); U.S. H.B. 2392 (115th Cong. 2017-2018).

Public Reporting of Staffing Levels

While a nurse-to-patient ratio similar to California may be worth considering to resolve staffing issues that contribute to poor working environments for nurses, there are other strategies the Commonwealth could pursue to improve working conditions and nurse retention. One strategy in particular is a state mandate that hospitals publicly report their staffing levels. Several states have enacted laws requiring the public reporting of hospital staffing levels. For example, in 2005, New Jersey enacted a law that requires licensed hospitals and nursing homes to publically disclose direct care staffing levels within their facilities and to report said staffing levels to the New Jersey Department of Health. The state's Health Care Facilities Planning Act (HCFPA) provides

[a] general hospital...shall compile, and shall post daily in the patient care area of each unit of the hospital and provide upon request to a member of the public, information detailing for each unit and for the end of the prevailing shift, as appropriate:

- (1) The number of registered professional nurses providing direct patient care and the ratio of patients to registered professional nurses;
- (2) The number of licensed practical nurses providing direct patient care and the ratio of patients to licensed practical nurses;
- (3) The number of certified nurse aides providing direct patient care and the ratio of patients to certified nurse aides;
- (4) The number of other licensed or registered health care professionals meeting State staffing requirements; and
- (5) The methods used by the hospital for determining and adjusting direct patient care staffing levels.³⁵⁸

The HCFPA also requires that a licensed nursing home shall:

compile, and shall include with the information about health care professionals who are directly responsible for resident care, which it is required under federal law to post in areas where this information can be viewed by residents and members of the public, information that details the ratio of these health care professionals to residents for that particular day on each shift.³⁵⁹

³⁵⁸ N.J.S. 26:2H-5ga.(1)-(5).

³⁵⁹ N.J.S. 26:2H-5gb.

The law further requires that general hospitals and nursing homes must report the information compiled pursuant to the HCFPA to the New Jersey Commissioner of Health and Senior Services on a monthly basis in a manner prescribed by the commissioner. The commissioner then in turn makes the information available to the public on a quarterly basis accompanied by a written explanation, which the commissioner prepares in consultation with the Quality Improvement Advisory Committee established by the commissioner to assist members of the public in interpreting the information reported.³⁶⁰

New York is another example of a state now requiring hospitals to publically report nurse staffing levels. In 2009, New York enacted the Nursing Care Quality Protection Act (NCQP) which requires that every health care facility with an operating certificate publish information regarding nurse staffing and patient outcomes as specified by the state's health commissioner.³⁶¹ The law's requirements didn't formally become effective until 2015 when the New York Health Department finalized the law's regulations.³⁶² Specifically, the NCQP requires a facility to report the following information:

- (1) The number of RNs providing direct care and the ratio of patients per RNs, full-time equivalent, providing direct care;
- (2) The number of LPNs providing direct care;
- (3) The number of unlicensed personnel utilized to provide direct patient care, including adjustment for case mix and acuity;
- (4) Incidence of adverse patient care, including incidents such as medication errors, patient injury, decubitus ulcers, nosocomial infections, and nosocomial urinary tract infections;
- (5) Methods used for determining and adjusting staffing levels and patient care needs and the facility's compliance with these methods; and
- (6) Data regarding complaints filed with any state or federal regulatory agency, or an accrediting agency, and data regarding investigations and findings as a result of those complaints, degree of compliance with acceptable standards, and the findings of scheduled inspection visits.³⁶³

³⁶⁰ N.J.S. 26:2H-5gd.

³⁶¹ New York Health Ch. 45, Art. 28, Pub. Health Law §2805-t1.

³⁶² James T. Mulder, "NY hospital patients in the dark about nurse staffing levels, report says," *Central NY Health*, (July 2015),

https://www.syracuse.com/health/index.ssf/2015/07/ny_hospitals_keep_public_in_the_dark_about_nurse_staffing_levels_report_says.html.

³⁶³ New York Health Ch. 45, Art. 28, Pub. Health Law §2805-t1(a)-(f).

There is little research on the impact of these reporting laws, however, these types of laws can ultimately serve as an accountability mechanism for hospitals and other health care facilities. Such a policy can serve as a motivating tool to hospitals to increase staffing as they become more cognizant of their standing in terms of staffing compared to market competitors. Moreover, quality nurses may favor working at hospitals with higher nurse staffing and lower nurse-to-patient ratios which could have the effect of pushing hospitals to be in line with the staffing levels of those hospitals with more desirable nurse staffing levels.³⁶⁴

Staffing Committees and Staffing Plans

A third option that may potentially improve nurse work environments is the creation of staffing committees in hospitals and health care facilities. Establishing of mandated staffing committees within hospitals is viewed by many health experts as a compromise in the nurse-to-patient ratio debate. Like the discussion on nurse-to-patient ratios, there is some debate on their effectiveness in improving nurse work environment.

Research has shown that good nurse work environments tend to involve nurses in decision making at all levels and provide more autonomy for nurses to make decisions within their scope of practice, foster good relationships between nurses and physicians, have supportive nurse managers and leaders, and have sufficient staffing and resources.³⁶⁵ One way to empower nurses and improve their work environment is to require hospitals to involve them in the dialogue surrounding their work environment and their ability to adequately care for patients. Staffing committees can be instituted through legislation that requires staffing committees to have a partial composition of RNs who provide direct patient care. Illinois provides an example of this legislation that has been enacted and implemented.

Illinois enacted the Nurse Staffing by Acuity Law (NSAL) in August 2007, which became effective in January 2008.³⁶⁶ The NSAL aimed to improve the patient care experience, align the needs of patients with professional nursing standards and nursing skills, and most relevant, promote a culture of collaboration within Illinois hospitals. With respect to nurse staffing committees, the law requires every hospital to have a nursing care committee of which at least 50 percent of the members are registered professional nurses providing direct care.³⁶⁷ The law allows the committee to be an existing or newly created hospital-wide committee of nurses but it requires a broad representation of clinical service areas.³⁶⁸ The committee is responsible for recommending a written staffing plan for the hospital, and shall provide input and feedback on the following:

³⁶⁴ JSGC, "Professional Bedside Nursing in Pennsylvania: A Staff Study," *supra* n. 87 at p. 18.

³⁶⁵ Chenjuan Ma, *et al.*, *supra* n. 326.

³⁶⁶ 210 ILCS § 85/10.10.

³⁶⁷ 210 ILCS §85/10.10(d)(1).

³⁶⁸ 210 ILCS §85/10.10(b).

- (1) Selection, implementation, and evaluation of minimum staffing levels for inpatient care units;
- (2) Selection, implementation, and evaluation of an acuity model to provide staffing flexibility that aligns changing patient acuity with nursing skills required;
- (3) Selection, implementation, and evaluation of a written staffing plan; and
- (4) Review the nurse-to-patient staffing guidelines for all inpatient areas and current acuity tools and measures in use.³⁶⁹

The law requires the committee to meet no less than twice annually to review hospital staffing plans and communicate key issues, discussions, and recommendations to all hospital nursing staff.³⁷⁰ In addition to establishing a staffing committee, the NSAL also requires that every hospital implement a written hospital-wide staffing plan that guides the assignment of nursing staff and provides for minimum RN-to-patient staffing needs of each inpatient care unit.³⁷¹ Said staffing plan must be recommended by the Nursing Care Committee and posted in conspicuous and accessible locations for both patients and staff.³⁷²

Studies have shown that staffing committees that include RNs involved in direct care improve the work environment by bringing about new staffing solutions and providing structural empowerment for nurses. One study supporting this notion was conducted by reviewing a Magnet-designated integrated, independent pediatric non-profit health care system in Ohio that established a Strategic Workforce Action Planning (SWAP) committee.³⁷³ Similar to hospitals in Illinois, the SWAP committee consisted of approximately 50 clinical nurses and other direct-care staff, among other personnel. The committee's purpose was to facilitate collaboration among multiple departments to coordinate efforts to address nurse staffing and staff satisfaction.³⁷⁴

In fulfillment of its obligations, the SWAP committee came up with new processes and plans to address decreased nurse satisfaction, nurse vacancies, and escalating premium wage expenditures that were present in 2015.³⁷⁵ The SWAP committee implemented their processes by September of 2016 and by May of 2017, their ability to attract and hire RNs improved. For example, the days to fill an RN position decreased from a mean of 45 to a

³⁶⁹ 210 ILCS §85/10.10(d)(3)(A)-(D).

³⁷⁰ 210 ILCS §85/10.10(d)(4).

³⁷¹ 210 ILCS §85/10.10(c)(1).

³⁷² 210 ILCS §85/10.10(c)(3).

³⁷³ Christine Young, *et al.*, "Nurse Staffing Improvements Through Interprofessional Strategic Workforce Action Planning," *Nursing Economics* (July-Aug. 2018).

³⁷⁴ *Id.* at p. 164.

³⁷⁵ *Id.*

mean of 28.7, a statistically significant 36 percent reduction. The SWAP committee's efforts also resulted in an increase in job satisfaction among nurse and other direct care staff based on an annual staff satisfaction survey.³⁷⁶

There were some practical issues with the utilization of the SWAP committee, such as the committee frequently attempting to tackle too many issues for too many stakeholders at the same time, which resulted in inefficiency and delays. Another practical issue was that by attempting to maximize input from all stakeholders, teams were too large to be functional and decisions were unable to be made in an effective manner. Nonetheless, resulting data from the study showed that staffing committees like the SWAP committee could transform strategies into action to address nurse staffing to support a healthy work environment and reduce premium labor costs. Further, such committees could provide structural empowerment to nurses by engaging clinical nurses, nurse leaders, and key stakeholders in the process.³⁷⁷ While nurse staffing committees could positively impact the nurse work environment, there is some doubt that such committees alone are enough.

Summary

While California has experienced some successful outcomes from its mandated nurse-to-patient ratio, it is important to reiterate that to date, California is the only U.S. state to require a nurse-to-patient ratio across all nursing units. Therefore, this state has the only implementation in the U.S. that can be studied. Moreover, “[a] risk inherent in legislation is the possibility that unforeseen and unintended consequences may result.”³⁷⁸

However, the host of beneficial effects on nurse work environment and resulting improvements to retention in California could make mandated nurse-to-patient ratios a possible legislative option for Pennsylvania to consider. While the Commission staff is not recommending mandatory nurse-to-patient ratios for Pennsylvania, it does recommend that, if the General Assembly decides to enact a nurse-to-patient ratio law, such legislation should authorize the Pennsylvania Department of Health to establish specific nurse-to-patient ratio based on an evaluation of evidence, state-specific needs, and stakeholder input. Given the broad and sweeping nature of such legislation, the General Assembly must objectively balance the demonstrated benefits of a mandated nurse-to-patient ratio law against any potential unintended consequences.

An alternative to a mandated nurse-to-patient ratio is a requirement that health facilities establish a staffing committee partially composed of RNs involved in direct care to assist in bringing about new staffing solutions and providing structural empowerment

³⁷⁶ *Id.* at p. 168.

³⁷⁷ *Id.*

³⁷⁸ Matthew D. McHugh, *et al.*, *supra* n. 294 at pp.1299-1306.

for nurses. This alternative would also require health facilities to prepare annual staffing plans in consultation with said staffing committees.

Pennsylvania may also want to consider enacting legislation requiring health facilities to publically report their staffing levels similar to the way the state of New Jersey currently does. As mentioned previously, this type of reporting law can serve as an accountability mechanism for hospitals and other health care facilities. Reporting requirements can also motivate hospitals to increase staffing as they become more cognizant of their standing in terms of staffing compared to market competitors. Further, the law could have the effect of encouraging high quality nurses to work at hospitals with higher nurse staffing and lower nurse-to-patient ratios which could in turn incentivize other hospitals to increase their RN staffing consummate to the staffing levels of those hospitals with higher nurse staffing levels.

Recommendation #7: Expand the Role of Nurse Practitioners and Physician Assistants

One of the reasons the National Academy of Medicine (NAM) recommended more nurses obtain baccalaureate degrees and higher levels of education is that they see advanced nursing professionals, such as nurse practitioners (NPs), expanding their role to fill the void left by the shortage of primary care physicians.³⁷⁹ The NAM's *Future of Nursing* report explained that "advanced practice registered nurses (APRNs), if permitted to practice to the full extent of their education and training, could help build the workforce necessary to meet the country's primary care needs and contribute their unique skills to the delivery of patient-centered, community-based health care."³⁸⁰

Over the past decade or so, there has been an expansion in the number and scope of practice of NPs and physician assistants (PAs).³⁸¹ These professions are sometimes called "mid-level providers," although they prefer to be called "advanced practitioners" or by some other descriptor.³⁸² They have graduate training which lasts two to three years, can prescribe medication, and are permitted to make diagnoses and order tests.³⁸³ Most

³⁷⁹ Assessing Progress on the Institute of Medicine Report, *supra* n. 227 at p. 39.

³⁸⁰ *Id.*

³⁸¹ Claudia B. Maier and Linda H. Aiken, "Task Shifting from Physicians to Nurses in Primary Care in 39 Countries: A Cross-Country Comparative Study," *The European Journal of Public Health* 26, no. 6 (Aug. 2, 2016): 927-934. <https://doi.org/10.1093/eurpub/ckw098>.

³⁸² Catherine S. Bishop, "Advanced Practitioners are not Mid-Level Providers," Guest Editorial, *Journal of the Advanced Practitioner in Oncology* 3, no. 5 (Sep./Oct. 2012): 287-288; The American Association of Nurse Practitioners rejects the term "mid-level practitioner" and prefers "advance practice providers" or "clinicians" when describing these types of providers as a group. See AANP, "Use of Terms Such as Mid-Level Provider and Physician Extender." <https://www.aanp.org/images/documents/publications/useofterms.pdf>.

³⁸³ American Association of Physician's Assistants, "What is a PA?" <https://www.aapa.org/what-is-a-pa/>; American Association of Nurse Practitioners, "All About NPs," <https://www.aanp.org/all-about-nps>.

states require these practitioners to be overseen by a supervising physician.³⁸⁴ However, some states permit them to work independently without the supervision of a physician.³⁸⁵

Certified Registered Nurse Practitioners

In Pennsylvania, NPs (known in the Commonwealth as Certified Registered Nurse Practitioners, or CRNPs) must collaborate with actively licensed physicians. While acting in collaboration with a physician, the CRNP may diagnose patients, order, perform, and supervise diagnostic tests, and to the extent it is within the scope of their specialty and consistent with the collaborative agreement, may interpret diagnostic tests, and may initiate referrals to and consultations with other licensed professional health care providers.³⁸⁶

According to the Pennsylvania Coalition of Nurse Practitioners, there are approximately 12,400 CRNPs in Pennsylvania.³⁸⁷ Nationally, the U.S. Health Resources and Services Administration (HRSA) estimated that there were 154,000 licensed NPs in the U.S. as of 2012, with 132,000 of them working in the capacity of an NP, and 127,000 providing patient care. Roughly 60,000 NPs were providing primary care.³⁸⁸ The American Association of Nurse Practitioners (AANP) estimates that there are more than 270,000 NPs nationally as of 2019.³⁸⁹ These estimates indicate that the NP population grew 42 percent between 2012 and 2017, much faster than the growth of physicians. According to the U.S. Department of Labor Bureau of Labor Statistics (BLS), NPs are primarily employed by offices of physicians, followed by general medical and surgical hospitals and outpatient care clinics.³⁹⁰

³⁸⁴ See American Association of Nurse Practitioners, “State Practice Environment,” <https://www.aanp.org/legislation-regulation/state-legislation/state-practice-environment>. The AANP counts 20 states which give NPs “full practice” authority – the ability to diagnose, prescribe, and engage in other aspects of their profession without the oversight of a physician.

³⁸⁵ Christine Vestal, “Nurse Practitioners Slowly Gain Autonomy,” *Kaiser Health News*, (Jul. 19, 2013), <https://khn.org/news/stateline-nurse-practitioners-scope-of-practice/>.

³⁸⁶ 49 Pa. Code § 21.282a.

³⁸⁷ Pennsylvania Coalition of Nurse Practitioners, “Welcome and Overview.” <https://www.pacnp.org/page/welcome>.

³⁸⁸ United States Department of Health and Human Services, Health Resources and Services Administration, “Highlights from the 2012 National Sample Survey of Nurse Practitioners,” (2014), p. 3 <https://bhwh.hrsa.gov/sites/default/files/bhwnchwa/npsurveyhighlights.pdf>.

³⁸⁹ American Association of Nurse Practitioners, “NP Fact Sheet.” <https://www.aanp.org/all-about-nps/np-fact-sheet>.

³⁹⁰ United States Department of Labor, Bureau of Labor Statistics, “Occupational Employment and Wages, (May 2019), 29-1171 Nurse Practitioners,” <https://www.bls.gov/oes/2017/may/oes291171.htm>.

There is a growing body of literature suggesting that nurse practitioners could be part of the solution to meet the primary care needs of the population.

There is a growing body of literature suggesting that NPs could be part of the solution to meet the primary care needs of the population. A report by the Kaiser Family Foundation concluded that NPs are capable of providing similar levels of care as primary care physicians, are significantly more likely to provide primary care in rural or inner-city urban areas, provide care in a wider range of community settings than physicians, and tend to serve a high proportion of uninsured patients and patients from vulnerable populations. The report also noted that it takes less time to train a new NP than a new physician, and that effective integration of NPs into the health care system could alleviate pressures on primary care capacity.³⁹¹

A review of a study performed in 2015 by the RAND Corporation regarding the effect of relaxing Ohio's NP scope-of-practice (SOP) regulations found that changing scope-of-practice laws from "restrictive" to "full practice authority" (allowing NPs to work without physician collaboration or supervision) would likely increase the total access and utilization of health care in that jurisdiction.³⁹² To support this finding, the authors cited a study which found a two percent increase in the number of office visits when a state relaxes its SOP laws, as well as an increase in the percentage of the population who received check-ups and reported timely and convenient care.³⁹³

The researchers also noted that one study found that the probability of an adult having had a routine checkup in the past year increased 3.8 percentage points within two years of a state allowing independent NP practice and prescribing, a rate which increased to 6.8 percentage points 11 years after the law changed, suggesting that increased autonomy for NPs results in greater access to primary care.³⁹⁴ Additionally, a state's expansion of NP authority could result in less time spent complying with SOP regulations and more time spent with patients, as well as potentially attracting NPs from states with a more restrictive SOP environment.³⁹⁵

Outside of primary care office visits, the RAND report highlighted one study which found that there was a 14 percent reduction in emergency room use by patients with ambulatory care sensitive conditions (a term meaning conditions for which hospital

³⁹¹ Amanda Van Fleet and Julia Paradise, "Tapping Nurse Practitioners to Meet Rising Demand for Primary Care," Henry J. Kaiser Family Foundation, January 20, 2015, <https://www.kff.org/medicaid/issue-brief/tapping-nurse-practitioners-to-meet-rising-demand-for-primary-care/>.

³⁹² Grant R. Martsolf, *et al.*, "The Impact of Full Practice Authority for Nurse Practitioners and Other Advanced Practice Registered Nurses in Ohio," The RAND Corporation, (2015), pp. 5-6, https://www.rand.org/content/dam/rand/pubs/research_reports/RR800/RR848/RAND_RR848.pdf.

³⁹³ *Id.* at p. 5.

³⁹⁴ *Id.* at p. 12.

³⁹⁵ *Id.* at p. 5.

admission could have been prevented by primary care intervention, such as diabetes) in states with full practice authority in the first two years after relaxing SOP laws.³⁹⁶ In the medical field, high hospital admissions “are an indicator of low-quality office-based care because primary care of sufficient availability and quality generally tends to reduce such admissions.”³⁹⁷

As for quality of care, adult patients in states with less restrictive SOP regulations tended to report better care experiences and reported that their provider was more likely to listen to them and explain things clearly. Further, an additional five percent of the adult population reported being in excellent health in these jurisdictions. A caveat should be added that these conclusions were drawn from one study which was designed to estimate the causal effect of NP independence on utilization of care and health outcomes.³⁹⁸ However, a separate 2014 study on the impact of NPs on Medicare and Medicaid patients found that states with full practice allowances for NPs had lower hospitalization rates in the patient population studied than states with reduced or restricted NP practice laws.³⁹⁹

A study designed to identify the characteristics and outcomes of patients who use PAs and NPs as a usual source of care in Wisconsin found that the populations served by PA, NPs, and physicians differed demographically but not in the types of medical issues presented. Patients from metropolitan or micropolitan areas were less likely to use PAs and NPs for care than patients in rural locations. Further, women and younger patients were more likely to utilize PAs and NPs, as were patients without insurance or with public insurance other than Medicare. While patients utilizing PA and NPs reported lower perceived access to health care, there were not significant differences in self-rated health outcomes or difficulties or delays in receiving care.⁴⁰⁰

The trend over the past decade and a half has been for states to loosen regulations governing NPs and PAs, granting them greater autonomy and expanded prescriptive authority. However, many states have also increased the level of education required of NPs and PAs, requiring some form of graduate school education.⁴⁰¹ Another study evaluating the use of PAs and NPs in emergency departments across the U.S. from 1993 to

³⁹⁶ *Id.*; Jeffrey Traczynski and Victoria Udalova, “Nurse Practitioner Independence, Health Care Utilization, and Health Outcomes,” (May 4, 2014), http://www2.hawaii.edu/~jtraczyn/paperdraft_050414_ASHE.pdf. This paper was also later published in the March 2018 edition of the *Journal of Health Economics*.

³⁹⁷ Martsolf, *et al.*, *supra* n. 392 at p. 7.

³⁹⁸ *Id.*

³⁹⁹ Gina M. Oliver, *et al.*, “Impact of Nurse Practitioners on Health Outcomes of Medicare and Medicaid Patients,” *Nursing Outlook* 62 no. 6 (Nov.-Dec. 2014): 440-447, <https://doi.org/10.1016/j.outlook.2014.07.004>.

⁴⁰⁰ Christine M. Everett, *et al.*, “Physician Assistants and Nurse Practitioners as a Usual Source of Care,” *Journal of Rural Health* 25 no. 4 (Fall 2009): 407-14. doi: 10.1111/j.1748-0361.2009.00252.x.

⁴⁰¹ Emily A. Gadbois, *et al.*, “Trends in State Regulation of Nurse Practitioners and Physician Assistants, 2001 to 2010,” *Medicare Research and Review* 72, no. 2 (Apr. 1, 2015): 200-219, <https://doi.org/10.1177/1077558714563763>.

2005 discovered a rise in the use of such mid-level practitioners during the 12 year period of study. Overall, 5.2 percent of emergency department patients were seen by a PA and 1.7 percent were seen by an NP. During the course of the study, the percentage of emergency department visitors seeing a PA rose from 2.9 percent to 9.1 percent, and such patients seeing an NP rose from 1.1 percent to 3.8 percent.⁴⁰²

Allowing an expanded scope of practice for NPs may also reduce costs, but this is more speculative as there is less data to support this claim.⁴⁰³ Cost is a function of the price of a given medical service and the amount and type of services provided. It is entirely possible that the price for a given service received from an NP with full practice authority could decrease and the total amount of services rendered could increase, thereby raising the overall cost of health care. For example, in the data referenced above, cost savings from a decrease in the number of emergency room visits could be offset by increased costs related to a greater number of office visits.

With regard to reimbursement, Medicare pays NPs 85 percent of what it pays a physician for the same service.⁴⁰⁴ Medicaid, the other major federal government health program, operates differently. Medicaid fee-for-service programs pay pediatric and family practice NPs directly, but the rates vary by state. In Pennsylvania, NPs are paid on a fee-for-service basis.⁴⁰⁵ However, the reimbursement rate for services rendered under Medicaid is 51 percent of the rate that is reimbursed for Medicare.⁴⁰⁶

With regard to cost reductions for specific services, the RAND report could cite to only one study that demonstrated a decrease in cost, which was a 2014 study indicating a six percent decrease in the cost of well-child visits in states with full practice authority for NPs.⁴⁰⁷ The report also noted that NPs with independent prescriptive authority had higher rates of filled prescriptions and higher overall costs as measured against NPs who had independent practice authority but not independent prescriptive authority. However, total health care expenditures in states with complete independent prescriptive authority was slightly lower than in states without.⁴⁰⁸

⁴⁰² A.A. Ginde, *et al.*, “Use of Midlevel Providers in U.S. EDs, 1993 to 2005: Implications for the Workforce,” *American Journal of Emergency Medicine* 28, no. 1 (Jan. 2010): 90-94, doi: 10.1016/j.ajem.2008.09.028.

⁴⁰³ Traczynski and Udalova, *supra*, n. 396 at p. 1.

⁴⁰⁴ United States Department of Health and Human Services, Centers for Medicare and Medicaid Services, “Advanced Practice Registered Nurses, Anesthesiologist Assistants, and Physician Assistants,” (Oct. 2016), p. 9, <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/Medicare-Information-for-APRNs-AAs-PAs-Booklet-ICN-901623.pdf>.

⁴⁰⁵ Kaiser Family Foundation, “Medicaid Benefits: Nurse Practitioner Services – Pennsylvania 2012,” <https://www.kff.org/medicaid/state-indicator/nurse-practitioner-services/>.

⁴⁰⁶ Kaiser Family Foundation, “Medicaid-to-Medicare Fee Index – Pennsylvania 2016,” <https://www.kff.org/medicaid/state-indicator/medicaid-to-medicare-fee-index>.

⁴⁰⁷ Martsolf *et al.*, *supra* n. 392 at p. 7.

⁴⁰⁸ *Id.* at p. 8.

A study published in 2015 in the journal *Nursing Economics* modeled the effect enacting full practice SOP legislation would have on the cost of primary care in the state of Alabama.⁴⁰⁹ Alabama is considered a “reduced practice” state by the AANP.⁴¹⁰ “Reduced practice” according to the AANP refers to state practice and license laws that reduce the ability of NPs to engage in at least one element of NP practice.⁴¹¹ The researchers assumed that the growth in the number of PAs and NPs would continue to increase faster than the growth in the number of primary care physicians based on the then-current growth rates of physicians, NPs, and PAs.⁴¹² The researchers noted that NPs and PAs provided 33 percent of all primary care in Alabama in 2013, but that with the faster growth in NPs and PAs, this would climb to roughly 41.6 percent by 2022.⁴¹³

By projecting into the future the current rate of change in PA and NP compensation-to-visit ratio, primary care physician compensation-to-visit ratio, and total primary care visits, the researchers calculated that an increase in the use of PAs and NPs for primary care office visits would result in a savings of \$729 million over 10 years. A caveat to the Alabama cost-savings study, however, is that it is dependent on assuming certain data points regarding such metrics as the rate of change in NP or PA compensation and primary care office visits, and was modeled on a hypothetical situation where the state granted NPs and PAs full practice authority such that they did not have to be under supervision by a physician.⁴¹⁴

Foreign countries are also identifying “task shifting” – a term occasionally used to describe the shifting of responsibilities from physicians to advanced practice nurses – as a strategy to alleviate the lack of primary care physicians.⁴¹⁵ A 2015 study published in the *European Journal of Public Health* compared task shifting in the 28 EU member nations, plus Switzerland, Norway, Iceland, and Turkey, as well as the U.S., Canada, New Zealand, and Australia. The study compared the countries based on whether they allowed advanced practice nurses to engage in seven advanced clinical activities, which included prescribing, diagnosing, and treating.⁴¹⁶

The researchers noticed several patterns. In the countries which allowed a greater degree of task shifting, the impetus for the task shifting to nurse practitioners or other

⁴⁰⁹ Roderick S. Hooker and Ashley N. Munchow, “Modifying State Laws for Nurse Practitioners and Physician Assistants Can Reduce Cost of Medical Services,” *Nursing Economics* 33 no. 2 (Mar.-Apr. 2015): 88-94.

⁴¹⁰ American Association of Nurse Practitioners, “State Practice Environment,” (Dec. 20, 2018), <https://www.aanp.org/advocacy/state/state-practice-environment>.

⁴¹¹ *Id.*

⁴¹² Hooker and Munchow, *supra* n. 409 at p. 92, Table 4.

⁴¹³ *Id.* at Table 1.

⁴¹⁴ *Id.* at p. 92, Table 4.

⁴¹⁵ Claudia B. Maier and Linda H. Aiken, “Task Shifting From Physicians to Nurses in Primary Care in 39 Countries: A Cross-Country Comparative Study,” *European Journal of Public Health* 26 no. 6 (Dec. 1, 2016): 927-934, doi: <https://doi.org/10.1093/eurpub/ckw098>.

⁴¹⁶ *Id.* at p. 928.

advanced practice nurses generally came from changes in the legal or regulatory environment which sanctioned such expanded responsibilities for these professionals.⁴¹⁷ It was done in a top-down manner, with changes to rules resulting in a greater scope of practice for the advanced practice nurses.

The U.S., Canada, Great Britain, Ireland, Australia, and New Zealand – all permitted advanced practice nurses to engage in all seven of the advanced clinical activities, as did The Netherlands.⁴¹⁸ Several countries implemented these changes in stages or over an extended period of time. The Netherlands implemented a time-limited “experimental law” authorizing nurse specialists to prescribe medication and engage in other advanced clinical activities followed by a nationwide evaluation before they were permanently enacted. Canada allowed advanced practice nurses full prescriptive authority in 2012. New Zealand allowed the same in 2014, and gave its advanced practice nurses more autonomy in 2015 – a decade after the measure had first been proposed in its parliament in 2005. In 2009, Spain enacted a law to allow limited nurse prescribing but did not implement the law until 2015. Estonia adopted a law in 2015 granting prescribing authority to family nurses who meet certain requirements.⁴¹⁹ Hungary expanded scope-of-practice laws in 2010 to include cervical cancer screenings provided by “district health visitors” who are trained and qualified to provide this specific preventative care.⁴²⁰

One health care delivery model that has developed within the past decade that emphasizes the use of NPs is the nurse-managed health clinic (NMHC). An NMHC is defined by federal statute as “a nurse-practice arrangement, managed by advanced practice nurses, that provides primary care or wellness services to underserved or vulnerable populations and that is associated with a school, college, university or department of nursing, federally qualified health center, or independent nonprofit health or social services agency.”⁴²¹ Essentially, an NMHC is a clinic that is staffed and managed by advanced practice nurses instead of physicians. These health centers typically focus on preventative medicine and the management of chronic conditions such as asthma, hypertension, and diabetes.⁴²²

Pennsylvania has 32 NMHCs, with most located in highly urbanized areas and a few located in rural counties such as Greene, Monroe, and Columbia. Excluding the clinics which serve entirely uninsured populations, 40 percent of the patients seen by the Commonwealth’s NMHCs are eligible for Medicaid, 30 percent are eligible for Medicare,

⁴¹⁷ *Id.* at p. 931.

⁴¹⁸ *Id.* at p. 930.

⁴¹⁹ *Id.* at p. 931.

⁴²⁰ *Id.*; Dobrossy Lajos, *et al.*, “Screening for Cervical Cancer in Hungary: New Role for Health Visitors,” *Clinical Nursing Studies* 1, no. 3 (2013): 1-32, doi: 10.5430/cns.v1n3p32.

⁴²¹ Patient Protection and Affordable Care Act of 2010, Pub.L. 111-148, Title V, § 5208(b), 124 Stat. 119, 612-613; 42 U.S.C. § 254c-1a.

⁴²² Tine Hansen-Turton, *et al.*, “Nurse-Managed Health Centers,” *American Journal of Nursing* 110, no. 9 (Sept. 2010): 23-26, doi: 10.1097/01.NAJ.0000388257.41804.41. “Safety net” providers are those who provide medical care primarily to uninsured patients and patients with Medicaid.

15 percent are uninsured, and six percent are privately insured. The NMHCs also provide clinical training opportunities for nursing students and many schools, such as Bloomsburg University, Messiah College, and the University of Pennsylvania, have nursing programs that are affiliated with an NMHC.⁴²³

Although the U.S. has a largely decentralized health care system, with each state devising its own licensure requirements and scope of practice policies, the federal government has also been a proponent of increased utilization of NPs in the primary care setting. The Affordable Care Act of 2010 created a grant program specifically for nurse-managed health centers, and the same year the HRSA released \$14.8 million dollars to ten separate NMHCs with the goal of increasing access to primary care.⁴²⁴ The HRSA's grant program provided a total of \$15 million in funding for federal fiscal years 2010 through 2012. The grant program ended in September 2013.⁴²⁵

Although the federal government no longer funds NMHCs through grant funds, it is clear that it supports the concept of an expanded scope of practice for advanced practitioners from a public policy standpoint. For instance, in 2016 the Department of Veterans Affairs (VA) finalized a rule which would give NPs (with the exception of Certified Registered Nurse Anesthesiologists) full practice authority within the VA health care system.⁴²⁶

Additionally, the Comprehensive Addiction and Recovery Act of 2016 allowed NPs and PAs to prescribe and administer medication-assisted treatment for recovery from addiction, so long as the NP or PA was prescribing within the purview of their state of licensure's law on prescribing and the NP or PA was supervised by or practicing in collaboration with a physician.⁴²⁷

However, support for increasing the role of NPs is not universal. The American Medical Association (AMA) opposes the expanded scope of practice for NPs, asserting that "health care professionals such as NPs are indispensable, but they cannot take the place of a fully trained physician." The AMA also opposes greater independence of practice for NPs because medical care delivery systems are heading in the direction of "team-based"

⁴²³ National Nurse-Led Care Consortium, "Nurse-Managed Health Clinics in Pennsylvania." (Apr. 2017), <https://nurseledcare.org/images/pdf/policy/NNCC-NMHCs-in-Pennsylvania.pdf>.

⁴²⁴ Tine Hansen-Turton, "Nurse-Managed Health Clinics Provided Badly Needed Primary Care – But Without Funding, They and Their Patients are at Risk," Culture of Health Blog, Robert Wood Johnson Foundation, (Jan. 27, 2012), <https://www.rwjf.org/en/blog/2012/01/nurse-managed-health-clinics-provided-badly-needed-primary-care-but-without-funding-they-and-their-patients-are-at-risk.html>.

⁴²⁵ United States Department of Health and Human Services, Health Resources and Services Administration, "Affordable Care Act Nurse Managed Health Clinics (NMHC) Frequently Asked Questions," p. 3,

<https://www.hrsa.gov/sites/default/files/grants/healthprofessions/acafaq.pdf>.

⁴²⁶ Department of Veterans Affairs, Advanced Practice Registered Nurses, 81 FR 90198 (Dec. 14, 2016).

⁴²⁷ Comprehensive Addiction and Recovery Act of 2016, Pub.L. 114-193, § 30, 130 Stat. 720, (July 22, 2016); 21 U.S.C. § 823(g)(2).

care models, and the AMA supports “increased use of physician-led teams of multidisciplinary health care professionals.” In the view of the AMA, it is only natural that physicians, as the members with the highest level of training and preparation, should guide other members of the team. According to the AMA, the training and education of NPs is best suited for dealing with patients who need basic preventative care, treatment of straightforward acute illnesses, and management of previously diagnosed uncomplicated chronic conditions.⁴²⁸

Some studies have indicated that an expanded scope of practice for NPs could result in a lower quality of care. For instance, a study by the Mayo Clinic comparing the quality of referrals of patients with complex medical problems to specialists from NPs, PAs, and physicians found that NPs tended to give poorer quality referrals than primary care physicians. In this study, five experienced physicians blinded to the source of referral used a 7-item instrument to assess the quality of referrals. The seven items used to score referrals were: referral question clearly articulated; clinical information provided; documented understanding of the patient’s pathophysiology; appropriate evaluation performed locally; appropriate management performed locally; confidence returning patient to referring health care professional; and whether the referral was evaluated as having been unnecessary. In all seven metrics, physicians were evaluated as providing higher quality referrals than NPs or PAs.⁴²⁹

A 2015 *Journal of American Medical Association* study comparing the diagnostic imaging ordering patterns between advanced practice clinicians and primary care physicians found that advanced practice clinicians ordered more imaging services than primary care physicians for similar patients during evaluation and management office visits. The data used to conduct the study was drawn from 2010-2011 Medicare claims for a sample of beneficiaries, controlling for geographic variation, patient demographics, and Charlson Comorbidity Index scores.⁴³⁰

An older study, published in 1999 in the journal *Effective Clinical Practice*, found that “patients assigned to NPs had more of the expensive ultrasonography, computed tomography, and magnetic resonance imaging studies than did patients assigned to attending physicians,” but that rates of use of laboratory tests for screening or monitoring were roughly the same.⁴³¹ The researchers also discovered that there were “more specialty

⁴²⁸ American Medical Association, Advocacy Resource Center, “Physician-led Health Care Teams,” (2015).

⁴²⁹ Robert H. Lohr, *et al.*, “Comparison of the Quality of Patient Referrals from Physicians, Physician Assistants, and Nurse Practitioners,” *Mayo Clinic Proceedings* 88 no. 11 (Nov. 2013): 1266-1271.

⁴³⁰ D.R. Hughes *et al.*, “A Comparison of Diagnostic Imaging Ordering Patterns Between Advanced Practice Clinicians and Primary Care Physicians Following Office-Based Evaluation and Management Visits,” *Journal of American Medical Association Internal Medicine* 175 no. 1 (Jan. 2015): 101-107, doi: 10.1001/jamainternmed.2014.6349.

⁴³¹ Alnoor Hemani, *et al.*, “A Comparison of Resource Utilization in Nurse Practitioners and Physicians,” *Effective Clinical Practice* 2 no. 6 (Nov./Dec. 1999): 258-265, at p. 264.

visits and hospital admissions for patients assigned to an NP.”⁴³² The study design was a quasi-random assignment of new primary care patients to either an attending physician, a resident, or an NP, and tracked data points such as laboratory tests, hospital admissions, and specialty referrals.⁴³³

With regard to prescribing power, which NPs have in most states, including Pennsylvania, some studies have shown differences in the way NPs and primary care physicians prescribe medication. One study of approximately 164,000 Medicare Part D beneficiaries found that while NPs and physicians prescribed the same top 20 types of medications and the same share of generic medications, beneficiaries treated by an NP received more 30-day prescription per year than beneficiaries treated by a physician. This pattern existed in all drug classes and was more pronounced in behavioral drug classes, such as anti-depressants, anti-psychotics, psychotherapeutics, and opioids.⁴³⁴

An October 2018 study published in the *American Journal of Emergency Medicine* examined opioid prescribing practice patterns and trends in emergency department visits by provider type – physicians and advanced practice providers, a category which included NPs and PAs.⁴³⁵ The researchers concluded that between 2005 and 2015, advanced practice providers, and particularly NPs, played an increasing role in opioid prescribing in emergency departments.⁴³⁶

However, a meta-analysis of 35 scholarly articles on nurse prescribing found mixed results with regards to total amount of medication prescribed, concluding that it is difficult to determine whether nurses prescribe less, more, or the same amount of medication compared to physicians, and noting divergent results for different types of medicines. The researchers concluded that, overall, the studies analyzed showed that there was effectively no difference between the way nurses and physicians prescribe medication. However, the researchers of this meta-analysis underscored that of the 35 studies included in their review, 24 were of “low methodological quality owing to their study design,” and that therefore their findings were tentative.⁴³⁷

Critics of expanded scope of practice for NPs also rebuke the 2010 IOM “Future of Nursing” report referenced previously in this report. Initially designed to explore ways to increase access to health care in the wake of the Affordable Care Act, the report was

⁴³² *Id.*

⁴³³ *Id.* at p. 260.

⁴³⁴ Ulrike Muench *et al.*, “Prescribing Practices by Nurse Practitioners and Primary Care Physicians: A Descriptive Analysis of Medicare Beneficiaries,” *Journal of Nursing Regulation* 8 no. 1 (April 2017): 21-30, [https://doi.org/10.1016/S2155-8256\(17\)30071-6](https://doi.org/10.1016/S2155-8256(17)30071-6).

⁴³⁵ B.K. Yang *et al.*, “National Opioid Prescribing Trends in Emergency Departments by Provider Type: 2005-2015,” *American Journal of Emergency Medicine*, (Oct. 22, 2018) (Electronically Published ahead of print), doi: 10.1016/j.ajem.2018.10.041.

⁴³⁶ *Id.*

⁴³⁷ Sanne C. Gielen, *et al.*, “The Effects of Nurse Prescribing: A Systematic Review,” *International Journal of Nursing Studies* 51 (2014): 1048-1061, doi: <http://dx.doi.org/10.1016/j.ijnurstu.2013.12.003>.

generated by a committee of 18 members. The composition of the committee has been criticized for only including two physicians and including health care industry representatives with potential conflicts of interest. Such critics also note that the IOM report does not give sufficient detail regarding the necessary clinical and educational standards which would undergird an expansion of the scope of practice of nurse practitioners.⁴³⁸

Physician Assistants

The concept of a PA was devised in the 1960s by Eugene A. Stead Jr., MD, at Duke University Medical Center specifically to alleviate a shortage of primary care physicians. For his first class of PAs, Dr. Stead selected Navy Corpsmen who had received medical training during their military service and based the curriculum on that used for fast-track training of doctors during the Second World War.⁴³⁹

Although the first graduating class of PAs at Duke was only composed of four former Navy Corpsmen, by 2010 there were approximately 80,000 PAs throughout the U.S. By 2016, that figure had grown to 115,547, representing a 44.4 percent increase in the number of PAs.⁴⁴⁰ In 2017, there were 123,076 PAs in the U.S., an increase of 6.2 percent in one year.⁴⁴¹

Pennsylvania has approximately 8,148 PAs as of 2017, making the Commonwealth third in the nation in absolute numbers, behind only New York and California.⁴⁴² Additionally, with an estimated 63.9 PAs per 100,000 people, the Commonwealth is third in terms of PAs per capita, behind only Alaska and South Dakota.⁴⁴³ The top practice areas of PAs throughout the country are family medicine, with 19.9 percent practicing in this specialty, surgical subspecialties with 18.5 percent, and emergency medicine with 13.1 percent.⁴⁴⁴ In total, 26.7 percent of PAs work in primary care fields nationwide. In Pennsylvania this figure is slightly less at 21.4 percent.⁴⁴⁵

⁴³⁸ Samer Cabbabe, “Should Nurse Practitioners Be Allowed to Practice Independently?,” *Missouri Medicine* 113 no. 6 (Nov.-Dec. 2016): 436-437.

⁴³⁹ American Association of Physician Assistants, “History of the PA Profession,” <https://www.aapa.org/about/history/>.

⁴⁴⁰ National Commission on Certification of Physician Assistants, “2016 Statistical Profile of Certified Physician Assistants,” p. 5, <https://prodcmstoragesa.blob.core.windows.net/uploads/files/2016StatisticalProfileofCertifiedPhysicianAssistants.pdf>.

⁴⁴¹ National Commission on Certification of Physician Assistants, “2017 Statistical Profile of Certified Physician Assistants,” p. 7, <https://prodcmstoragesa.blob.core.windows.net/uploads/files/2017StatisticalProfileofCertifiedPhysicianAssistants%206.27.pdf>.

⁴⁴² *Id.* at pp. 7-8.

⁴⁴³ *Id.* at p. 7.

⁴⁴⁴ *Id.* at p. 13.

⁴⁴⁵ *Id.* at p. 15.

Like NPs, PAs generally have graduate degrees. To be eligible to be licensed as a PA in Pennsylvania, an applicant must have graduated from a PA program recognized by the State Board of Medicine or the State Board of Osteopathic Medicine (referred to collectively as “the Boards”).⁴⁴⁶ The State Board of Medicine regulations recognize PA educational programs accredited by the American Medical Association’s Committee on Allied Health Education and Accreditation (CAHEA), the Commission on Accreditation of Allied Health Education Programs (CAAHEP), Accreditation Review Commission on Education for the Physician Assistant (ARC-PA), or a successor organization.⁴⁴⁷ However, the State Board of Osteopathic Medicine regulations only recognize PA educational programs accredited by the CAHEA.⁴⁴⁸

The CAHEA was dissolved in 1994 and its accreditation activities were transferred to a new agency, the CAAHEP. ARC-PA was a constituent member of both CAAHEP and CAHEA, but became a freestanding organization in 2001, and is recognized as the successor organization to CAAHEP.⁴⁴⁹ Only graduates of ARC-PA accredited PA programs are eligible to sit for the PANCE exam.⁴⁵⁰ This makes ARC-PA the only current accrediting organization for PAs who practice under the supervision of a doctor of osteopathic medicine, regulated by the Board of Osteopathic Medicine, and those who practice under the supervision of a doctor regulated by the Board of Medicine. Pennsylvania has 23 graduate programs accredited by ARC-PA.⁴⁵¹ Pennsylvania is tied with New York for the most PA graduate programs in the country.⁴⁵²

To become licensed, PAs must take an examination approved by the Boards. The State Board of Osteopathic Medicine has approved the national certification examination on primary care developed by the National Commission on Certification of Physician Assistants (NCCPA), known as the Physician Assistant National Certifying Exam (PANCE) exam.⁴⁵³ The State Board of Medicine simply states that in addition to graduating from a PA program it has recognized, an applicant for a PA license must pass “the physician assistant examination.”⁴⁵⁴

Similar to NPs, PAs must be supervised by a physician. Further, a PA must have a written agreement with each supervising physician outlining the manner in which the PA

⁴⁴⁶ 49 Pa. Code § 18.141 (State Board of Medicine); 49 Pa. Code § 25.161 (State Board of Osteopathic Medicine).

⁴⁴⁷ 49 Pa. Code § 18.131.

⁴⁴⁸ 49 Pa. Code § 25.151.

⁴⁴⁹ ARC-PA, “ARC-PA History,” <http://www.arc-pa.org/about/arc-pa-history/>.

⁴⁵⁰ National Commission on Certification of Physician Assistants, “PANCE Eligibility Requirements.” <https://www.nccpa.net/pance-eligibility>.

⁴⁵¹ Physician Assistant Education Association, “PAEA Program Directory.” http://directory.paeaonline.org/programs?utf8=%E2%9C%93&state=PA°ree=&caspa=&gre=&health_xp=&bach_required=&min_gpa=&start_month=

⁴⁵² *Id.*

⁴⁵³ 49 Pa. Code § 25.161.

⁴⁵⁴ 49 Pa. Code § 18.141.

will be assisting each supervising physician as well as the nature and degree of supervision and direction each supervising physician will provide to the PA.⁴⁵⁵ The written agreement between the PA and the supervising physician must be provided to and approved by the Board of Medicine and must require that the supervising physician countersign the patient record within ten days.⁴⁵⁶ A PA may not provide medical services at a satellite location unless the supervising physician has filed a registration with the Board.⁴⁵⁷

A PA cannot independently prescribe or dispense drugs, and may only do so at the direction of a physician.⁴⁵⁸ Furthermore, a PA cannot prescribe or dispense Schedule I controlled substances, as defined by The Controlled Substances, Drug, Device, and Cosmetic Act.⁴⁵⁹ A supervising physician can normally supervise no more than four PAs, however, this rule is subject to a waiver by the Boards.⁴⁶⁰ A PA must renew his license biennially and comply with the continuing medical education requirements set forth by the NCCPA.⁴⁶¹

Also like NPs, PAs are one of the fastest growing occupations in the country, with a projected growth rate of 37 percent between 2016 and 2026. NPs are projected to grow 36 percent over the same period.⁴⁶² Like NPs, PAs have a growing role in providing health care, particularly primary care. While the focus of much of the literature surrounding NPs has been on that profession's desire to see NPs prescribe, diagnose, and treat patients independent of physician oversight, much of the literature examining PAs explores how PAs work in collaboration with their supervising physicians through delegated clinical tasks and patient management.⁴⁶³

According to the U.S. Department of Labor Bureau of Labor Statistics, PAs are primarily employed by offices of physicians, followed by hospitals and outpatient care centers.⁴⁶⁴ They have been employed by physicians in private practice in order to cut costs and expand the practice's ability to handle more patients.⁴⁶⁵ PAs perform complementary roles in which they can substitute for physicians for particular tasks, such as preventative

⁴⁵⁵ Act of December 20, 1985, P.L. 457 no. 112, § 13; 63 P.S. § 422.13(f).

⁴⁵⁶ 49 Pa. Code § 18.142.

⁴⁵⁷ 49 Pa. Code § 18.155.

⁴⁵⁸ Act of December 20, 1985, P.L. 457 no. 112, § 13; 63 P.S. § 422.13(e).

⁴⁵⁹ 49 Pa. Code § 18.158(a)(2).

⁴⁶⁰ Act of December 20, 1985, P.L. 457 no. 112, § 13; 63 P.S. § 422.13(e).

⁴⁶¹ 49 Pa. Code § 18.145.

⁴⁶² United States Department of Labor, Bureau of Labor Statistics, "Occupational Outlook Handbook – Fastest Growing Occupations." <https://www.bls.gov/ooh/fastest-growing.htm>.

⁴⁶³ Roderick S. Hooker and Chirstine M. Everett, "The Contributions of Physician Assistants in Primary Care Systems," *Health and Social Care in the Community* 20 no. 1 (Jan. 2012): 20-31, doi: 10.1111/j/1365-2524.2011.01021.x.

⁴⁶⁴ United States Department of Labor, Bureau of Labor Statistics, "Occupational Outlook Handbook, Physician Assistants 2016." <https://www.bls.gov/ooh/healthcare/physician-assistants.htm#tab-3>.

⁴⁶⁵ Adele R. Clark *et al.*, "The Emerging Role of Physician Assistants in the Delivery of Dermatologic Health Care," *Dermatologic Clinics* 18, no. 2 (Apr. 2000): 297-302, doi: [https://doi.org/10.1016/S0733-8635\(05\)70175-3](https://doi.org/10.1016/S0733-8635(05)70175-3).

care responsibilities. A review of the literature on PA usage by hospitals discovered that, according to one study, female NPs and PAs were used to deliver preventative care to the hospitals' female patients, on account of the shortage of female physicians and the preference of female patients for female providers. Another study cited by the same review of the literature found that a strong majority of physicians (73-79 percent of family physicians and 60-70 percent of internists) would approve of their supervised PAs conducting cancer screenings.⁴⁶⁶

As previously mentioned, the Pennsylvania Department of Health (DOH) conducts a survey of physicians and PAs practicing "direct patient care" on a biennial basis.⁴⁶⁷ The most recently published report is from 2014.⁴⁶⁸ According to the DOH's report, 86 percent of PAs in Pennsylvania practice in direct patient care, whether it be in family medicine or some other specialty.⁴⁶⁹ The report includes demographic data, such as median age, race, and gender of the Commonwealth's PAs (94 percent White, 75 percent female).⁴⁷⁰ The report also notes that 85 percent of the PAs practicing in Pennsylvania completed their highest level of education (usually their PA program's graduate degree) in Pennsylvania.⁴⁷¹ The DOH report also provides a breakdown of PAs practicing direct patient care in Pennsylvania per 100,000 people by county of primary practice.⁴⁷² A map illustrating this is provided in Map 5.

⁴⁶⁶ Hooker and Everett, *supra* n. 463.

⁴⁶⁷ Pennsylvania Department of Health, Bureau of Health Planning, "2014 Pulse of Pennsylvania's Physician and Physician Assistant Workforce," Volume 6, (Aug. 2017).
https://www.health.pa.gov/topics/Documents/Programs/Workforce%20Reports/FINAL_2014%20Pulse%20of%20Pennsylvania%27s%20Physician%20and%20Physician%20Assistant%20Workforce.pdf.

⁴⁶⁸ Pennsylvania Department of Health, "Health Care Workforce Reports."
<https://www.health.pa.gov/topics/Health-Planning/Pages/Reports.aspx>.

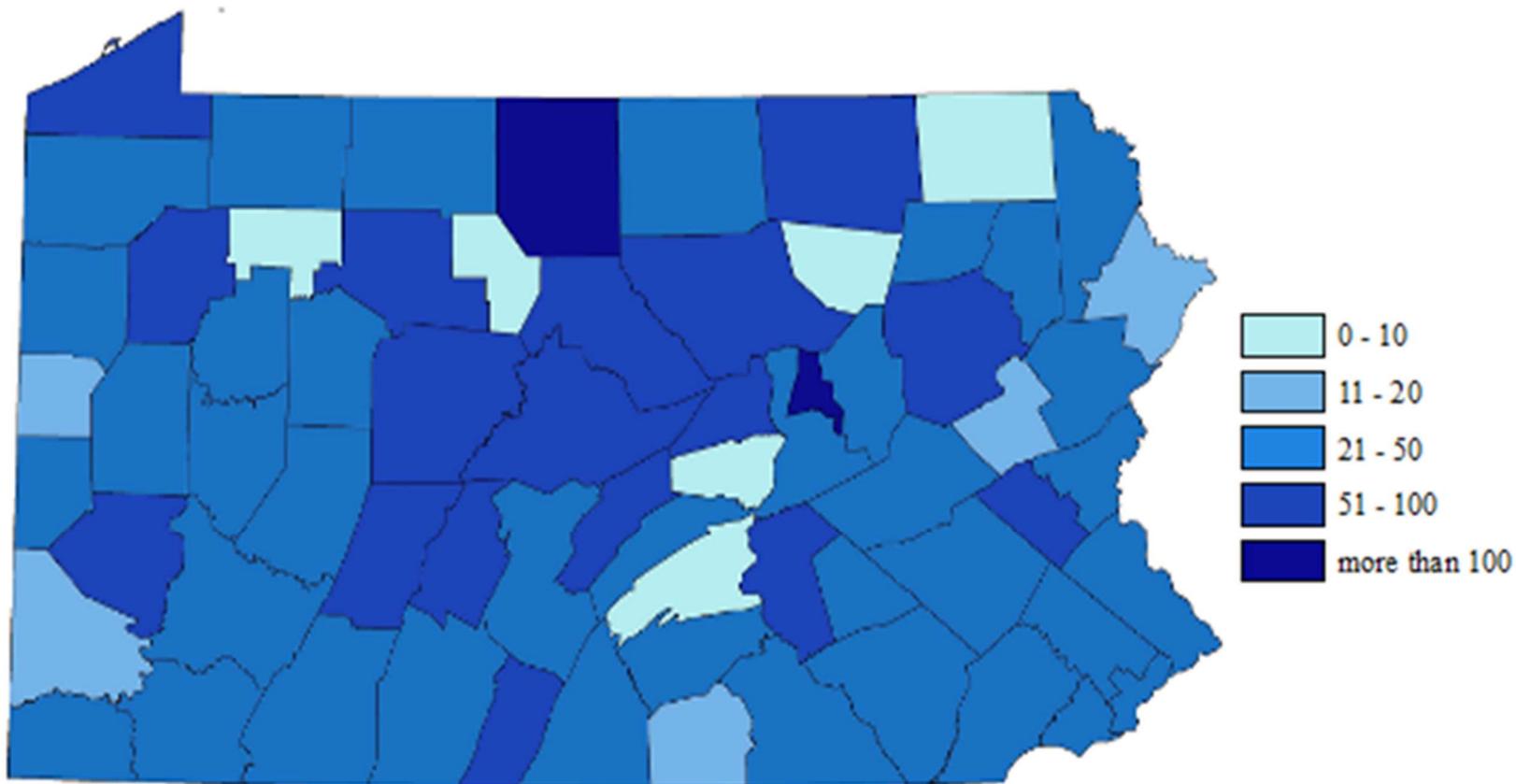
⁴⁶⁹ *Id.* at p. xii.

⁴⁷⁰ *Id.* at pp. 48-49.

⁴⁷¹ *Id.* at p. 51.

⁴⁷² *Id.* at p. 56.

Map 5
Physician Assistants Practicing Direct Patient Care in Pennsylvania per 100,000 Population by County of Primary Practice
2014 Physician Assistant Survey



Source: Pennsylvania Department of Health, Bureau of Health Planning, 2014 Pulse of Pennsylvania's Physician and Physician Assistant Workforce

However, more detailed data on PAs and NPs in the Commonwealth does not exist. Other states collect and maintain additional information about their PAs and NPs. For example, the Indiana Professional Licensing Agency has statistics on the demographics of supervising physicians, demographic data such as age and gender of the state's PAs, how many PAs are practicing in each county, and data on PA education in Indiana (including information such as where they were born and educated, noting that more PAs working in Indiana were born and educated outside that state than born and educated within). This data has been collected since 1978, allowing Indiana to analyze trends, such as that most PAs graduating from one of Indiana's three PA programs have chosen to remain in the state.⁴⁷³ This kind of analysis is currently unavailable to researchers of the Commonwealth's PA workforce because the needed data are not compiled and readily accessible. The issue of improvement in Pennsylvania's data collection and analysis for its health care workforce in general will be addressed in greater detail in this report under Recommendation #12.

Summary

The role of non-physician health care practitioners such as NPs and PAs has greatly expanded in recent decades. The development of these new professional roles in the delivery of health care occurred organically in response to a need to provide care for minor or less complex cases and decrease physicians' case load or increase the capacity of larger hospitals or outpatient facilities. With higher-than-average numbers of NPs, PAs, and their respective educational programs situated in the Commonwealth, Pennsylvania is well-positioned to reap the benefits of these professionals.

To enable physicians' offices, hospitals, clinics, and other medical facilities to make better use of the Commonwealth's NPs and PAs, the General Assembly could loosen restrictions on the practice of NPs and PAs. Legislation which would aim to reduce involvement by the board in the advanced practice professional-physician-patient relationship by eliminating Board approval of supervision agreements (while still making such agreements available to the Board) would allow the advanced practice professional and their supervising physician to determine the scope of practice of the PA or NP, without going so far as to allow the PA or NP to practice without physician oversight.

Pennsylvania has already been moving in the direction of relaxing regulations on advanced practitioners. In January 2018 Governor Wolf waived the requirement of a face-to-face interview with a physician for admission to a narcotic treatment program as part of his declaration of the heroin and opioid epidemic as a statewide disaster emergency. Now, the initial intake review can be completed by a NP or a PA.⁴⁷⁴ In 2017, the General Assembly amended the Vital Statistics Law to permit NPs and PAs to certify a report of

⁴⁷³ Jennifer Snyder, *et al.*, "The Physician Assistant Workforce in Indiana: Preparing to Meet Future Health Care Needs," *Journal of the American Association of Physician Assistants*, 24 no. 12 (Dec. 2011): 50-57.

⁴⁷⁴ Governor Tom Wolf, "Governor Wolf Declares Heroin and Opioid Epidemic a Statewide Disaster Emergency," (Jan. 10, 2018), <https://www.governor.pa.gov/governor-wolf-declares-heroin-and-opioid-epidemic-a-statewide-disaster-emergency/>.

death or fetal death to the DOH.⁴⁷⁵ Additionally, to enable better analysis of the Commonwealth's NP and PA workforce, the DOH should collect, organize, and make available more data on such members of the workforce.

Recommendation #8

Enable the Increased Utilization of Telemedicine through Parity Laws

As mentioned previously, many Pennsylvania residents living in rural communities and other underserved areas face unique challenges in accessing health care. Some examples of these challenges often include lack of primary care physicians and specialists, sparse population, geographic remoteness, limited financial resources, and inclement weather. One possible solution to address the shortage of health care professionals within Pennsylvania's rural and underserved areas is increased utilization of "telemedicine" or its commonly used synonym "telehealth."

Telemedicine is defined as "the use of electronic information and telecommunication technologies to support and promote long-distance clinical health care, patient and professional health-related education, public health, and health administration."⁴⁷⁶ The electronic communication reference within the definition refers to the use of interactive telecommunication equipment which includes, at a minimum, audio and video equipment, but may also include videoconferencing, store-and-forward imaging, streaming media, and terrestrial and wireless communications.⁴⁷⁷ Telemedicine itself is not a separate medical specialty, but rather products and services related to telemedicine are often part of a larger investment by health care institutions in either information technology or the delivery of clinical care.⁴⁷⁸

Historical Background

While the practice of telemedicine has become more widespread throughout the U.S. in recent years, the modern version of the concept itself originated many years ago as a product of early telecommunications technology such as the telegraph, radio, and telephone. Shortly after the introduction of these innovations, American inventor, writer, editor, and magazine publisher, Dr. Hugo Gernsback wrote about a future device he called the "teledactyl," a device that would make it possible for doctors to visually inspect their patients through a view-screen and physically touch them from miles away with robotic arms.⁴⁷⁹

⁴⁷⁵ Act of July 7, 2017, (P.L. 296 No. 17).

⁴⁷⁶ Department of Health and Human Services, Health Resources and Services Administration, "Telehealth Programs," (Jun. 2018), <https://www.hrsa.gov/rural-health/telehealth/index.html>.

⁴⁷⁷ *Id.*; Medicaid.gov, "Telemedicine," <https://www.medicare.gov/medicaid/benefits/telemed/index.html>.

⁴⁷⁸ Adelyn B. Boleman, *Georgia's Telemedicine Laws and Regulations: Protecting against Health Care Access*, 489 Mercer L. Rev. 520, 492 (2017).

⁴⁷⁹ Matt Novak, "Telemedicine Predicted in 1925," *Smithsonian.com*, (Mar. 14, 2012), <https://www.smithsonianmag.com/history/telemedicine-predicted-in-1925-124140942/?no-ist>.

The last 40 years, have seen the development and application of telemedicine progress significantly, despite many barriers, including technological and equipment challenges, costs, and regulatory quandaries. The first stage of telemedicine developments in the U.S. consisted essentially of pioneering efforts with little public or private resources to support their efforts. Between 1965 and 1973, deliberate efforts toward research and development of telemedicine were made and even supported by short-term federal funding.⁴⁸⁰

Development continued into the mid-1970s and involved evaluation by interdisciplinary teams, including social scientists and specialists involved in medical care organization, planning, and delivery.⁴⁸¹ In 1977, observational studies were even completed demonstrating the potential for the use of telemedicine for intensive care units to address the increasing complexity of patients and insufficient supply of intensivists.⁴⁸² While the telemedicine technology during this time was relatively effective in transmitting the necessary information for most clinical uses, the infrastructure necessary to transmit video pictures, still images, and audio signals was scarce and costly, and as a result, the practice of telemedicine failed to thrive on a large scale.⁴⁸³ A renewed push for new and innovative telemedicine occurred in the 1990s with new developments in high-speed computing and telecommunication, as well as the introduction of interactive video teleconferencing (VTC) systems.⁴⁸⁴ During this time period, a number of successful telemedicine applications had been utilized in health care settings. Some examples of these successes included teleradiology, a method by which remote diagnosis was possible, and hemodialysis, the use of VTC for chronically ill patients.⁴⁸⁵

Types of Telemedicine

Today telemedicine is being utilized in specialty departments, hospitals, home health agencies, consumers' homes and workplaces, as well as in private physician offices.⁴⁸⁶ Currently, an estimated 60 percent of all health institutions and 40 to 50 percent of all hospitals are using some form of telemedicine. Further, the device market for the remote monitoring of patients afflicted with chronic conditions was projected to reach \$46 billion in

Currently, an estimated 60 percent of all health institutions and 40 to 50 percent of all hospitals are using some form of telemedicine.

⁴⁸⁰ Seong K. Mun and Jeanie W. Turner, "Telemedicine: Emerging e-Medicine," *Annu. Rev. Biomed Eng.*, Dept of Radiology, Georgetown University, (1999), p. 591.

⁴⁸¹ *Id.*

⁴⁸² Chiedozie Udeh *et al.*, "Telemedicine/Virtual ICU: Where Are We and Where Are We Going?" Cleveland Clinic Foundation, *Methodist DeBakey Cardiovascular Journal*, (Apr. 1, 2018), p. 127.

⁴⁸³ Seong K. Mun and Jeanie W. Turner, *supra* n. 480 at p. 591.

⁴⁸⁴ *Id.* at 592.

⁴⁸⁵ *Id.* at 593.

⁴⁸⁶ Adelyn B. Boleman, *supra* n. 478 at pp. 520, 492.

2017. It's estimated that by 2020, all large private sector employers will provide some telemedicine coverage for employees.⁴⁸⁷

While it is true that telemedicine is not a new creation, many consumers nationwide are still unfamiliar with the concept of and methods associated with the practice. In fact, a 2016 HealthMine survey indicated that 39 percent of Americans don't even know telemedicine exists.⁴⁸⁸ Despite common misperception, telemedicine encompasses more than just real-time health consultations through video. Currently, there are three main types of telemedicine being utilized: remote patient monitoring; store-and-forward; and interactive services.⁴⁸⁹

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Remote patient monitoring (RPM) allows health care providers to track a patient's vital signs and other health-related data from a distance through the patient's at-home utilization of various technological equipment.⁴⁹⁰ Once data is obtained by such equipment, it is transmitted back to the telemedicine system to the physician.⁴⁹¹ As a result, the physician can remotely monitor the patient and the patient does not have to physically leave his or her home to be examined by the physician. In many circumstances, RPM can improve a physician's ability to watch for health-related warning signs and expeditiously intervene if necessary. Generally, RPM is used for managing chronic diseases and conditions such as asthma, heart disease, and diabetes mellitus. RPM devices are specifically used to collect vital signs, blood tests, and electrocardiograms.⁴⁹² A common example of RPM is a glucose tracker device for a patient with diabetes that can monitor the patient's glucose levels at home and transmit them to the patient's physician. If the levels are off, the physician will have the opportunity to record the incident and contact the patient for a consult.⁴⁹³

Store-and-forward telemedicine solutions enable a physician to collect medical data, such as lab results, images, videos, and records from a patient, and then forward to and share with this data to another physician or health care provider at a different location. This form of telemedicine is viewed as an efficient method to securely share patient data without numerous physicians having to be present in the same room or without the need

⁴⁸⁷ Margo Edmunds *et al.*, "An Emergent Research and Policy Framework for Telehealth," *The Journal for Electronic Health Data and Methods* 5, No. 2 (Mar. 29, 2017): 1303, doi: 10.3063/2327-9214.1303, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5389433/>.

⁴⁸⁸ Eric Wicklund, "Telemedicine Still Isn't Winning Hearts and Minds," *Telehealth News*, (Mar. 21, 2016).

⁴⁸⁹ "The Ultimate Telemedicine Guide/What is Telemedicine?" eVisit, (May 25, 2018), <https://evisit.com/resources/what-is-telemedicine/>.

⁴⁹⁰ *Id.*; Adelyn B. Boleman, *supra* n. 478 at pp. 492-93.

⁴⁹¹ *Id.*

⁴⁹² *Id.* at p. 493.

⁴⁹³ "The Ultimate Telemedicine Guide/What is Telemedicine?" *supra* n. 489.

for real-time communications.⁴⁹⁴ Dermatology, pathology, and radiology are the most common fields store-and-forward telemedicine is utilized in.⁴⁹⁵

Interactive telemedicine, sometimes referred to as “real-time telemedicine” involves concurrent communications between physicians and patients through methods such as phone conversations, home visits, and online communication.⁴⁹⁶ Usually interactive telemedicine uses video communication as a means of offering a virtual alternative to an in-person doctor’s visit.⁴⁹⁷ Like the other telemedicine solutions mentioned previously, interactive telemedicine allows the patient to stay in their own home during this interaction with the physician.

In addition to treating physical health needs, there has been an increase in utilization of telemedicine for mental health services, a practice sometimes referred to as “telebehavioral health” or “telepsychiatry.” The U.S. Department of Veterans Affairs (VA) currently uses interactive, RPM, and store-and-forward telemedicine to provide psychotherapy, psychiatric diagnostic interview examinations, and medication management, as well as services for end stage conditions such as renal disease and veterans battling depression and post-traumatic stress disorder (PTSD).⁴⁹⁸ Secondary schools have also started utilizing telemedicine to address the mental health conditions showing up in adolescents.

Quality of Care

Many health professionals across the country agree that the utilization of telemedicine is beneficial to both patients and health care practitioners, by providing additional support through increased communication with specialists and other practitioners based in central urban areas.⁴⁹⁹ Further, those same professionals tend to agree that telemedicine permits patients with limited access to physicians to interact with a physician without having to make a potentially lengthy drive to a physician’s office, ultimately eliminating costly and sometimes dangerous travels.⁵⁰⁰ However, some question whether telemedicine can match or improve the quality of care provided in face-to-face physician’s visits.

⁴⁹⁴ *Id.*

⁴⁹⁵ Adelyn B. Boleman, *supra* n. 478 at pp. 493; “The Ultimate Telemedicine Guide/What is Telemedicine?” *supra* n. 489.

⁴⁹⁶ *Id.*

⁴⁹⁷ “The Ultimate Telemedicine Guide/What is Telemedicine?” *supra* n. 654.

⁴⁹⁸ “Telehealth Connects Patients and Doctors in Real Time,” America’s Health Insurance Plans, Issue Brief, (Nov. 2017), p. 4.

⁴⁹⁹ Travis Holyk *et al.*, “The Role of Telehealth in Improving Continuity of Care: The Carrier Sekani Family Services Primary Care Model,” *BC Medical Journal* 59, No. 9 (Nov. 2017), p. 461.

⁵⁰⁰ *Id.*

Numerous studies have sought to answer this question. Over 15,000 peer-reviewed articles and 400 systematic reviews on telemedicine were completed as of January 2016 as categorized by the National Library of Medicine.⁵⁰¹ Some of these studies, specifically evaluating quality of care, have shown that telemedicine can be just as effective as face-to-face treatment and testing and does improve symptoms. An example of this can be found in studies performed on RPM, the type of telemedicine frequently studied for its functionality and ability to monitor and manage illnesses.⁵⁰² Of 22 recent evidence reports of RPM conducted by the Agency for Healthcare Research and Quality, ten concluded that it led to positive benefits, six concluded benefits were possible, four reported no benefits, and two were inconclusive.⁵⁰³

Rheumatology telemedicine solutions were also put to the test by a satisfaction study undertaken in 2012 in a rural town located in northern Australia.⁵⁰⁴ In this study, a telemedicine patient satisfaction survey was developed by adapting a previously published questionnaire used to evaluate a similar medical oncology telemedicine service. Participant responses were collected from consecutive patients attending the Mount Isa rheumatology telemedicine clinics from January 2012 to November 2012.⁵⁰⁵

The study evaluated 107 rheumatology outpatients, 49 of whom utilized telemedicine consultations, 46 of whom attended face-to-face consultations with a short travel distance, and 12 of whom attended a face-to-face consultation with a much higher median travel distance.⁵⁰⁶ The questionnaire resulted in a patient satisfaction of almost 90 percent for telemedicine service. Further, when comparing the telemedicine consultations with the face-to-face model of care, there was no statistically significant differences in the rates of the patient satisfaction indicated in the questionnaires, apart from a single questionnaire question relating to rapport, which favored the face-to-face consultation. When asked whether attending the telemedicine consultation saved them time or money, 85.7 percent and 89.3 percent of participating patients answered that they “agreed” or “strongly agreed” respectively. When asked whether they would rather travel a significant distance for a face-to-face consultation over a telemedicine consultation, 63 percent of patients selected “disagree” (17 percent) or “strongly disagree” (46 percent). Ninety percent of patients participating in telemedicine consultations also indicated that they were receiving satisfactory care over video link.⁵⁰⁷

⁵⁰¹ Margo Edmunds *et al.*, *supra* n. 487.

⁵⁰² AM Totten *et al.*, “Telehealth: Mapping the Evidence for Patient Outcomes from Systematic Reviews.” Technical Briefs, No. 26, Agency for Healthcare Research and Quality, (Jun. 2016), p. 37 <https://www.ncbi.nlm.nih.gov/books/NBK379323>.

⁵⁰³ *Id.*; The Agency for Healthcare Research and Quality, through its Evidence-based Practice Centers, sponsors the development of evidence reports and technology assessments to assist public and private sector organizations in their efforts to improve the quality of health care in the U.S.

⁵⁰⁴ Katherine A. Poulsen *et al.*, “Satisfaction with Rural Rheumatology Telemedicine Service,” *International Journal of Rheumatic Diseases* 18, No. 3 (Mar. 2015): 304-14, doi: 10.1111/1756-185X.12491.

⁵⁰⁵ *Id.* at p. 306.

⁵⁰⁶ *Id.* at p. 304.

⁵⁰⁷ *Id.* at p. 309.

In February of 2016, the American Telemedicine Association, Academy Health, the Kaiser Permanente Institute for Health Policy, and Physician Insurers Association of America partnered together to convene a small group of experts to develop a comprehensive research and policy agenda relating to telemedicine. The group of experts was comprised of health services and policy researchers, physicians, nurses, care managers, and a host of other health professionals. In evaluating telemedicine, the experts focused on risk management, patient safety, and quality of care.⁵⁰⁸

Participating experts maintained a general consensus that there is, in fact, evidence demonstrating that telemedicine can improve access to care. Moreover, the experts found that the utilization of telemedicine can improve the quality of health care by reducing wait time to see specialists, preventing unnecessary hospital readmissions, providing closer and more accurate monitoring of patients with chronic conditions, and reducing patient travel costs and time.⁵⁰⁹ Further, the study acknowledged the current shortage of clinical providers in many parts of the country, along with changing demographics leading to a large increase in older adults with chronic conditions, and ultimately concluded that the practice of telemedicine is a way to reduce lengthy wait times and increase the timeliness of clinical interactions for a broader range of populations.⁵¹⁰

In addition, the experts acknowledge that telemedicine has faced two major cost barriers, those barriers being which services are allowable, from a regulatory and legal perspective, and what services are paid for by private insurers and public sector payment policies. The study also concluded that a significant amount of additional research was needed to fill gaps in their experiences about quality of care and clinical outcomes, and noted that the shortage of overall funding for telemedicine research along with the aforementioned barriers would dampen the ability to build an evidence base for telemedicine utilization.⁵¹¹ Moreover, the participating experts believe that continued combined research and policy framework could serve to accelerate evidence-based decision-making regarding the effective utilization of telemedicine by public and private payers, regulators, and provider groups, and could also help fill gaps in the current evidence base.⁵¹²

Potential Cost and Time Savings

Studies have shown that a widespread adoption of telemedicine solutions across the country could also generate substantial savings to health care providers. One study conducted in 2014 by global professional services company, Towers Watson, now Willis Tower Watson, (WTW) indicated that telemedicine could potentially deliver more than six

⁵⁰⁸ Margo Edmunds *et al.*, *supra* n. 487.

⁵⁰⁹ *Id.*

⁵¹⁰ *Id.* at p. 8.

⁵¹¹ *Id.* at p. 3.

⁵¹² *Id.* at p. 9.

billion dollars per year in health care savings to U.S. companies.⁵¹³ WTW opined that “while this analysis highlights a maximum potential savings, even a significantly lower level of use could generate hundreds of millions of dollars in savings.”⁵¹⁴

In addition to health care providers, telemedicine solutions have also been shown to generate cost savings for patients. For example, the University of California Davis Health System (UCDHS) conducted a study in 2017 to estimate travel-related and environmental savings attributable to the use of telemedicine for outpatient specialty consultations with its telemedicine program. Moreover, the study was specifically designed to retrospectively analyze the telemedicine consultation database at UCDHS between July 1996 and December 2013. The study calculated travel cost savings and environmental impact by determining differences in mileage reimbursement rate and emissions between those incurred in attending telemedicine appointments and those that would have been incurred if a visit to the hospital facility was necessary. The study observed 19,246 consultations identified among 11,281 unique patients within the study period.⁵¹⁵

The study concluded that the utilization of telemedicine resulted in a total travel distance savings of 5,345,602 miles, a total time savings of 8.96 years (or 4,708,891 minutes), and a total cost savings of \$2,882,086 over the 17 years of the program. In addition, the study found that as a result of reduced travel distances to consultations, the utilization of telemedicine bore out a reduction in pollution and greenhouse gas emissions, which the reduction in CO2 emissions alone was equivalent to one year emissions for electricity production of 271 average four-member households.⁵¹⁶

Regulation of Telemedicine

The utilization of telemedicine is impacted by laws and regulations at both the federal and state level. While the federal government provides some incentives through the Affordable Care Act of 2010 to develop telemedicine services at the state level, the bulk of regulatory issues such as implementation and reimbursement for telemedicine in Medicaid programs have been left to the states.⁵¹⁷ The fact that there is no uniform legal approach to regulating telemedicine services has resulted in inconsistent patchwork of regulatory practices throughout the country, especially concerning reimbursement.

Insurance reimbursement of telemedicine services is of growing peripheral concern within the telemedicine discussion. At the federal level, Medicare allows for

⁵¹³ “Current Telemedicine Technology Could Mean Big Savings.” Towers Watson. Press Release, (Aug. 11, 2014), <https://www.towerswatson.com/en-US/Press/2014/08/current-telemedicine-technology-could-mean-big-savings>.

⁵¹⁴ *Id.*

⁵¹⁵ Navjit W. Dullet *et al.*, “Impact of a University-Based Outpatient Telemedicine Program on Time Savings, Travel Costs, and Environmental Pollutants,” *Value in Health Journal*, (Jan. 14, 2017), p. 542.

⁵¹⁶ *Id.* at p. 544.

⁵¹⁷ Tony Yang, “Telehealth Parity Laws,” *Health Affairs*, (Aug. 15, 2016), p. 1, <https://www.healthaffairs.org/doi/10.1377/hpb20160815.244795/full/>.

reimbursement of telemedicine services provided through an interactive audio and video telecommunications system that permits real-time communication between a patient at a distant site and the physician at the originating site. Medicare will not reimburse for asynchronous communications such as store-and-forward services or RPM for chronic diseases, except when said services are rendered within Alaska or Hawaii.⁵¹⁸

States have been passing legislation to address the issue of reimbursement for telemedicine services, both within their Medicaid programs and through laws governing private insurers. The most common form of telemedicine reimbursement legislation across the U.S. is coverage through Medicaid. Currently, 49 states and the District of Columbia provide some form of Medicaid reimbursement for telemedicine services.⁵¹⁹ Pennsylvania reimburses for RPM telemedicine services through its Department of Aging.⁵²⁰

Many states have also started enacting what are known as telemedicine “parity laws.” Telemedicine parity laws essentially require reimbursement through health plans for telemedicine services at the same or equivalent rate as paid for in-person services. From a legal standpoint, the absence of a parity law can essentially leave the door open for private insurance plans to reimburse for telemedicine services at only a percentage of what they pay for in-person services, if they reimburse at all. Consequently, a failure to require the necessary cost reimbursements for telemedicine services can result in the erosion of incentive for health care professionals to offer and provide such services, which often help isolated individuals in rural and underserved areas.⁵²¹

Currently, 35 states and District of Columbia have parity laws that cover private insurers and reimbursement for telemedicine services.⁵²² As of 2018, another four states, including Pennsylvania, have proposed parity law legislation.⁵²³ A breakdown of telemedicine regulations by state is shown in Map 6. In 2015, the U.S. Congress was considering a nationwide telemedicine parity law called the Medicare Telehealth Parity Act.⁵²⁴ The act was intended to modernize the method by which Medicare reimburses telemedicine services and also sought to expand coverage for Medicare beneficiaries, however, the bill was never enacted.⁵²⁵

⁵¹⁸ Medicare Learning Network, “Telehealth Services,” Center for Medicare & Medicaid Services, (Feb. 2018), p. 4, <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/TelehealthSrvcsfctst.pdf>.

⁵¹⁹ Tony Yang, *supra* n. 517 at p. 3.

⁵²⁰ *Id.* at p. 3.

⁵²¹ *Id.*

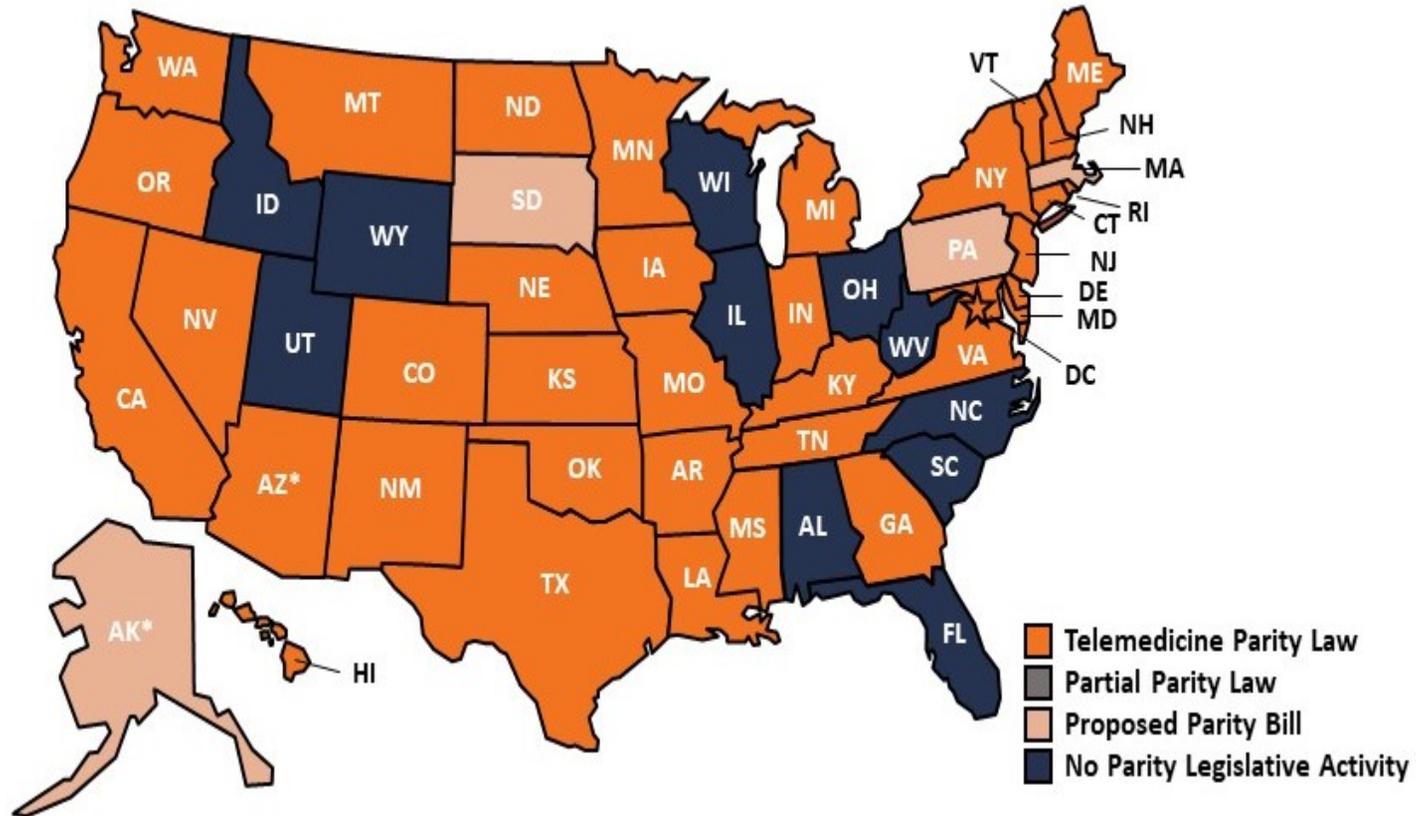
⁵²² American Telemedicine Association, “States with Parity Laws for Private Insurance Coverage of Telemedicine (2018),” State Policy Resource Center, <http://www.americantelemed.org/policy-page/state-policy-resource-center>.

⁵²³ Pennsylvania S.B. 780, P.N. 1997 (Session of 2017).

⁵²⁴ Tony Yang, *supra* n. 517 at p. 5.

⁵²⁵ United States H.R. 29848 (114th Congress), 2015-2017; govtrack, <https://www.govtrack.us/congress/bills/114/hr2948>.

Map 6
 States with Parity Laws for Private Insurance Coverage of Telemedicine
 2018



Source: American Telemedicine Association, "States with Parity Laws for Private Insurance Coverage of Telemedicine (2018)," State Policy Resource Center, <http://www.americantelemed.org/policy-page/state-policy-resource-center>.

Proposed Legislation in Pennsylvania

As shown in Map 6, Pennsylvania is one of the four states that has recently considered legislation regarding telemedicine. The proposed legislation, Pennsylvania Senate Bill 780 of 2017 (SB 780) was introduced and referred to the Senate Professional Licensure Committee. The bill defined telemedicine and provided a host of requirements for health care providers who engage in telemedicine.⁵²⁶

Most notably, the proposed bill also required that all insurance policies issued, delivered, executed, or renewed within the Commonwealth provide coverage for medically necessary telemedicine delivered by a participating network provider who provides a covered service through telemedicine consistent with the insurer's medical policies. Further, SB 780 prohibited such health insurance policy from excluding a health care service provided through telemedicine. In other words, the health insurer must essentially reimburse the health care provider for a telemedicine service if the health insurer reimburses the same participating provider for the same service through an in-person encounter.⁵²⁷

A public hearing was held on SB 780 before the House Professional Licensure Committee on September 12, 2018 with professional health care providers and health insurers present to testify. Both health care providers and health insurers unanimously agreed that telemedicine presents significant benefits for delivering health care. Health providers testified in support, citing numerous studies concluding that outcomes of care through telemedicine services are at least as good as, and sometimes even better than, outcomes of care provided face-to-face.⁵²⁸ One health provider testified that telemedicine effectively cuts down travel-time for patients, is safe, cost effective, and timelier when it comes to clinical conditions.⁵²⁹ Another health provider testified that telemedicine helps attract more qualified physicians to practice in Pennsylvania, because it permits them to expand their practice and skills to treat more patients in more remote locations within the Commonwealth.⁵³⁰

While health care providers largely expressed support for SB780, health insurers expressed concern that language in the proposed bill was too broad. For example, one health insurer representative testified that the bill's language requiring that "a health insurer may not exclude a health care service for coverage or reimbursement solely because the service is provided through telemedicine" is too broad.⁵³¹ According to the representative, the breadth of the language could invite ridiculous claims, such as setting a broken leg or conducting child birth through telemedicine that insurers would not be able to deny simply

⁵²⁶ Pennsylvania S.B. 780, P.N. 1997 (Session of 2017).

⁵²⁷ *Id.*

⁵²⁸ Testimony of Judd Hollander, MD, Thomas Jefferson University, at Public Hearing before the House Professional Licensure Committee, Sept. 12, 2018.

⁵²⁹ Testimony of Bimal Desai, MD, MBI, FAAP, Children's Hospital of Philadelphia, at Public Hearing before the House Professional Licensure Committee, Sept. 12, 2018.

⁵³⁰ Testimony of Judd Hollander, MD, *supra* n. 528.

⁵³¹ Testimony of Douglas Furness, Capital Blue Cross, at Public Hearing before the House Professional Licensure Committee, Sept. 12, 2018 quoting Pa. S. No. 780 (Sess. of 2017).

because they were practiced utilizing telemedicine services. Moreover, the health insurers opined that the telemedicine marketplace is currently thriving and legislation mandating insurance coverage is both unnecessary and potentially counter-productive. Health insurers seemed to agree that technological challenges are more of an impediment to providing telemedicine services to rural areas and argued that improved access to broadband internet and growing 4G wireless coverage throughout the state would do far more to provide telemedicine services than passing regulatory legislation.⁵³²

Potential Impact to Health Care Workforce

While telemedicine may not be the cure-all solution for physician maldistribution in Pennsylvania, its rapid development and increased utilization has the potential to redistribute high-quality medical expertise to rural and underserved areas without having to physically relocate or retain the existing physician workforce. Many experts also agree that by improving the quality of care available in underserved communities, there is the potential to transform rural and underserved inner-city communities into more attractive locations for primary-care physicians.⁵³³

A plurality of health professionals and organizations the Commission staff spoke with in preparation of this report agreed that addressing the shortage of health practitioners in rural and underserved areas is critical to strengthening Pennsylvania's health care workforce. Telemedicine can enhance rural physician recruitment and retention. However, prior to evaluating this possibility, it is important to identify both personal and workplace factors that positively influence a health care practitioner's decision to practice in a rural setting. Some known personal factors for physicians include returning to a community where the physician grew up or one similar to it, staying in the general location where a residency was completed, lifestyle preferences, spousal preference, and earning potential.⁵³⁴

Some known workplace factors that may also lead to a positive influence include positive professional situation (some examples of which include access to continuing education, collegial support, degree of autonomy, and career pathway), maintenance of adequate and stable staffing, sufficient infrastructure, and sustainable workplace

⁵³² *Id.*

⁵³³ Thomas S. Nesbitt *et al.*, "A Proposed Model for Telemedicine to Supplement the Physician Workforce in the USA," *Journal of Telemedicine and Telecare*, Suppl. 2, (1999), p. S2:25.

⁵³⁴ Marie-Pierre Gagnon *et al.*, "Exploring the effects of telehealth on medical human resource supply: a qualitative case study in remote regions," *BMC Health Services Research* 7, No. 6 (2007): doi: 10.1186/1472-6963-7-6; J. Duplantie *et al.*, "Telehealth and the recruitment and retention incentives for health workers in rural and remote areas: a Delphi study," *Canadian Journal of Rural Medicine*, (2007), pp. 30-36; C. Hancock *et al.*, "Why doctors choose small towns: a development model of rural physician recruitment and retention," *Social Science & Medicine*, (2009), pp. 1368-1376; M. Viscomi *et al.*, "Recruitment and retention of general practitioners in rural Canada and Australia: A Review of the Literature," *Canadian Journal of Rural Medicine*, (2007), pp. 13-23.

organization. It should be noted that it is unlikely that these factors alone would lead a physician to choose rural practice if he or she were not already inclined to do so.⁵³⁵

Surprisingly, the notion that an increased utilization of telemedicine may enhance rural physician recruitment and retention “has been frequently hypothesized, but rarely studied.”⁵³⁶ A recent review of the literature identified 13 studies regarding the effects of information and communication technologies on recruitment and retention of health care professionals, of which nine showed a positive effect. The review did note, however, that the authors of the studies suggested a need for more research due in large part to the diversity of telemedicine applications, health care professionals examined, geographic settings, and study methods employed.⁵³⁷ Another review identified 143 articles on reported benefits of telemedicine for rural Australians, of which three suggested that the utilization of telemedicine could improve rural recruitment and retention of health care workers. Of those three studies, only one, analyzing continuing medical education for psychiatrists by way of videoconference, presented any evidence to support the hypothesis that telemedicine does in fact positively impact recruitment and retention of rural health practitioners.⁵³⁸

Recognizing this, a 2013 study was conducted specifically analyzing the impact of a tele-emergency service on physician recruitment and retention in the Upper Midwest of the U.S. In this particular study, telemedicine services were used to link a large hub emergency department, composed of board-certified emergency medicine physicians and emergency department nurses, with numerous smaller hospital emergency departments in rural locations. Clinical staff at the peripheral hospitals could essentially press a button for immediate, synchronous audio/video connection to the tele-emergency hub site. Staff, patients, and family members situated at the remote hospitals had the ability to consult with the hub’s staff, and the hub’s clinicians had the ability to access patient medical records. The tele-emergency services were most typically utilized by the remote facilities to consult regarding patients who might require a transfer, may have complex traumatic injuries, or may have serious acute illnesses requiring rapid diagnosis (*e.g.* stroke and acute myocardial infarction).⁵³⁹

In the study, a survey was sent to a single contact person at all of the remote hospitals subscribing to the tele-emergency service who shared and distributed the study with impacted staff personnel.⁵⁴⁰ The survey found that 65 percent of respondents agreed that tele-emergency positively impacted recruitment and retention of health care

⁵³⁵ *Id.*

⁵³⁶ Andrew Potter *et al.*, “Effect of tele-emergency services on recruitment and retention of US rural physicians,” *Rural and Remote Health* 2014 14, No. 3 (Dec. 3, 2013): p. 2, www.rrh.org.au/journal/article/2787.

⁵³⁷ Marie-Pierre Gagnon *et al.*, “Supporting Health Professionals through Information and Communication Technologies: A Systematic Review of the Effects of Information and Communication Technologies on Recruitment and Retention,” *Telemedicine and E-Health* 2011, pp. 269-274.

⁵³⁸ Andrew Potter *et al.*, *supra* n. 536 at p. 2.

⁵³⁹ *Id.* at p. 3.

⁵⁴⁰ *Id.*

professionals.⁵⁴¹ The survey also found that “sizeable majorities of respondents also responded positively to each of five other items related to the effect of tele-emergency on the work environment.”⁵⁴²

Ultimately, the survey concluded that tele-emergency’s effects on the workplace were captured in three major benefits: the availability of clinical back-up increased physicians’ confidence in patient care; rural physicians became part of a virtual professional network, creating opportunities for the on-the-job education in patient care and overcoming a sense of professional isolation; and a reduction of rural physicians’ on-call burden when emergency department care could be completed by an onsite physician assistant (PA) or nurse practitioner (NP) in consultation with a remote tele-emergency physician. According to the study, “interviewees articulated that by improving the

Interviewees articulated that by improving the work environment, tele-emergency improved professional recruitment and retention.

environment, tele-emergency improved professional recruitment and retention.”

In addition, study participants agreed that regulatory guidance enabling tele-

emergency to serve as physician backup for PAs and NPs could increase the recruitment and retention value of tele-emergency. It should be noted that since the survey was narrowly constrained to tele-emergency services, its findings, while valuable to the overall discussion concerning telemedicine and the health care workforce, are not necessarily generalizable to all other telemedicine services.⁵⁴³

It’s worth noting that the Commission’s 2015 report *The Physician Shortage in Pennsylvania* briefly addressed telemedicine’s potential impact on the physician shortage. The advisory committee appointed under the study’s authorizing resolution to assist the Commission staff concluded that telemedicine can in fact serve as a recruiting tool in rural areas, agreeing that inexperienced physicians appreciate the availability of more experienced physicians who can provide support and guidance.⁵⁴⁴ This conclusion may be linked to the decrease in professional isolation identified in the Upper Midwest study and would provide the beneficial workforce factor of collegial support desired by many health care practitioners.

Another study administered in Quebec reviewed the impact of telemedicine on nurse recruitment and retention. The results of the study revealed that while telemedicine resulted in a greater level of job satisfaction by nurses by decreasing professional isolation through the presence of mutual aid and lowered stress in certain circumstances, several participants in the study mentioned work overload among resource nurses especially during the patient data collection process.⁵⁴⁵ One example of this was illustrated by a nurse participant who stated that in some respects, telemedicine created more work for her, explaining that she was spending increased time writing reports from virtual clinical

⁵⁴¹ *Id.* at p. 4.

⁵⁴² *Id.*

⁵⁴³ *Id.* at p. 10.

⁵⁴⁴ JSGC, “The Physician Shortage in Pennsylvania,” *supra* n. 57 at p. 48.

⁵⁴⁵ Marie-Pierre Gagnon *et al.*, “The Influence of a Wound Care Teleassistance Service on Nursing Practice: A Case Study in Quebec,” *Telemedicine Journal of E-Health* 20, No. 6 (June 1, 2014): pp. 563-600 at p. 597, doi: 10.1089/tmj.2013.2087, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4038993>.

sessions.⁵⁴⁶ In general, the study highlighted many positive impacts of telemedicine on work environment, however, it also concluded that any positive impact on nurse recruitment and retention was limited and thus, telemedicine could not be considered a full solution to or replacement for the shortage of nurses.⁵⁴⁷

Summary

To reiterate, telemedicine may not be the sole solution to alleviating Pennsylvania’s shortage of health care professionals and strengthening the health care workforce, however, it does have the potential to redistribute high-quality medical expertise in rural and underserved areas without having to physically relocate or retain the existing physician workforce. Further, telemedicine’s ability to improve work environments for health practitioners by eliminating professional isolation and increasing collegial support has strong potential to attract more qualified health professionals to rural locations in the Commonwealth. The American Association of Medical Colleges (AAMC) has also opined that telemedicine expands the health care workforce for all kinds of practitioners “in that it offers the flexibility to work from home or in circumstances when practitioners otherwise might not be available.”⁵⁴⁸ In addition, the AAMC notes that “access to more varied client populations can decrease burnout and thereby increase workforce retention.”⁵⁴⁹

Access to more varied client populations can decrease burnout and thereby increase workforce retention.

As noted previously, studies have also shown that telemedicine can result in cost and time savings for both patients and health care providers. A cost and time savings for health care providers could potentially lead to an increase in funds available to hire additional health care practitioners.

Pennsylvania has taken steps to enable increased utilization of telemedicine over the past few years. For example, DOH and several other stakeholders established a telemedicine advisory committee tasked with developing a strategic plan to implement telemedicine in Pennsylvania, and these efforts are supported through grant money provided by the Mid-Atlantic Telehealth Resource Center.⁵⁵⁰ Enacting parity legislation that will ensure that health insurers reimburse health care providers for telemedicine services at the same rate they would for face-to-face consultations is essential to encouraging the practice of telemedicine and will likely encourage more physicians to practice in Pennsylvania, knowing that they may be able to expand the scope of their practice and the depth of their skills through telemedicine while receiving appropriate reimbursement.

⁵⁴⁶ *Id.*

⁵⁴⁷ *Id.* at p. 599.

⁵⁴⁸ Stacy Weiner, “Addressing the Escalating Psychiatrist Shortage,” *AAMCNews – Patient Care*, (Feb. 13, 2018).

⁵⁴⁹ *Id.*

⁵⁵⁰ Pennsylvania Telehealth Roundtable, “Welcome,” <https://pennsylvaniatelehealth.wordpress.com/>; Mid-Atlantic Telehealth Resource Ctr., “Home,” 2018, <http://www.matrc.org/>.

Recommendation #9: Improve Wages, Training Opportunities, and Career Development Opportunities in Long-Term Care Facilities

Long-Term Care Facilities, Their Staff, and Medicaid

One aspect of Pennsylvania’s health care workforce that deserves special mention are those professionals who staff long-term care facilities, often referred to as nursing homes. Although the rest of this report discusses issues affecting specific health professions (physicians, nurses, psychiatrists, etc.), because long-term care facilities provide a unique type of care and sit at the intersection of a myriad of medical, legal, and financial issues, they merit distinct consideration.

The median monthly cost of a private room at a nursing home in Pennsylvania is roughly \$10,000 per month.

According to the Pennsylvania Department of Health (DOH), more than 80,000 Pennsylvanians reside in more than 700 nursing homes throughout the Commonwealth.⁵⁵¹ A national survey conducted by a financial services provider that markets long-term care insurance has found that the median monthly cost of a private room at a nursing home in Pennsylvania is roughly \$10,000 per month.⁵⁵² Long-term care costs are typically financed by Medicaid, although private long-term care insurance is used by some individuals. Medicare, however, does not finance long-term care. Its nursing home benefits are limited in duration (a maximum of 100 days of post-hospital care) and scope (services must qualify as “skilled care”). Medicaid, also known as Medical Assistance in Pennsylvania, is a means-tested eligibility program administered jointly by the DOH and the federal Centers for Medicare and Medicaid Services (CMS), which develops quality standards and other regulations.⁵⁵³ As of 2016, 65 percent of all residents at federally-certified nursing homes primarily have their care paid for by Medicaid, according to the Kaiser Family Foundation.⁵⁵⁴

It should be noted that nursing homes differ from assisted living facilities or personal care homes. Nursing homes provide round-the-clock care by professional nursing staff and the facilities themselves are licensed by the DOH. In contrast, assisted care

⁵⁵¹ Pennsylvania Department of Health, “Nursing Homes.”

<https://www.health.pa.gov/topics/facilities/nursing%20homes/Pages/Nursing%20Homes.aspx>.

⁵⁵² Genworth Financial, “Cost of Care Survey 2018.” <https://www.genworth.com/aging-and-you/finances/cost-of-care.html>.

⁵⁵³ Robert C. Gerhard III, “Pennsylvania Medicaid Long-Term Care,” George T. Bisel Company, Inc., (Philadelphia Pa.), 2018 edition.

⁵⁵⁴ Kaiser Family Foundation, “Distribution of Certified Nursing Facility Residents by Primary Payer Source,” (2016), <https://www.kff.org/other/state-indicator/distribution-of-certified-nursing-facilities-by-primary-payer-source/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D>.

facilities and personal care homes are general facilities for people who can still take care of themselves for the most part with the exception of certain household tasks such as cleaning, cooking, and laundry.⁵⁵⁵ Facilities may also be certified by CMS if they receive funding from Medicare or Medicaid. In 2015, the amount spent in Pennsylvania on nursing home care by Medical Assistance was \$3,848,905 and accounted for 43 percent of all Medical Assistance spending.⁵⁵⁶

Nurses (registered nurses and licensed practical nurses) and nursing aides are the primary caretakers at long-term care facilities. Nationally, about seven percent of registered nurses and 38 percent of licensed practical nurses (LPNs) work in a nursing home.⁵⁵⁷ Registered nurses (RNs) working in nursing homes have an annual mean wage of \$65,710. In comparison, RNs working in general medical and surgical hospitals have an annual mean wage of \$75,820.⁵⁵⁸ It is this disparity which has led the Pennsylvania Health Care Association (PHCA), an organization that advocates on behalf of nursing homes, to claim that nursing homes cannot “invest in staff by offering competitive wages and/or benefits, leading to higher turnover.”⁵⁵⁹

Nursing aides, also called nursing assistants or certified nursing assistants (CNAs), make up the bulk of the workforce which performs day-to-day caregiving tasks for nursing home residents, such as feeding, bathing, dressing, grooming, and transporting them. Nationally, nursing aides make up approximately 37 percent of the workforce of nursing care facilities, according to the U.S. Department of Labor’s Bureau of Labor Statistics. Pennsylvania has the fifth-highest number of nursing aides of any state, at 75,020, with an hourly mean wage of \$14.43.⁵⁶⁰

Nationally, most nursing aides work in nursing homes, followed by general medical and surgical hospitals and then continuing care retirement communities and assisted living facilities for the elderly. As with RNs, there is a pay disparity between those nursing aides who work in a nursing home and those who work in a hospital setting. The hourly mean

⁵⁵⁵ Seniorliving.com, “Assisted Living vs Nursing Home,” <https://www.seniorliving.org/compare/assisted-living-vs-nursing-home/>.

⁵⁵⁶ Kaiser Family Foundation, “Medicaid’s Role in Nursing Home Care,” (Jun. 20, 2017), <https://www.kff.org/infographic/medicaids-role-in-nursing-home-care/>.

⁵⁵⁷ United States Department of Labor, Bureau of Labor Statistics, “Occupational Outlook Handbook, Registered Nurses, Work Environment.” <https://www.bls.gov/ooh/healthcare/registered-nurses.htm#tab-3>; United States Department of Labor, Bureau of Labor Statistics, “Occupational Outlook Handbook, Licensed Practical and Licensed Vocational Nurses, Work Environment,” <https://www.bls.gov/ooh/healthcare/licensed-practical-and-licensed-vocational-nurses.htm#tab-3>.

⁵⁵⁸ United States Department of Labor, Bureau of Labor Statistics, “Occupational Employment Statistics, Occupational Employment and Wages, (May 2017), 29-1141 Registered Nurses,” <https://www.bls.gov/oes/current/oes291141.htm>.

⁵⁵⁹ Pennsylvania Health Care Association, “State Budget,” <https://www.phca.org/advocacy/state-budget>, accessed Jan. 25, 2019.

⁵⁶⁰ United States Department of Labor, Bureau of Labor Statistics, “Occupational Employment Statistics, Occupational Employment and Wages, (May 2017), 31-1014 Nursing Assistants,” <https://www.bls.gov/oes/current/oes311014.htm>.

wage across the U.S. for nursing aides is \$13.20 for those who work in nursing homes, but \$14.73 for those who work in general medical and surgical hospitals.⁵⁶¹

The PHCA cites inadequate reimbursement from Medical Assistance as the paramount reason why nursing homes cannot offer more competitive wages to their staff. The PHCA asserts that the level of care needed by residents has risen, as well as the cost to provide care, while Medical Assistance payments have not kept pace with costs. From the perspective of the PHCA, the underfunding of Medical Assistance, in turn, has created a “financially unsustainable path” for many of the Commonwealth’s nursing homes. According to the PHCA, for each nursing home resident dependent on Medical Assistance, the cost of care exceeds the Medical Assistance payments by an average of \$47.36 per day, or \$17,200 annually.⁵⁶² This would mean that a nursing home which accepts residents receiving Medical Assistance to pay for their care loses \$17,200 per year for each such resident.

Optimum Staffing Levels

One consequence of the inability of nursing homes to pay competitive wages to their nursing staff is that some nursing homes may not be able to have enough staff available to properly care for residents in accordance with state and federal regulation. In 2016, a performance audit conducted by the Pennsylvania Office of the Auditor General concluded that the quality of life of residents and the quality of care they receive can be directly impacted by the staffing levels within the residents’ respective nursing homes.⁵⁶³ The audit pointed out that Pennsylvania regulation requires at least 2.7 hours of direct nursing care per resident per day, and that nursing homes may have trouble attaining this minimum staffing level if they cannot attract and retain enough staff.⁵⁶⁴ Federal regulations do not mandate staffing levels, providing only that “[t]he facility must have sufficient nursing staff with the appropriate competencies and skills sets to provide nursing and related services to assure resident safety”⁵⁶⁵

In 2001, Congress commissioned a study to investigate whether CMS should require a minimum nurse staffing level in nursing homes.⁵⁶⁶ To conduct the study, CMS

⁵⁶¹ *Id.*

⁵⁶² Pennsylvania Health Care Association, State Budget, *supra* n. 559, accessed Jan. 25, 2019.

⁵⁶³ Pennsylvania Department of the Auditor General, “Performance Audit Report, Pennsylvania Department of Health,” (Jul. 2016), p. 9, https://www.paauditor.gov/Media/Default/Reports/Performance%20Audit_PA%20Department%20of%20Health%20Nursing%20Homes.pdf.

⁵⁶⁴ *Id.* (citing 28 Pa. Code § 211.12(i)).

⁵⁶⁵ 42 C.F.R. § 483.35. The federal regulation on nurse staffing does require a registered nurse to be present at the facility for at least 8 consecutive hours a day, 7 days a week. The facility must also have a full-time director of nursing who is a registered nurse.

⁵⁶⁶ United States Department of Health and Human Services, Centers for Medicare and Medicaid Servs., “Appropriateness of Minimum Nurse Staffing Ratios in Nursing Homes Overview of the Phase II Report: Background, Study Approach, Findings, and Conclusions,” (Dec. 2001), https://www.justice.gov/sites/default/files/elderjustice/legacy/2015/07/12/Appropriateness_of_Minimum_Nurse_Staffing_Ratios_in_Nursing_Homes.pdf.

investigated the relationship between staffing and quality of care. CMS noted in its report that data collected during the study revealed that for each quality of care measure, “there was a pattern of incremental benefits of increased staffing until a threshold was reached at which point there were no further significant benefits with respect to quality when additional staff were utilized.”⁵⁶⁷

The CMS concluded that the staffing threshold beyond which there was no quality improvement was 2.8 hours per resident per day for nursing aides.⁵⁶⁸ For licensed staff, the threshold was 1.15 hours per resident per day for hospital transfer “short-stay” measures and 1.3 hours per resident per day for “long-stay” measures.⁵⁶⁹ Within these totals, RN thresholds were 0.55 hours for short-stay quality measures and 0.75 hours for long-stay measures. The nursing aide threshold figure and the licensed staff threshold figure for long-term residents are added together for a combined 4.1 hours per resident per day of nursing staff, a level below which there is an increased risk of poor medical outcomes for residents.⁵⁷⁰

A 2016 review of the literature and commentary on the need for higher minimum staffing levels in nursing homes noted that nearly 150 research studies of the issue have been conducted over the preceding 25 years, primarily in the U.S. but also in Canada, the United Kingdom, Germany, Norway, and Sweden.⁵⁷¹ The results of these studies have “documented a strong positive impact of nurse staffing on both care processes and outcome measures.”⁵⁷² The strongest positive relationship documented in the studies reviewed was between RN staffing levels and quality, which was stronger than the relationship between LPNs and quality and total nurse staffing levels (which includes nursing aides) and quality, both of which were also found to be related to quality.⁵⁷³

Using the CMS’ Casper Nursing Home Staffing Data from 2014, the authors of this article were able to conclude that between 2009 and 2014, total facility-reported median staffing levels increased from 3.7 hours per resident per day of care to 3.97, with RN hours specifically increasing from 0.5 to 0.7 during the same time frame. However, despite these improvements, the lowest quartile of nursing homes reported a staffing level of nursing aides of 2.08 hours per resident per day, which translates into roughly 10 or 11 residents to one nursing aide. The researchers found that this is not enough staff to engage in the labor-

⁵⁶⁷ *Id.* at p. 5.

⁵⁶⁸ *Id.*

⁵⁶⁹ *Id.* “Short-stay” measures were “[q]uality measures related to hospital transfer for potentially avoidable causes (e.g. urinary tract infections, sepsis, electrolyte imbalance) for a short-stay sample of Medicare [nursing home] admissions.” Because the researchers are referencing Medicare, it is clear from the context that “short-stay” refers to those residents in nursing homes for a short period of time, as Medicare will only fund 100 days of nursing home care. “Long stay” measures were “selected quality of care issues for the treatment of long-stay nursing home residents who were in the facility for at least 90 days (*i.e.* functional improvement, incidence of pressure sores, incidence of skin trauma, resisting care improvement, and weight loss).”

⁵⁷⁰ *Id.*

⁵⁷¹ Charlene Harrington, *et al.*, “The Need for Higher Minimum Staffing Standards in U.S. Nursing Homes,” *Health Service Insights* 9 (Jan. 2016): 13-19, doi: 10.4137/HSI.S38994.

⁵⁷² *Id.* at p. 14.

⁵⁷³ *Id.*

intensive care that has to be provided to residents, such as feeding and incontinence care. Further, it is unlikely that LPNs or RNs are filling those gaps, as nursing homes with low total staffing are likely to have low RN and LPN staffing as well.⁵⁷⁴

Low Wages and Staffing Shortages

Low reimbursement rates, as identified by the PHCA, is a causative factor of staffing shortages identified by academic researchers of the topic. One study examining California's financial incentives aimed at increasing staffing in nursing homes found that increased reimbursement rates were associated with increased RN staffing levels.⁵⁷⁵ LPN and nurses' aides staffing levels were unaffected.⁵⁷⁶

Another study investigated the impact of state-level Medicaid wage pass-through legislation on nursing home staffing. Wage pass-through refers to a policy adopted by some states which earmarks additional Medicaid funds for the explicit purpose of increasing compensation for direct-care workers (RNs, LPNs, and nursing aides) in nursing homes.⁵⁷⁷ Such states require that a certain portion of the Medicaid reimbursement increase be devoted to staffing through enhancing direct-care wages or benefits, or increasing the number of staff.⁵⁷⁸

The researchers noted that Michigan was one of the first states to adopt a wage pass-through policy for its Medicaid funding of nursing homes, implementing it in 1990, and longitudinal data from Michigan indicated that between 1990 and 1998, the rate of turnover of nursing staff in Michigan declined from 75 to 67 percent. Further, data from Michigan indicated a large cumulative impact of wage pass-through on actual nursing aides' wages by 2000.⁵⁷⁹

The researchers also conducted their own analysis of state Medicaid wage pass-through policies, utilizing longitudinal data from 1996 to 2004 from the 48 continental states. Data was collected from the Online Survey Certification and Reporting system (OSCAR), a data network maintained by the Centers for Medicare and Medicaid Services which gathers data self-reported by each nursing home.⁵⁸⁰ The study compared the 21 states which adopted a wage pass-through policy against those that did not.⁵⁸¹ The researchers were able to estimate that, among the states implementing a wage pass-through policy, its implementation was associated with a three to four percent increase in nursing

⁵⁷⁴ *Id.* at p. 15.

⁵⁷⁵ DB Mukamel, *et al.*, "The Relationship of California's Medicaid Reimbursement System to Nurse Staffing Levels," *Medical Care* 50, no. 10 (October 2012): 836-42, doi: 10.1097/MLR.0b013e318264e4ce.

⁵⁷⁶ *Id.*

⁵⁷⁷ Zhanlian Feng, *et al.*, "Do Medicaid Wage Pass-Through Payments Increase Nursing Home Staffing?," *Health Services Research* 45, no. 3 (June 2010): 728-47, at p. 729, doi: 10.1111/j.1475-6773.2010.01109.x.

⁵⁷⁸ *Id.* at p. 729.

⁵⁷⁹ *Id.* at p. 730.

⁵⁸⁰ *Id.* at p. 731.

⁵⁸¹ *Id.* at pp. 735-36.

aide hours per resident per day.⁵⁸² This translates to roughly an additional 27 to 36 minutes of nursing aide care per resident per day.⁵⁸³ The researchers concluded that, although these staffing gains are arguably moderate, “the finding of this positive relationship should be reassuring to state policy makers and advocates long concerned about inadequate staffing in nursing homes.”⁵⁸⁴

Legislation has been proposed in the Pennsylvania General Assembly to address the low wages of nursing home staff. On February 1, 2019, Senate Bill 186 of 2019 was introduced to encourage nursing homes to pay a minimum wage of \$15 an hour to its employees, thereby earning a “living wage accreditation” from the Commonwealth.⁵⁸⁵ Nursing homes who did not receive such an accreditation would be required to pay a penalty for each employee who used Medical Assistance or other public assistance programs.⁵⁸⁶ According to the Senate Co-Sponsorship Memo:

Many Nursing Facility workers are making wages that fall well below a living wage. This in turn requires them to rely on public assistance programs. Certainly no working Pennsylvanian should make so little that they need to supplement their income with state assistance programs but this should be especially true of the nurses caring for the elderly and disabled in our Commonwealth.⁵⁸⁷

Other Factors Affecting Staffing

There are other factors contributing to nursing homes’ staffing difficulties. The Commission’s 2014 *Report of the Advisory Committee on Long Term Care Services and Supports for Older Pennsylvanians* noted that factors beyond wages, such as “emotional support, child care services, health benefits, involvement with developing care plans, and training that allows more responsibilities and understanding” were also important to nursing home staff.⁵⁸⁸

A 2001 report by the Pennsylvania Intra-governmental Council on Long Term Care detailed workforce issues, specifically those surrounding recruitment and retention, as conveyed by the nursing aides working in nursing homes.⁵⁸⁹ The perspectives of the

⁵⁸² *Id.* at pp. 738-43.

⁵⁸³ *Id.* at p. 743.

⁵⁸⁴ *Id.*

⁵⁸⁵ Pennsylvania S.B. 186, P.N. 141 (Sess. of 2019). This bill is a reintroduction of Senate Bill 236 of 2017.

⁵⁸⁶ *Id.*

⁵⁸⁷ SB 186 Senate Co-Sponsorship Memoranda, Jan. 3, 2019, <https://www.legis.state.pa.us/cfdocs/Legis/CSM/showMemoPublic.cfm?chamber=S&SPick=20190&cosponId=27370>.

⁵⁸⁸ JSGC, “Report of the Advisory Committee on Long Term Care Services and Supports for Older Pennsylvanians (Revised),” (Aug. 2014), p. 140.

⁵⁸⁹ Pennsylvania Intra-Governmental Council on Long Term Care, “In Their Own Words: Pennsylvania’s Frontline Workers in Long Term Care,” (Feb. 2001),

nursing aides were collected through a number of focus groups held throughout the Commonwealth.⁵⁹⁰ An overwhelming majority – 74 percent – of these workers stated that their facility was experiencing a staffing shortage.⁵⁹¹

Aside from low wages, the focus group participants stated that it is also difficult for their facility or employer to recruit workers because the work is too personal, the work is too hard, the environment of a long term care facility is uncomfortable, better jobs were available, hours were inflexible, and it was difficult to find child care during scheduled shifts.⁵⁹²

With regard to retaining workers, the focus group participants identified the consistent lack of care givers to share the workload, the difficulty of the work, and a feeling of being unappreciated by the facility as greater reasons than low wages as reasons for worker turnover and attrition.⁵⁹³ Additionally, a “lack of orientation and training was identified as having the greatest impact on employee retention.”⁵⁹⁴ The care givers reported that they were given little guidance and essentially were required to learn their role as they performed it, and that such a situation was responsible for much of the attrition in the field.⁵⁹⁵

Anecdotally, some focus group participants related that they have been asked by friends, family, and acquaintances why they do not get a “real job,” evincing the view among society at large that working in a long term care facility is a menial labor position, more akin to working in retail or fast-food restaurant service, rather than a professional position.⁵⁹⁶ Such occurrences have engendered a feeling among the care givers that they receive little or no respect from society in general, which they found demoralizing.⁵⁹⁷ As the report concluded, “[t]o attract and retain good people in this field, there must be a sense of respect and a sense of professionalism.”⁵⁹⁸

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The report recommended that to better recruit workers, employers should emphasize different characteristics or benefits of the position depending on the prospective

<https://www.aging.pa.gov/organization/PennsylvaniaLongTermCareCouncil/Documents/Reports/PennsylvaniaIntraGovernmentalCouncilOnLTC/InTheirOwn%20WordsPennsylvania%E2%80%99s%20FrontlineWorkersinLongTerm%20CareFebruary2001.pdf>.

⁵⁹⁰ *Id.* at p. 1.

⁵⁹¹ *Id.* at p. 2.

⁵⁹² *Id.* at p. 13.

⁵⁹³ *Id.* at p. 14.

⁵⁹⁴ *Id.* at p. 4.

⁵⁹⁵ *Id.*

⁵⁹⁶ *Id.* at p. 17

⁵⁹⁷ *Id.* at p. 24.

⁵⁹⁸ *Id.* at p. 25.

employee's age demographic.⁵⁹⁹ For instance, to better recruit 18-29 year-olds, nursing homes should promote, or offer, no mandatory weekend shifts, child care, and continuing education, while for 30-39 year-olds, health benefits, schedule flexibility, and job security should be offered and highlighted as perks of the position.⁶⁰⁰

Additionally, cutting labor costs in order to maximize profits has also been propounded by some researchers as a cause of nursing homes' anemic staffing. Evidence of this includes the lower staffing of for-profit facilities than their non-profit counterparts, as well as a finding that nursing homes with higher profit margins have the poorest quality.⁶⁰¹

The federal government has also become involved in researching the issues affecting long-term care homes and their staffing difficulties. The U.S. Senate Commission on Long-Term Care (SCLTC) issued a report to the Congress in 2013 which offered several solutions to the workforce shortage facing the long-term care industry.⁶⁰² One of the proposed solutions was to "expand[] the roles of trained direct care workers [which] may help compensate for the shortage in the professional workforce by allowing care to be provided more efficiently."⁶⁰³ In other words, nursing aides, who receive less formal education than LPNs and RNs, should be trained to replace the LPNs and RNs, who are more expensive, take longer to train, and are more difficult to recruit and retain. However, such a strategy has its own flaws. As discussed above, there are recruitment and retention issues with nursing aides – the staffing shortage is not limited to LPNs or RNs.

The SCLTC report also recommended that "career ladders and lattices" be created at the state and federal level for direct care workers.⁶⁰⁴ Recognizing that there is little room for advancement in the nursing home setting, particularly for nursing aides, the SCLTC emphasized that creating such "career ladders and lattices" could increase the desirability of these positions and improve retention.⁶⁰⁵

The SCLTC's report described a "career lattice" as "a structure that allows workers to move laterally along a career path by developing specialized skill sets."⁶⁰⁶ Effectively, the SCLTC advocated specializing the nursing aide workforce such that some would be trained to do a few things well rather than to be generalists. A ladder, in contrast, would allow such workers to earn new credentials that build on experience and move upward into a role with more responsibility.⁶⁰⁷ The SCLTC's report cited Massachusetts's Extended Care Career Ladder Initiative, "a competitive multi-round grant program available to

⁵⁹⁹ *Id.* at p. 16.

⁶⁰⁰ *Id.*

⁶⁰¹ Charlene Harrington, *et al.*, *supra* n. 571 at p. 16.

⁶⁰² United States Senate Commission on Long-Term Care Report to the Congress, Sept. 30, 2013.

<http://ltccommission.org/ltccommission/wp-content/uploads/2013/12/Commission-on-Long-Term-Care-Final-Report-9-26-13.pdf>.

⁶⁰³ *Id.* at p. 55.

⁶⁰⁴ *Id.* at 57.

⁶⁰⁵ *Id.*

⁶⁰⁶ *Id.*

⁶⁰⁷ *Id.*

nursing homes and home health agencies to develop career ladders and other training program for nursing aides,” as a positive example.⁶⁰⁸

One aspect of the nursing home staffing shortage, at least with respect to nursing aides, is the result of an unforeseen consequence of a policy implemented under federal law that banned nursing homes issued a civil monetary penalty of \$10,000 or greater from training nursing aides for two years.⁶⁰⁹ This effectively prevents such nursing homes from training new staff, resulting in reliance on overtime by their current staff and hiring already-trained staff from other facilities. A bill was introduced in Congress in 2018 to rescind this ban upon a demonstration by a nursing home that all deficiencies for which the civil monetary penalty was assessed have been remedied.⁶¹⁰ The bill was reintroduced on February 14, 2019.⁶¹¹

Summary

Maintaining a caring and committed workforce is a major concern for the Commonwealth’s nursing homes, and the low compensation of nursing home staff, particularly nursing aides, is a significant contributor to staff turnover. Proposals in recent years would raise minimum wages to meet “livable” levels.

Pennsylvania does not appear to currently have a Medicaid wage pass-through requirement for long-term care workers.⁶¹² Medicaid wage pass-through legislation, tying increased Medicaid funding of nursing homes to increased wages for staff, has been used in numerous states since 1990, has been studied by academic health researchers, and appears to have some success in raising the wages of nursing home staff and cutting such facilities’ turnover. It should be noted however, that recent Medicaid rule changes promulgated by CMS may apply to or potentially impact state Medicaid wage pass-through policies. In 2017 CMS promulgated a final rule on Medicaid pass-through payments which effectively prevented increases in pass-through payments and the addition of new pass-through payments beyond those in place when the pass-through payment transition period was established in Medicaid managed care regulations effective July 5, 2016.⁶¹³ One November 14, 2018, the Trump Administration published proposed modifications to Medicaid managed care regulations mentioned above.⁶¹⁴ The proposed regulations indicated that CMS issued a letter to the nation’s Governors on March 14, 2017 stating that it was committed to a thorough review of the regulations regarding the above-mentioned

⁶⁰⁸ *Id.*

⁶⁰⁹ 42 U.S.C. § 1395i-3.

⁶¹⁰ Nursing Home Workforce Quality Act, H.R. 6986, 115th Cong. (2d Sess. 2018).

⁶¹¹ United States Congress, “All Actions – H.R. 1265 – 116th Congress (1st Sess. 2019),”

<https://www.congress.gov/bill/116th-congress/house-bill/1265>.

⁶¹² The Hospital and Healthsystem Association of Pennsylvania, “CMS’ Final Rule on Medicaid Pass-through Payments,” (Jan. 17, 2017), <https://www.haponline.org/Newsroom/News/ID/2183/CMS-Final>

⁶¹³ 42 CFR 438

⁶¹⁴ Federal Register Proposed Rules, Vol. 83, No. 220, (Nov. 14, 2018).

pass-through limitations and was prioritizing beneficiary outcomes and state priorities.⁶¹⁵ This may be an indication of yet another change in the rules moving in the near future.

To improve the training and career development opportunities in long-term care facilities, the Commonwealth could invest in a career ladder program available to nursing homes and other long-term care facilities to develop career ladders and other training programs for nursing aides as another way to help facilities attract more workers through improved work environment.

**Recommendation #10:
Reduce Restrictions on Mental Health Information Sharing and Improve Insurer
Compliance with Parity Law Requirements**

Like many other aspects of the health care system, the demand for mental health services is rapidly rising, while the supply of licensed psychiatrists is barely holding steady. In order increase the supply of psychiatrists to meet their increasing demand, Pennsylvania must discover new ways to attract and retain more psychiatrists. A few ways the Commonwealth can achieve this include reducing mental health information sharing restrictions and implementing stronger mental health parity laws.

Scope of Practice

A psychiatrist is one of several different types of mental health professionals who provide mental health services in the U.S. The National Alliance on Mental Illness (NAMI) provides a list of mental health practitioners that are generally qualified throughout the U.S. to provide guidance to treat the mental health of patients in varying degrees. NAMI's list includes psychologists, clinical social workers, psychiatrists, psychiatric or mental health nurse practitioners, and primary care physicians.⁶¹⁶

Psychiatrists are medical doctors who assess and treat mental, emotional, and behavioral illnesses through a combination of psychotherapy, psychoanalysis, hospitalization, and medication. Psychiatrists are the only professional that specialize in mental health and can also prescribe medications.⁶¹⁷ Psychiatrists must complete a four-year residency program after medical school.⁶¹⁸ Some psychiatrists also complete additional specialized fellowship training in sub-specialties such as child and adolescent

⁶¹⁵ *Id.*

⁶¹⁶ National Alliance of Mental Illness, "Types of Mental Health Professionals," (Aug. 2017), <https://www.nami.org/learn-more/treatment/types-of-mental-health-professionals>.

⁶¹⁷ United States Department of Health and Human Services, Health Resources and Services Administration, "Behavioral Health Workforce Projections, 2016-2030: Psychiatrists (Adult), Child and Adolescent Psychiatrists," HRSA Health Workforce, (2018), <https://bhw.hrsa.gov/sites/default/files/bhw/nchwa/projections/psychiatrists-2018.pdf>.

⁶¹⁸ Accreditation Council for Graduate Medical Education, "ACGME Program Requirements for Graduate Medical Education in Psychiatry," (2017), p. 1, https://www.acgme.org/Portals/0/PFAssets/ProgramRequirements/400_psychiatry_2017-07-01.pdf.

psychiatry, geriatric psychiatry, and forensic (legal) psychiatry.⁶¹⁹ In Pennsylvania, psychiatrists are licensed through the Pennsylvania State Board of Medicine or through the State Board of Osteopathic Medicine within the Pennsylvania Department of State.⁶²⁰

According to the U.S. Bureau of Labor and Statistics there were over 25,000 psychiatrists nationwide as of 2017. The bulk of psychiatrists are employed in physician offices, psychiatric and substance abuse hospitals, and general medical and surgical hospitals. States with the highest employment level of psychiatrists as of 2017 included New York, California, and Ohio.⁶²¹

Increasing Shortage of Psychiatrists

According to the *Journal of the American Medical Association (JAMA)*, more than one in five people suffer from some form of mental health condition.⁶²² Further, the *JAMA* reported in 2015 that the disease burden (the impact of a health problem as measured by financial cost, death rates, disability, and other measures) of mental health and substance use disorders was higher than that of any other health condition in the U.S.⁶²³ Based on survey data cited by the National Council for Behavioral Health (NCBH) on the population identifying a treatment need, the demand for psychiatry may outstrip supply by 6,090 to 15,600 psychiatrists in 2025.⁶²⁴ In 2018, the U.S. Health Resources and Services Administration (HRSA) reported that under one of its models, the psychiatrist shortfall could increase to 17,990 by 2030, while another model indicated the shortfall could increase to 21,150 by the same year.⁶²⁵

Further illustrating this point is the fact that, according to the NCBH, 77 percent of counties in the U.S. are underserved when it comes to mental health services.⁶²⁶

According to the National Council for Behavioral Health, 77 percent of counties in the U.S. are underserved when it comes to mental health services.

Further, “[t]he pool of psychiatrists working with

⁶¹⁹ American Psychiatric Association, “What is Psychiatry?” *supra* n. 822.

⁶²⁰ Pennsylvania Department of State, “State Board of Medicine,” (2019), <https://www.dos.pa.gov/ProfessionalLicensing/BoardsCommissions/Medicine/Pages/default.aspx>.

⁶²¹ United States Department of Labor, Bureau of Labor & Statistics, “Occupational Employment Statistics, May 2017,” <https://www.bls.gov/oes/2017/may/oes291066.htm>.

⁶²² Janet R. Cummings, *et al.*, “Geographic access to specialty mental health care across high- and low-income U.S. communities,” *Journal of American Medical Association Psychiatry* 74, No. 5 (May 2017): pp. 476-484, doi: 10.1001/jamapsychiatry.2017.0303, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5693377/>.

⁶²³ Cynthia Cox and Bradley Sawyer, “What Do We Know about the Burden of Disease in the U.S.?” Peterson-Kaiser Health System Tracker, (May 22, 2017), <https://www.healthsystemtracker.org/chart-collection/know-burden-disease-u-s/#item-start>.

⁶²⁴ National Council for Behavior Health, “The Psychiatric Shortage: Causes and Solutions,” *supra* n. 93 at p. 15.

⁶²⁵ United States Department of Health and Human Services, Health Resources and Services Administration, “Behavioral Health Workforce Projections, 2016-2030: Psychiatrists (Adult), Child and Adolescent Psychiatrists,” *supra*, n. 835.

⁶²⁶ National Council for Behavior Health, “The Psychiatric Shortage: Causes and Solutions,” *supra*, n. 93 at p. 6.

public sector and insured populations declined by ten percent from 2003-2013.”⁶²⁷ Pennsylvania is among numerous states in the U.S. struggling with a shortage of mental health professionals, only meeting 35.91 percent of its need.⁶²⁸ In fact, Pennsylvania is one of 43 states reporting a severe shortage of psychiatrists according to the NCBH.⁶²⁹ The NCBH attributes some of the shrinking pool of psychiatrists to a number of issues including aging of the current workforce, low rates of reimbursement, burnout, burdensome documentation requirements, and restrictive regulations around sharing clinical information necessary to coordinate care.⁶³⁰

Psychiatrists have been identified as being more prone to stress, burnout,⁶³¹ and even suicide than their counterparts in other medical disciplines.⁶³² This claim may not be surprising as psychiatrists have historically been identified as a particularly susceptible group due to the nature of their work and the populations they serve, consisting of highly distressed patients who may be traumatized, suicidal, homicidal, hostile, or unappreciative. A patient population such as this can leave clinicians feeling helpless, powerless, and depleted.⁶³³

Psychiatrists have also reported significantly higher levels of work-related exhaustion and severe depression than other physicians.

Psychiatrists have also reported significantly higher levels of work-related exhaustion and severe depression than other physicians.⁶³⁴ According to the NCBH, a study examining physicians experiencing burnout found an increase in psychiatrists

⁶²⁷ *Id.* at p. 5.

⁶²⁸ Henry J. Kaiser Family Foundation, “Mental Health Care Health Professional Shortage Areas (HPSAs),” (Dec. 31, 2017), <https://www.kff.org/other/state-indicator/mental-health-care-health-professional-shortage-areas-hpsas/?currentTimeframe=0&selectedRows=%7B%22states%22:%7B%22pennsylvania%22:%7B%7D%7D%7D&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D>.

⁶²⁹ National Council for Behavioral Health, “The Psychiatric Shortage: Causes and Solutions,” *supra* n. 93 at p. 15.

⁶³⁰ National Council for Behavior Health, “The Psychiatric Shortage: Causes and Solutions,” *supra* n. 93 at p. 18.

⁶³¹ The term “burnout” grew in popularity in the 1970s and has since been used to describe chronic exhaustion and decreased interest in work. Maslach and Associates developed the most widely used definition of the term, which describes burnout as emotional exhaustion, depersonalization, and lack of personal accomplishment. Christine Maslach is a social scientist and professor emerita at the University of California Berkeley known for her research on occupational burnout. - Eva Szigethy, “‘Burnout’: Strategies to Prevent and Overcome a Common – and Dangerous – Problem,” *Psychiatric Times*, (May 29, 2014), p. 1.

⁶³² Jesse Fischer *et al.*, “What makes psychiatry such a stressful profession? A qualitative study,” *Australian Psychiatry*, (Oct. 2007), p. 417.

⁶³³ Eva Szigethy, “‘Burnout’: Strategies to Prevent and Overcome a Common – and Dangerous – Problem,” *Psychiatric Times*, (May 29, 2014), p. 1.

⁶³⁴ *Id.*

experiencing burnout from 40 percent in 2011 to 48 percent in 2014.⁶³⁵ Burnout among psychiatrists is extremely prevalent in treating mental health disorders in the military.⁶³⁶

Restrictions on Mental Health Information Sharing

One of the key causes of low job satisfaction and high burnout within the psychiatric workforce is the regulatory restrictions on information sharing.⁶³⁷ According to the NCBH, confidentiality regulations regarding psychiatric information (related to both mental health and substance use disorders) have created substantial barriers to access psychiatric services and have impeded the ability for practitioners to share information.⁶³⁸ These regulations have contributed to frustrations among psychiatrists who often experience burnout. Regulatory barriers that result in restrictions on psychiatric information sharing are found at both the federal and state levels.

At the federal level, the Health Insurance Portability and Accountability Act (HIPAA) prescribes the minimum standard for maintaining the privacy of an individual's protected health information.⁶³⁹ HIPAA included administrative simplification provisions that required the U.S. Department of Health and Human Services (HHS) to issue the provisions for what is now known as the "Privacy Rule," which HHS published in December 2000 and subsequently modified in August 2002. The rule essentially sets national standards for protecting identifiable health information of individuals and sets limits and conditions on its use and disclosures without patient authorization by three types of covered entities: health plans, health care clearinghouses, and health care providers who conduct standard health care transactions electronically.⁶⁴⁰ The regulations also expressly state that "[w]here provided, the standards, requirements, and implementation specifications adopted under this subchapter apply to a covered entity's business associate."⁶⁴¹

The Privacy Rule protects all "individually identifiable health information" held or transmitted by a covered entity or its business associate, in any form or media, whether electronic, paper, or oral.⁶⁴² Individually Identifiable Health Information according to

⁶³⁵ National Council for Behavior Health, "The Psychiatric Shortage: Causes and Solutions," *supra* n. 93 at p. 18.

⁶³⁶ Kara K. Ballenger-Browning *et al.*, "Predictors of Burnout among Military Mental Health Providers," *Military Medicine*, (Mar. 2011), p. 253.

⁶³⁷ National Council for Behavior Health, "The Psychiatric Shortage: Causes and Solutions," *supra* n. 93 at pp. 17-18.

⁶³⁸ *Id.* at p. 39.

⁶³⁹ Health Insurance Portability and Accountability Act of 1996, PL 104-191, 110 Stat 1936.

⁶⁴⁰ HHS.gov, "HIPAA for Professionals," United States Department of Health and Human Services, <https://www.hhs.gov/hipaa/for-professionals/index.html>; HHS.gov, "Health Information Privacy," United States Department of Health and Human Services, <https://www.hhs.gov/hipaa/for-professionals/privacy/index.html>; 45 C.F.R. Part 160 *et seq.*

⁶⁴¹ 45 C.F.R. § 160.102(a)(1)-(3), (b).

⁶⁴² HHS.gov, "Health Information Privacy Summary of the HIPAA Privacy Rule," United States Department of Health and Human Services, <https://www.hhs.gov/hipaa/for-professionals/privacy/laws-regulations/index.html>.

HIPAA regulations is information that is a subset of health information,⁶⁴³ including demographic information collected from an individual, and:

- (1) Is created or received by a health care provider, health plan, employer, or health care clearinghouse; and
- (2) Relates to the past, present, or future physical or mental health or condition of an individual; the provision of health care to an individual; or the past, present, or future payment for the provision of health care to an individual; and;
- (3) Identifies the individual; or
- (4) With respect to which there is a reasonable basis to believe the information can be used to identify the individual.⁶⁴⁴

However, HIPAA permits disclosure of mental health information without a patient's consent if the covered entity is disclosing the information for the following purposes: disclosure to the individual (unless required for access or accounting of disclosures); disclosure for treatment, payment, and health care operations; disclosure pursuant to an agreement; disclosure for any reason incident to an otherwise permitted use and disclosure; disclosure for the public interest and benefit activities; and disclosure for limited data set for the purposes of research, public health, or health care operations.⁶⁴⁵

Another set of federal regulations regarding the protection of individual mental health information pertains specifically to confidentiality of substance use disorder patient records.⁶⁴⁶ This set of regulations sets a relatively high standard for the protection of substance use disorder information and is intended to prohibit the disclosure and use of such patient records without patient consent except under certain circumstances which include medical emergencies, research, and certain audits and evaluations.⁶⁴⁷ The protections provided under these regulations apply to federally assisted Part 2 programs which are a majority of the drug and substance abuse treatment centers.⁶⁴⁸ Exceptions to

⁶⁴³ Health Information is defined under 45 C.F.R. §160.103 as “any information, including genetic information, whether oral or recorded in any form or medium, that: (1) is created or received by a health care provider, health plan, public health authority, employer, life insurer, school or university, or health care clearinghouse; and (2) relates to the past, present, or future physical or mental health or condition of an individual; the provision of health care to an individual; or the past, present, or future payment for the provision of health care to an individual.

⁶⁴⁴ 45 C.F.R. § 160.103.

⁶⁴⁵ 45 C.F.R. § 164.502(a)(1); HHS.gov, “Health Information Privacy,” <https://www.hhs.gov/hipaa/for-professionals/privacy/laws-regulations/index.html>.

⁶⁴⁶ 42 C.F.R. Part 2.

⁶⁴⁷ 42 C.F.R. §§ 2.2(b), 2.51, 2.52, 2.53; John Petrila, “Clinical Practice and Information Sharing: HIPAA, State Confidentiality Laws and Other Legal Issues,” (Dec. 3, 2013), <http://www.pacenterofexcellence.pitt.edu/documents/HIPAA%20Harrisburg%20Presentation.pdf>.

⁶⁴⁸ 42 C.F.R. § 2.11.

these covered programs are the U.S. Department of Veterans Bureau and the U.S. Armed Forces.⁶⁴⁹

While federal laws like those listed above set the minimum standards for mental health information confidentiality, states are free to pass laws that are more restrictive. State laws generally tend to be more restrictive than HIPAA regulations in general, but are rarely stricter than the disclosure restrictions for substance abuse disorders.⁶⁵⁰ With respect to mental health records, Pennsylvania law provides that all documents regarding individuals in treatment shall be confidential and, without the individual's written consent, may not be released or their contents disclosed to anyone except: those providing treatment for the individual; the county administrator, pursuant to state law; a court in the course of legal proceedings authorized by state law; and pursuant to federal rules, statutes and regulations governing disclosure of patient information where treatment is undertaken in a federal agency.⁶⁵¹

Pennsylvania has stricter disclosure restrictions regarding drug and alcohol abuse health information than the federal provisions. For example, the Pennsylvania Drug and Alcohol Abuse Control Act (PDAACA) requires that:

All patient records (including all records relating to any commitment proceeding) ... shall remain confidential, and may be disclosed only with the patient's consent and only (i) to medical personnel exclusively for purposes of diagnosis and treatment of the patient or (ii) to government or other officials exclusively for the purpose of obtaining benefits due the patient as a result of his drug or alcohol abuse or drug or alcohol dependence except that in emergency medical situations where the patient's life is in immediate jeopardy, patient records may be released without the patient's consent to proper medical authorities solely for the purpose of providing medical treatment to the patient. Disclosure may be made for purposes unrelated to such treatment or benefits only upon an order of a court of common pleas after application showing good cause therefor.⁶⁵²

Unlike the federal regulations regarding drug and alcohol abuse health information, the PDAACA essentially requires a patient's consent to disclose such information and only allows disclosure without patient consent in an emergency medical situation where the patient's life is in immediate jeopardy. Aside from this scenario, a psychiatrist would have

⁶⁴⁹ 42 C.F.R. § 2.12.

⁶⁵⁰ John Petril, "Clinical Practice and Information Sharing: HIPAA, State Confidentiality Laws and Other Legal Issues," (Dec. 3, 2013), <http://www.pacenterofexcellence.pitt.edu/documents/HIPAA%20Harrisburg%20Presentation.pdf>.

⁶⁵¹ Act of July 9, 1976, (P.L. 817 No. 143); 50 P.S. § 7111(a)(1)-(4).

⁶⁵² 71 P.S. § 1690.108(b).

to obtain a court order permitting disclosure, which can leave a psychiatrist little option when attempting to coordinate care.⁶⁵³

According to the 2017 NCBH report, confidentiality regulations that are more restrictive for psychiatric information than for general medical information can have a harmful impact on psychiatrists and their work environment. Specifically, the report concluded that such restrictions make it less likely that general medical providers will have access to psychiatric assessments and recommendations regarding a patient, which can lead to duplicative and unnecessary psychiatric assessments. Consequently, health care providers are left with a substantial disincentive to add psychiatric services to their health care organization's services.⁶⁵⁴

In the midst of a growing opioid crisis, restrictive confidentiality regulations can also impede a psychiatrist's ability to obtain critical information about a patient in a timely manner, which could have life-threatening consequences for psychiatric patients. Since psychiatrists often spend a great deal of time building relationships with their patients, the inability to properly treat and help their patient due to regulatory barriers such as strict confidentiality regulations can and often does negatively impact their desire to stay within their area of practice.

The NCBH recommended revising state confidentiality regulations so that restrictions on mental health information are aligned more equally with general medical information in HIPAA and the regulations governing substance use disorder information under federal regulations.⁶⁵⁵ The lessening of restrictions on confidentiality regulations at the state level will also help reduce the barriers the regulations create to a timely exchange of electronic health records, which is critical for effective interventions and collaborations with others.⁶⁵⁶ Revising Pennsylvania's health information confidentiality laws, including the PDAACA, to be more aligned with HIPAA and federal regulations on substance abuse information could eliminate barriers to efficient coordinated care while still maintaining a reasonable level of patient confidentiality.

Lower Reimbursement Rates and Parity Law Enforcement

Another factor believed to contribute to the shortage of psychiatrists in the Commonwealth and nationwide is the continued undervaluing of mental health services through lower insurance reimbursement and more limited coverage, despite an increasing demand for services. According to a 2018 survey by the Cohen Veterans Network and the NCBH, more than 56 percent of 5,024 Americans surveyed indicated that they have sought or wanted to seek mental health services either for themselves or for a loved one, however,

⁶⁵³ *Id.*

⁶⁵⁴ National Council for Behavior Health, "The Psychiatric Shortage: Causes and Solutions," *supra* n. 93 at p. 39.

⁶⁵⁵ *Id.*

⁶⁵⁶ *Id.* at p. 33.

about three-quarters of this survey group stated there are access issues.⁶⁵⁷ Specifically, 42 percent pointed to cost or poor insurance coverage as being the largest hurdles to obtaining mental health services.⁶⁵⁸ Disparate insurance coverage of mental health disorders has been an issue in the U.S. for quite some time. Prior to the enactment of the Affordable Care Act of 2010, health insurers in the individual market regularly denied coverage to people with pre-existing conditions, including mental health and substance use disorders. When it came to mental health and substance use treatment, the coverage was more limited than that provided for other medical or surgical treatment – if it existed at all.⁶⁵⁹

The lack of mental health parity was recognized as a national problem over a decade ago and Congress sought to rectify it through federal legislation. With the promise of making both mental health and substance abuse treatment just as accessible as care for other physical health conditions, the U.S. enacted the federal law formally known as the Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008 (MHPAEA).⁶⁶⁰ In general, the MHPAEA was designed to prevent group health plans and health insurance issuers that provide mental health or substance use disorder benefits from imposing less favorable benefit limitations on those benefits than on other medical or surgical benefits. Prior to the passage of the MHPAEA, the Mental Health Parity Act of 1996 (MHPA) was enacted to prohibit large group health plans from imposing annual or lifetime dollar limits on mental health benefits that are less favorable than those limits imposed on other medical or surgical benefits. The MHPAEA essentially preserves the already in-place MHPA protections and adds significant new protections, most notably extending the parity requirements to substance use disorders.⁶⁶¹

Initially the MHPAEA was applied to group health plans and group health insurance coverage but was later amended by the Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010 (collectively referred to as the ACA), to apply to individual health insurance coverage.⁶⁶² The final rules of the MHPAEA were formally promulgated in 2013. Most pertinently, the final rules provide that any processes, strategies, evidentiary standards, and other factors used in managing mental health and substance abuse benefits must be comparable to, and applied no more stringently than, those used in managing other medical or surgical benefits.⁶⁶³

⁶⁵⁷ Cohen Veterans Network and National Council for Behavioral Health, “America’s Mental Health 2018,” (Oct. 10, 2018), p. 6, <https://www.cohenveteransnetwork.org/wp-content/uploads/2018/10/Research-Summary-10-10-2018.pdf>.

⁶⁵⁸ *Id.* at p. 18.

⁶⁵⁹ Dania Palanker, “Mental Health Parity at Risk,” National Alliance of Mental Illness, (May 2018), p. 5.

⁶⁶⁰ The Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008 enacted on October 3, 2008 as sections 511 and 512 of the Tax Extenders and Alternative Minimum Tax Relief Act of 2008 (Division C of Pub. L. 110-343); 29 U.S.C. §1185a.

⁶⁶¹ CMS.gov, The Ctr. for Consumer Information & Insurance Oversight, “The Mental Health Parity and Addiction Equity Act (MHPAEA),” https://www.cms.gov/cciiio/programs-and-initiatives/other-insurance-protections/mhpaea_factsheet.html.

⁶⁶² *Id.*

⁶⁶³ Final Rules under the Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008; Technical Amendment to External Review for Multi-State Plan Program, Fed. Reg. 68240, (Nov. 13, 2013) (to be codified at 45 C.F.R. Parts 146 and 147), <https://www.gpo.gov/fdsys/pkg/FR-2013-11-13/pdf/2013-27086.pdf>.

This also includes medical management standards, prescription drug formulary design, network adequacy, provider fee levels, and step therapies, among other processes. The foregoing standards and processes are known under the MHPAEA as nonquantitative treatment limitations (NQTLs).⁶⁶⁴ The U.S. Department of Health and Human Services (HHS) has jurisdiction over public sector group health plans and the U.S. Department of Labor and the U.S. Department of Treasury maintain jurisdiction over private group health plans.⁶⁶⁵ However, enforcement of the MHPAEA is largely left to each individual state, usually through their respective insurance departments or state-level parity laws. These state-level departments have to examine NQTLs to determine compliance with the MHPAEA by conducting a careful qualitative review of a plan's or health plan issuer's care management protocols. Due to the complexity of the NQTLs, competent clinical and legal professionals must conduct these reviews.⁶⁶⁶

Although the MHPAEA mandates a general equivalence in the way mental health or substance abuse disorder and other medical or surgical benefits are treated with respect to annual and lifetime dollar limits, financial requirements and treatment limitations, the MHPAEA does not require large group health plans or health insurance issuers to cover mental health/substance abuse disorder benefits. Moreover, the law's requirements apply only to large group health plans and health insurance issuers that choose to include mental health or substance abuse benefits in their benefit packages. The ACA, however, "builds on the MHPAEA and requires coverage of mental health and substance use disorder services as one of ten EHB [Essential Health Benefits insurance plans under the ACA] categories in non-grandfathered individual and small group plans."⁶⁶⁷

While there has been some progress made toward fulfilling the MHPAEA's goal of eliminating health insurance discrimination against those with mental health and substance use disorders, the current level of compliance with the MHPAEA is murky. According to the 2017 Milliman Research Report, there are still identifiable disparities in both out-of-network utilization and reimbursement rates for other medical or surgical providers in comparison to behavioral health providers. For example, the report highlighted that between 2013 and 2015, the proportion of inpatient facility services for behavioral health care that were provided out-of-network was 2.8 to 4.2 times higher than for other medical or surgical services. Moreover, the proportion of outpatient facility services for behavioral health care that were provided out-of-network was 3.0 to 5.8 times higher than for other medical or surgical services and proportion of behavioral office visits provided out-of-network was 4.8 to 5.1 times higher than for other medical or surgical primary care office visits.⁶⁶⁸

⁶⁶⁴ Stephen P. Melek *et al.*, Milliman Research Report, "Addiction and Mental Health vs. Physical Health: Analyzing Disparities in Network Use and Provider Reimbursement Rates," Mental Health Treatment and Research Institute LLC, (Dec. 2017), p. 1, <http://www.milliman.com/uploadedFiles/insight/2017/NQTLDisparityAnalysis.pdf>.

⁶⁶⁵ CMS.gov, "The Mental Health Parity and Addiction Equity Act (MHPAEA)," *supra* n. 661.

⁶⁶⁶ Mental Health Partnerships, "Insurance Equity in Pennsylvania – Parity = Equity = Fairness," <https://www.mentalhealthpartnerships.org/insurance-equity-pa/>.

⁶⁶⁷ CMS.gov, "The Mental Health Parity and Addiction Equity Act (MHPAEA)," *supra* n. 661.

⁶⁶⁸ Stephen P. Melek *et al.*, *supra* n. 664 at pp. 1-2.

Primary care providers were paid 20.7 percent to 22 percent higher rates for office visits than behavioral providers, while medical/surgical specialty care providers were paid 17.1 percent to 19.1 percent higher rates for other office visits than were behavioral health providers.

Regarding reimbursement rates, the Milliman Report found that between 2013 and 2015, primary care providers were paid 20.7 percent to 22 percent higher rates for office visits than behavioral providers, while medical/surgical specialty care providers were paid 17.1 percent to 19.1 percent higher rates for other office visits than were behavioral health providers.⁶⁶⁹ Further evidence supporting the notion that current rates offered by payers are significantly below the actual market value of the mental health services provided is that 40 percent of psychiatrists across the country have opted to run cash-only practices in order to avoid the low insurance reimbursement.⁶⁷⁰

These unequal patterns of coverage for individuals and reimbursement for psychiatrists are largely responsible for the fact that salaries for psychiatrists as a specialty profession are among the lowest when compared to other specialties. This has precipitated a steady stream of psychiatric unit closures due to an inability to recruit and retain psychiatrists.⁶⁷¹

While the concepts of the MHPAEA and its NQTLs are intimidating, it is important to note that parity of provider reimbursement rates for mental health services in and of themselves is not required under the MHPAEA. However, the MHPAEA does require process parity in the establishment of reimbursement rates, that is, the process by which the payer establishes the reimbursement rates for mental health services must be comparable to that of the process for other medical or surgical reimbursement rates.⁶⁷² The large disparities illustrated in the statistics above between mental health services and other medical or surgical services begs the question as to whether insurance companies and payers are complying with the MHPAEA, and further, whether or not state-level insurance departments are adequately enforcing the law's provisions.

Shortly after the MHPAEA was enacted, Pennsylvania adopted the language of the federal law into its own laws in 2010 under the Health Insurance Coverage Parity and Nondiscrimination Act (HICPN).⁶⁷³ It should also be noted that Pennsylvania also mandates minimum benefits for alcohol and substance use treatment under Pennsylvania Act 106. However, the interplay between Act 106 and the MHPAEA occurs when an individual has a plan that offers superior medical or surgical benefits than it does mental

⁶⁶⁹ *Id.* at p. 2.

⁶⁷⁰ National Council for Behavioral Health, "The Psychiatric Shortage: Causes and Solutions," *supra* n. 93 at p. 37.

⁶⁷¹ Stephen P. Melek *et al.*, *supra* n. 664 at p. 19.

⁶⁷² Tim Clement *et al.*, "The 'Six-Step' Parity Compliance Guide for Non-Qualitative Treatment Limitation (NQTL) Requirements," *Kennedy Forum Issue Brief*, (Sept. 2017), p. 86, <https://www.dol.gov/sites/default/files/ebsa/laws-and-regulations/rules-and-regulations/public-comments/faq-38/00018.pdf>.

⁶⁷³ Article VI-B of the Insurance Company Act of 1921 (P.L. 682, No. 284), added by the Act of March 2010 (P.L. 147, No. 14); 40 P.S. §§908-11 *et seq.*

health or substance use disorder benefits. So for example, Act 106 mandates coverage of 30 outpatient sessions for mental health/substance use disorder services. If an individual's plan covers 60 days of outpatient sessions for medical/surgical services, the MHPAEA would require the plan to also cover 60 outpatient sessions for mental health/substance use disorder services.⁶⁷⁴

Even with the HICPN in place, insurance companies in some cases are still not complying with the parity requirements. For example, a Pennsylvania Insurance Department Market Conduct Examination Report issued on November 5, 2018 found numerous violations of the HICPN by health insurer Aetna when it came to coverage for substance use disorder and autism.⁶⁷⁵ The Pennsylvania Insurance Department is authorized to conduct Market Conduct Examinations pursuant to the Pennsylvania Insurance Department Act.⁶⁷⁶ The Insurance Department found that Aetna "imposed a nonquantitative treatment limitation with respect to mental health benefits not in parity with medical/surgical benefits ... [and is] limiting the scope and duration of treatment for the noted claims in a manner that was applied more stringently than medical/surgical benefits within the classification."⁶⁷⁷ Aetna was fined for the parity violations along with certain other violations found in the report.⁶⁷⁸

While the Aetna examination is one example of Pennsylvania enforcing the mental health parity law requirements, Pennsylvania recently received an "F" grade for its laws on mental health coverage from Paritytrack.org. Paritytrack.org issued state report cards in October 2018 in light of the ten year anniversary of the passage of the MHPAEA. For its "F" grade, Pennsylvania scored 55 points out of 100. However, Pennsylvania was not alone, as 31 other states received failing grades for their mental health coverage.⁶⁷⁹ As studies have shown, the federal adoption of the MHPAEA is insufficient to fully address the unequal treatment of mental health services when it comes to coverage and reimbursement rates. The complexity of the MHPAEA's requirements have led many states to struggle with its enforcement. If the status quo remains, physicians will continue to avoid practicing in the field of psychiatry and the psychiatrist supply may continue to dwindle in the face of growing demand.

Pennsylvania has taken some steps to improve the implementation and enforcement of its mental health parity law. For instance, Pennsylvania participated in the federal government's Commercial Parity Policy Academy, designed to help states better protect

⁶⁷⁴ Article VI-B of the Insurance Company Act of 1921 (P.L. 682, No. 284), added by the Act of December 22, 1989 (P.L. 755, No. 106), referred to as Act 106.

⁶⁷⁵ Pennsylvania Insurance Department, Bureau of Market Actions Life and Health Division, "Market Conduct Examination Report of Aetna Health Insurance Company," (Nov. 5, 2018), pp. 69-70, https://www.insurance.pa.gov/Regulations/Regulatory%20Actions/Documents/Current%20Market%20Conduct/Aetna_FinalExamReport_01042019.pdf.

⁶⁷⁶ 40 P.S. §§ 323.3 - 323.4.

⁶⁷⁷ Pennsylvania Insurance Department, Bureau of Market Actions Life and Health Division, Market Conduct Examination Report of Aetna Health Insurance Company, *supra* n. 675.

⁶⁷⁸ *Id.*

⁶⁷⁹ Pennsylvania Watchdog, "By the numbers: Pennsylvania gets "F" for its laws on mental health coverage," (Nov. 15, 2018), https://www.watchdog.org/pennsylvania/by-the-numbers-pennsylvania-gets-f-for-its-laws-on/article_37c589b0-e8fa-11e8-9bee-b3f67617fe12.html.

consumers through enforcement of federal laws requiring parity between insurance coverage of mental health and substance use disorders and physical health coverage.⁶⁸⁰ The Pennsylvania Insurance Department has also issued online resources designed to educate citizens on their rights under the mental health parity laws.⁶⁸¹

To further address this issue, the General Assembly should continue to support the enforcement efforts of the Commonwealth's Insurance Department of its parity laws. In addition, the General Assembly should require transparency from insurers about how they are establishing and applying their NQTLs. To acquire this transparency, the Commonwealth should specifically require insurance companies to submit annual reports to the Pennsylvania Insurance Department detailing the processes used to determine coverage for mental health treatment and medical and surgical treatment. For example, the report should provide a comprehensive description of the process and methods used to develop the medical necessity criteria for mental health benefits and substance use disorder treatment, as well as the process and methods used to develop such criteria for medical and surgical treatment. Moreover, Pennsylvania should also require that this report provide the process and methods utilized by the insurer to determine reimbursement rates for mental health treatment, substance use disorder treatment, and medical and surgical treatment. Requiring this level of transparency from the insurers will assist the Commonwealth in policing insurers' compliance with the mental health parity requirements.

Several states have already passed similar transparency legislation in relation to the MHPAEA. In August 2018, the state of Delaware enacted mental health parity legislation that, among other things, mandates certain reporting requirements that allow the state to determine if health insurers and Medicaid managed care organizations are applying treatment limitations for mental health and substance abuse services equally to medical/surgical services. The law requires that health insurance carriers file an annual report containing a description of the process used to develop or select the medical necessity criteria for mental illness and drug and alcohol dependency benefits and the process used to develop or select the medical necessity criteria for medical and surgical benefits, along with other processes utilized by the carriers to comply with the MHPAEA.⁶⁸² Similar legislation has also been enacted in New York, Colorado, Illinois, and Tennessee.⁶⁸³

In addition to annual reporting requirements, Pennsylvania should also continue to publish materials educating the public on their right to mental health parity under federal and state laws, as well as continue to invest in the proper training of enforcement officials at the Pennsylvania Insurance Department.

⁶⁸⁰ PA Pressroom, "Wolf Administration Strengthening Mental Health and Substance Use Disorder Insurance Protection through Federal Training on Parity Compliance," (Mar. 8, 2017), <https://www.media.pa.gov/Pages/Insurance-Details.aspx?newsid=229>.

⁶⁸¹ The Hospital & Healthsystem Assoc. of PA Newsroom, "Mental Health Parity a Priority for State Insurance Department," (June 28, 2016), <https://www.haponline.org/Newsroom/News/ID/1810/Mental-Health-Parity-a-Priority-for-State-Insurance-Department>.

⁶⁸² Delaware S.B. 230, 149th General Assembly (2017-2018); 18 Del. C. § 3343.

⁶⁸³ Linda M. Richmond, "Five States Pass Parity Reporting Laws," *Psychiatric News*, <https://psychnews.psychiatryonline.org/doi/full/10.1176/appi.pn.2018.8b8>.

Summary

Pennsylvania should invest some of its efforts into better attracting and retaining physicians who specialize in psychiatry. As mentioned above, one way to accomplish this is to revise its health information confidentiality laws, including the PDAACA, to be more aligned with HIPAA and other federal regulations. Doing so can help eliminate barriers to efficient coordinated care while still maintaining a reasonable level of patient confidentiality and as a result will reduce some of the frustrations many psychiatrists face when treating patients that lead to burnout. In addition, Pennsylvania should address the inequities facing psychiatrists and their patients regarding mental health treatment coverage and reimbursement rates. To address these issues, the Commonwealth should consider strengthening mental health parity by requiring health insurers to report the processes they engage in when determining coverage and reimbursement rates to ensure compliance with the MHPAEA's parity requirements.

Pennsylvania courts “have historically been reluctant to enforce contracts that place restraints on trade or the ability of an individual to earn a living, however, post-employment non-competition covenants are not *per se* unreasonable or unenforceable.”

Recommendation #11: Reduce Restrictions Permitted under Physician Non-Compete Agreements

Restrictions under Non-Compete Agreements

Another important issue worth briefly mentioning in this report is the existence of physician non-competes. Non-competes generally limit a physician's right to compete within his or her employer's industry for a specified period of time and in a specified geographical location following the termination of the physician's employment. Pennsylvania courts “have historically been reluctant to enforce contracts that place restraints on trade or the ability of an individual to earn a living, however, post-employment non-competition covenants are not *per se* unreasonable or unenforceable.”⁶⁸⁴ To be enforceable, such agreements or clauses must, at a minimum, “be reasonably related to the protection of a legitimate business interest.”⁶⁸⁵

Pennsylvania Courts' View on Non-Compete Agreements

Types of interests that have been recognized as “legitimate business interests” by Pennsylvania courts include trade secrets or confidential information, unique or extraordinary skills, customer good will, and investments in an employee specialized training program.⁶⁸⁶ A specific example of a legitimate business interest can be found in the case of *WellSpan Health v. Bayliss* where the court held that protecting its patient

⁶⁸⁴ *Hess v. Gebhard & Co., Inc.*, 808 A.2d 912, 917-18 (Pa. 2002).

⁶⁸⁵ *Id.* at 918.

⁶⁸⁶ *Id.* at 920.

population was a protectable interest for a hospital.⁶⁸⁷ Once a protectable business interest is adequately identified, the court must weigh the interests of the employer against the employee's interests.⁶⁸⁸ In doing so, Pennsylvania courts have applied a balancing test analysis examining whether a covenant is reasonably necessary to protect the employer's interest and whether the restrictions imposed by the agreement are geographically and temporally limited in scope.⁶⁸⁹

When applying this test, courts do not always review the broader interest of the public; however courts have agreed that "the interests of the public are of paramount importance in the context of non-competition covenants for physicians."⁶⁹⁰ Moreover, the Pennsylvania Supreme Court has made it clear that the courts will undertake a "close judicial scrutiny" of non-competition agreements involving physicians because of the value of their services to the public.⁶⁹¹

One example of this can be found in the court's decision in the Pennsylvania Superior Court case of *New Castle Orthopedic Association v. Burns*. In this case, evidence of long delays experienced by patients who attempted to obtain appointments for orthopedic services resulted in the court concluding that there was a shortage of orthopedic specialists in the geographic area.⁶⁹² As such, this was the major factor in the court's decision to reverse the grant of a preliminary injunction against an orthopedic physician-surgeon regarding a non-compete agreement.⁶⁹³

In the court case of *West Penn Specialty MSO, Inc. v. Nolan*, the court held that the public interest analysis of non-competition covenants involving physicians necessitates a determination of the "quantitative sufficiency of physicians practicing in the restricted area"⁶⁹⁴ In other words, if the patient demand in the geographical region in question exceeds the ability of appropriately trained physicians to provide expeditious treatment, then the public interest predominates over the right of the employer to enforce a non-competition agreement by injunction.⁶⁹⁵ The *West Penn* court drew attention to the presence of numerous oncologists in the area and no evidence of a shortage of oncology services in affirming a grant of a preliminary injunction to enforce a non-compete agreement against an oncologist.⁶⁹⁶

Despite the additional analysis of "quantitative sufficiency of physicians practicing in the restricted area" of a non-compete agreement, many physicians believe that such agreements are ultimately bad for the practice of medicine in Pennsylvania and result in the creation of geographical barriers that "disregard the core of the patient-physician

⁶⁸⁷ *WellSpan Health v. Bayliss*, 869 A.2d 990 (Pa. Super. 2005).

⁶⁸⁸ *Hess*, *supra* n. 684 at 917.

⁶⁸⁹ *Insulation Corporation of America v. Brobston*, 667 A.2d 729, 733-34 (Pa. Super. 1995).

⁶⁹⁰ *New Castle Orthopedic Assoc. v. Burns*, 392 A.2d 1383, 1385 (Pa. 1978).

⁶⁹¹ *Id.*

⁶⁹² *Id.*

⁶⁹³ *Id.* at 1387.

⁶⁹⁴ *West Penn Specialty MSO, Inc. v. Nolan*, 737 A.2d 295, 300-01 (Pa. Super. 1999).

⁶⁹⁵ *Id.*

⁶⁹⁶ *Id.*

relationship.”⁶⁹⁷ Further, such agreements can be a “threat to access, continuity, and the protection of patients’ rights to be cared for by a physician they know and trust.”⁶⁹⁸ On the other hand, many hospital administrators and even some physicians understand why hospitals in more populous areas might want to keep young physicians from leaving for their competition.⁶⁹⁹

Other States’ Restrictions on Non-Compete Agreements

Several states have enacted legislation severely restricting non-compete agreements on physicians. Rhode Island enacted legislation in July 2016 that largely rendered physician non-compete agreements void and unenforceable.⁷⁰⁰ The law specifically prohibits numerous types of limitations on a physician’s right to practice medicine in any employment agreement such as geographical limitations, a physician’s right to treat, advise, consult, or establish a physician-patient relationship with any current patient of the employer, and limitations on a physician’s right to solicit or establish a physician-patient relationship with any current patient of the employer.⁷⁰¹ The law does allow non-compete language for the purchase and sale of a physician practice, so long as the restriction is for no more than five years.⁷⁰²

Connecticut passed legislation limiting the duration of a physician non-compete agreement to one year and the geographical scope to no more than 15 miles from the primary site where such physician practices.⁷⁰³ Further, the law provides that such agreements are unenforceable if the employer terminates the physician’s employment without cause.⁷⁰⁴ In 2017, the state of West Virginia enacted legislation called the Physicians Freedom of Practice Act (FPA) which limited a physician non-compete agreement to no more than one year in duration and no more than 30 road miles from the physician’s primary place of practice with the employer.⁷⁰⁵ The FPA also renders non-compete agreements void and unenforceable upon the termination of the physician’s employment by the employer with or without cause.⁷⁰⁶

Summary

While non-compete agreements in many cases protect reasonable business interests, the Commonwealth should consider taking a limited regulatory approach on

⁶⁹⁷ Pennsylvania Medical Society, “Keeping Physicians Away from the Competition: Pennsylvania Perspectives on Non-Compete Clauses,” <https://www.pamedsoc.org/detail/article/Non-Compete-Clauses>.

⁶⁹⁸ *Id.*

⁶⁹⁹ *Id.*

⁷⁰⁰ R.I. Gen. Laws 1956 § 5-37-33.

⁷⁰¹ R.I. Gen. Laws 1956 § 5-37-33(b)(1)-(3).

⁷⁰² R.I. Gen. Laws 1956 § 5-37-33(c).

⁷⁰³ C.G.S.A. § 20-14p(b)(2).

⁷⁰⁴ *Id.*

⁷⁰⁵ W. Va. Code § 47-11E-2(a)(1)-(2).

⁷⁰⁶ W. Va. Code § 47-11E-2(c).

limiting the restrictions of non-compete agreements for physicians. For example, the General Assembly could follow Connecticut and West Virginia's lead by creating a bright line limitation on the geographical and temporal scope of valid non-compete agreements pertaining to physicians. Such limitations may help provide clarity for physicians practicing within Pennsylvania and may help alleviate the shortage of physicians in health care facilities in both rural and underserved areas of the Commonwealth.

Recommendation #12: Improve Health Care Workforce Data Collection and Analysis

Reiterating a key recommendation from the Commission's 2015 report, *The Physician Shortage in Pennsylvania*, Pennsylvania must continue to work on improving its own health care workforce data collection and analysis if it wants to effectively address its workforce needs.⁷⁰⁷ A longstanding barrier to increased strategic health care workforce planning efforts is a lack of sufficient basic data on the activities performed by health professionals.⁷⁰⁸ While claims data can provide useful information on the services provided by physicians and some allied health professionals, the efforts of other health professionals are practically invisible in most federal data sets.⁷⁰⁹ Many federal and state programs rely on the U.S. Health Resources and Services Administration (HRSA) designations (HPSA, MUA, and MUP) to determine eligibility. Academic researchers also often rely on HRSA designations and data from HRSA. While widely used, the HRSA designations are not complete measures of workforce shortages. In fact, the HRSA projections are just that – projections based on models.⁷¹⁰

Current Workforce Projections and Models

Current workforce forecasts like recent HRSA projections have been based on historical data, and thus have estimated future supply and demand as if past patterns of utilization, graduations, and decisions to work would continue to prevail."⁷¹¹ However, such patterns do not always persist, as was the case with HRSA's 2002 projections that forecasted a substantial RN shortage.⁷¹² As such, forecasts like the HRSA projections often vary significantly from other workforce forecast models as evidenced in nurse workforce projections mentioned previously in this report. In addition to HRSA data, many academic researchers also utilized data collected by the American Medical Association (AMA), the Association of American Medical Colleges (AAMC), and the Bureau of Health Planning to address the issue of physician shortages. The AMA, the AAMC, and the Bureau of

⁷⁰⁷ JSGC, "The Physician Shortage in Pennsylvania," *supra* n. 63 at p. 23.

⁷⁰⁸ Institute of Medicine, "The Future of Nursing: Leading Change, Advancing Health," (2011), Washington DC: The National Academies Press, p. 261, <https://www.ncbi.nlm.nih.gov/books/NBK209866/>.

⁷⁰⁹ *Id.* at pp. 261-62.

⁷¹⁰ JSGC, "The Physician Shortage in Pennsylvania," *supra* n. 57 at p. 23.

⁷¹¹ Joanne Spetz, "Too Many, Too Few, or Just Right? Making Sense of Conflicting RN Supply and Demand Forecasts," *Nursing Economics*, (May-Jun. 2015), p. 176.

⁷¹² *Id.*

Health Planning rely on surveys, which are not always reliable methods of data collection.⁷¹³

Many of these methods often “focus on single professions, typically assuming the continuation of current practice and utilization patterns.”⁷¹⁴ In addition, there are major gaps within the available data on the health care workforce. For instance, health care workforce data in many cases are still lacking the specific numbers and types of health professionals currently employed, where they are employed, and in what roles they are employed.⁷¹⁵

Aside from lacking specificity, much of the research on the health care workforce used to inform policy deliberations is also fragmented and dominated by historical debates over what numbers of a particular health profession are necessary.⁷¹⁶ An example of this kind of workforce data found at the state level is the Pennsylvania Department of Labor and Industry’s Center for Workforce Information and Analysis (CWIA). As mentioned previously, CWIA prepares short-term industry forecasts in an effort to anticipate changes in employment within an industry over a two-year period. CWIA’s forecasts are revised every year to incorporate economic changes that occur across the country and within the Commonwealth.⁷¹⁷ Like HRSA data, CWIA workforce data are projections based on modeling. CWIA workforce data does not provide each individual health care profession’s geographical distribution and specialty distribution, retention numbers, practice settings, and other important workforce-related data.

While it is undeniable that the aforementioned forecast models serve an important purpose in reviewing potential trends in the Commonwealth’s health care workforce, forecasts such as these should be treated cautiously and used as guides to policy rather than definitive future outcomes. To improve forecasts and models to help the Commonwealth address its health care workforce’s long term needs, it must be able to obtain more accurate information about its workforce by improving its workforce data collection and analysis.

Independent State Agency Data Collection

One way to accomplish improved workforce data collection and analysis recommended by *The Physician Shortage in Pennsylvania* report in 2015, and reiterated by the Commission staff in this report, is to create an entity as an independent body or within an appropriate department or agency, to collect and analyze additional data. The data to be collected and analyzed by this entity should include:

⁷¹³ JSGC, “The Physician Shortage in Pennsylvania,” *supra* n. 57 at p. 23.

⁷¹⁴ Institute of Medicine, “The Future of Nursing: Leading Change, Advancing Health,” *supra* n. 708 at p. 260.

⁷¹⁵ *Id.* at p. 259.

⁷¹⁶ *Id.* at p. 260.

⁷¹⁷ Pennsylvania Department of Labor and Industry, Center For Workforce Information & Analysis, <http://www.workstats.dli.pa.gov/Products/ShortTermIndustryForecasts/Pages/default.aspx>.

- Each individual health care profession’s workforce, including the number of members in that workforce currently practicing in Pennsylvania, the geographic distribution, and the specialty distribution of those members.
- The current and future demand for each individual health care profession, using both existing and proposed models of health care delivery.
- The demographics of each individual health care profession, as well as of the populations served.
- The retention of trainees as they move through the pipeline, from kindergarten through residency training, by specialty, geographic location, practice setting, and the demographics of the populations they serve.
- Workforce programs in the Commonwealth, including their funding and their impacts on each individual health care profession.⁷¹⁸

Such additional and specific data points would provide much needed assistance to the Commonwealth in evaluating its health care workforce needs in general.

Summary

In order to strengthen its health care workforce, the Commonwealth has to do more to improve its workforce data collection and analysis. Creating an entity as an independent body or within an appropriate department or agency tasked with the responsibility to generate comprehensive health care workforce data collection and analysis may be the solution for improved and localized data collection.

While the Commonwealth does provide certain health care workforce reports within the Pennsylvania Department of Health, these reports are limited in to a select number of health professions including licensed practical nurses, registered nurses, physicians, physician assistants, dentists, and dental hygienists, and are only prepared every two years. Consequently, the Commonwealth is left to rely heavily on less precise national data projections from HRSA and CWIA. Efforts to localize expanded data collection and analysis within the Commonwealth will lead to more accurate and complete workforce projections and will ultimately increase state legislators’ ability to address health care workforce needs of Pennsylvania.

⁷¹⁸ JSGC, “The Physician Shortage in Pennsylvania,” *supra* n. 63 at p. 23.

Other Considerations

In addition to the other topics and needs identified throughout this report, the following health care workforce topics are important and ultimately worth a brief mention.

Change of Venue for Medical Malpractice Claims

Almost two decades ago, Pennsylvania was facing a health care crisis in large part due to costly medical malpractice lawsuits. The Commonwealth was not alone however, as the U.S. saw a rapid growth in insurance premiums in the mid-1970s and 1980s due to rising malpractice claims causing many malpractice carriers to exit the market. By 2003, the median increase in malpractice premiums across the country ranged from 15 to 30 percent. Premium increases in Pennsylvania by 2003 were even worse, ranging from 26 to 73 percent.⁷¹⁹

Philadelphia plaintiffs were more than twice as likely to win jury trials as the national average and over half of the awards of record in these cases were for \$1 million or more.

The Commonwealth enacted the Medical Care Availability and Reduction of Error (MCARE) Act in 2002, which had a largely positive impact on the practice of medicine but also had the

effect of expanding the scope of existing venue rules.⁷²⁰ Recognizing the expanding scope of the venue rule as a problem, the Pennsylvania Supreme Court sought to reestablish balance and fairness within medical malpractice litigation and promulgated new rules of civil procedure which effectively limited venue to the county in which the cause of action arose for medical malpractice lawsuits.⁷²¹ This limitation on venue was designed to prevent the practice of venue shopping by trial lawyers litigating medical malpractice claims. Venue shopping refers to a litigant's ability to move a court case to a court that has been historically more favorable to plaintiffs. For example, in the late 1990s and early 2000s, many malpractice cases were transferred to the County of Philadelphia because Philadelphia plaintiffs were more than twice as likely to win jury trials as the national average and over half of the awards of record in these cases were for \$1 million or more.⁷²²

While medical liability court case filings have exhibited a fairly consistent trend over the past several years, they remain relatively low in comparison to the reported filings data in the years prior to the venue rule change. For example, the Unified Judicial System of Pennsylvania released data on medical malpractice case filings between 2000 and 2017 which show that in Pittsburgh's home county of Allegheny, an average of 396 malpractice cases were filed between 2000 and 2002, while in Philadelphia County, an average of 1,204 malpractice cases were filed between the same years. Moreover, the court's data show that

⁷¹⁹ Kenneth E. Thorpe, "The Medical Malpractice 'Crisis': Recent Trends and the Impact of State Tort Reforms," *Health Affairs* 23, no. Suppl. 1 (Jan. 21, 2004): W4-20, doi: 10.1377/hlthaff.W4.20.

⁷²⁰ Act of March 20, 2002, (P.L. 154, No. 13), 40 P.S. §§ 1303.101 *et seq.*

⁷²¹ Pa. R. Civ. P. 1006(a.1).

⁷²² Randall R. Bovbjerg and Anna Bartow, "Understanding Pennsylvania's Medical Malpractice Crisis," Pew Project on Medical Liability, (2003), p. 3.

after implementation of the 2002 venue change rule, Allegheny County had 272 malpractice filings in 2003, while Philadelphia County had only 577 filings for the same year. In 2017, Allegheny County had 224 malpractice filings, while Philadelphia County had 406 filings for the same year.⁷²³

It is important to note that the change in venue rule alone is not the only factor that has led to reduced filings of malpractice claims. According to the Pennsylvania Medical Society, a number of other factors have contributed to a general reduction in medical malpractice claims such as the rising cost of litigation, an increase in the use of alternate dispute resolution methods, and Medicare's requirement that plaintiffs obtain a certificate of merit from an expert establishing that the medical procedures in the case at issue fell outside of acceptable industry standards.⁷²⁴ While the venue change rule is not the sole reason for the decrease in malpractice filings in plaintiff-favored jurisdictions like Philadelphia and Pittsburgh, the venue change rule likely helped to lower the number of case filings.

Currently, the limitation on venue in medical malpractice cases mentioned above is still the law in Pennsylvania, however, the Pennsylvania Supreme Court Civil Procedural Rules Committee (CPRC)⁷²⁵ recently published a notice in the Pennsylvania Bulletin stating that it is considering a roll-back of restrictions on venue for medical malpractice cases within the Pennsylvania Rules of Civil Procedure (Pa. R. C. P.).⁷²⁶ In particular, the CPRC's proposed amendment would eliminate the requirement that medical professional liability actions be brought against a health care provider only in a county in which the cause of action arose, essentially opening the doors again for the venue shopping tactics of the past.⁷²⁷

A 2019 Milliman Research Report examining the potential impact of the amendment proposed by the CPRC found that the proposed venue rule change could result in a 15.3 percent increase in the current statewide medical malpractice liability costs.⁷²⁸ The report also indicated that some unintended consequences of the rule change could

⁷²³ The Unified Judicial System of Pennsylvania, "Pennsylvania Medical Malpractice Case Filings: 2000-2017," (Sept. 20, 2018), <http://www.pacourts.us/assets/files/setting-771/file-7457.pdf?cb=99a891>.

⁷²⁴ Pennsylvania Medical Society, "Pennsylvania's Medical Liability Statistics for 2017: A Closer Look," (Dec. 4, 2018), <https://www.pamedsoc.org/list/articles/medical-liability-statistics>.

⁷²⁵ The Unified Judicial System of Pennsylvania, "Civil Procedural Rules Committee," (Feb. 11, 2019), <http://www.pacourts.us/courts/supreme-court/committees/rules-committees/civil-procedural-rules-committee>. The Civil Procedural Rules Committee was originally established by the Supreme Court of Pennsylvania in 1937 and is currently the oldest of the Supreme Court's rules committees. The committee assists the Supreme Court in the preparation, revision, publication, and administration of the Pennsylvania rules of civil procedure.

⁷²⁶ Supreme Court of Pennsylvania Civil Procedural Rules Committee, "Notice of Proposed Rulemaking Proposed Amendment of Pa. R. C. P. Nos. 1006, 2130, 2156, and 2179," <http://www.pacourts.us/assets/uploads/Resources/Documents/Proposed%20Amendments%20of%20PaRCP%20Nos%201006%202130%202156%20and%202179%20-%20007481.pdf?cb=64836>.

⁷²⁷ *Id.* at p. 2.

⁷²⁸ Thomas Ryan and Carissa Lorie, "Review of Proposed Amendment of Pennsylvania Rules of Civil Procedure Nos. 1006, 2130, 2156, and 2179: Governing Venue in Medical Professional Liability Actions in Pennsylvania," *Milliman Research Report*, (Feb. 20, 2019), p. 5.

include reduced availability of insurance coverage within the Commonwealth as well as an adverse effect on self-insured health care entities.⁷²⁹ The conclusions provided within the Milliman report were based on publically available data.⁷³⁰

Recognizing the potential impact on and potential unintended consequences associated with the change on Pennsylvania's decade long reduction of medical malpractice claims, Pennsylvania Senate Resolution 20 of 2019 (SR 20) directs the Legislative Budget and Finance Committee (LBFC) to conduct an analysis of the impact of the original change brought about by the medical malpractice venue rules currently in place. The resolution also directs the LBFC to study the potential impact of the CPRC's proposal to amend the current venue rules. Furthermore, SR 20 requires the LBFC to hold at least one public hearing and to provide the General Assembly with a final report by January 1, 2020. SR 20 also requests that the CPRC delay action on the proposed venue amendment to the Pa. R. C. P.'s until the LBFC submits its report to the General Assembly.⁷³¹ The resolution was adopted on February 5, 2019.⁷³²

Changing Landscape of the Dental Field

Dentists are the health care professionals who specialize in the prevention, diagnosis, and treatment of diseases of the mouth and teeth.⁷³³ To become a licensed dentist in the Commonwealth, one must complete four years of dental school at an institution accredited or provisionally accredited by the Commission on Accreditation of the American Dental Association.⁷³⁴ A dental school graduate must also pass the National Board Dental Examination and the dental clinical examination, administered by one of five proctoring organizations.⁷³⁵ Dentists must renew their license biennially.⁷³⁶

Although there are certainly other valuable members of the dental health care team – dental assistants and dental hygienists, for instance – this section of the report will focus on dentists. Pennsylvania has 7,565 actively practicing dentists as of October 2018, according to the Kaiser Family Foundation, which sourced its data from the American Dental Association.⁷³⁷ According to data from the Centers for Disease Control and Prevention (CDC), the number of dentists in the Commonwealth has slightly decreased

⁷²⁹ *Id.* at p. 11.

⁷³⁰ *Id.* at p. 12.

⁷³¹ Pennsylvania S.R. 20, P.N. 155 (Sess. of 2019).

⁷³² Pennsylvania General Assembly, "Bill Information,"

<https://www.legis.state.pa.us/cfdocs/billInfo/billInfo.cfm?sYear=2019&sInd=0&body=S&type=R&bn=0020>
<https://www.legis.state.pa.us/cfdocs/billInfo/billInfo.cfm?sYear=2019&sInd=0&body=S&type=R&bn=20>

⁷³³ 63 P.S. § 121.

⁷³⁴ 49 Pa. Code § 33.102(a)(1).

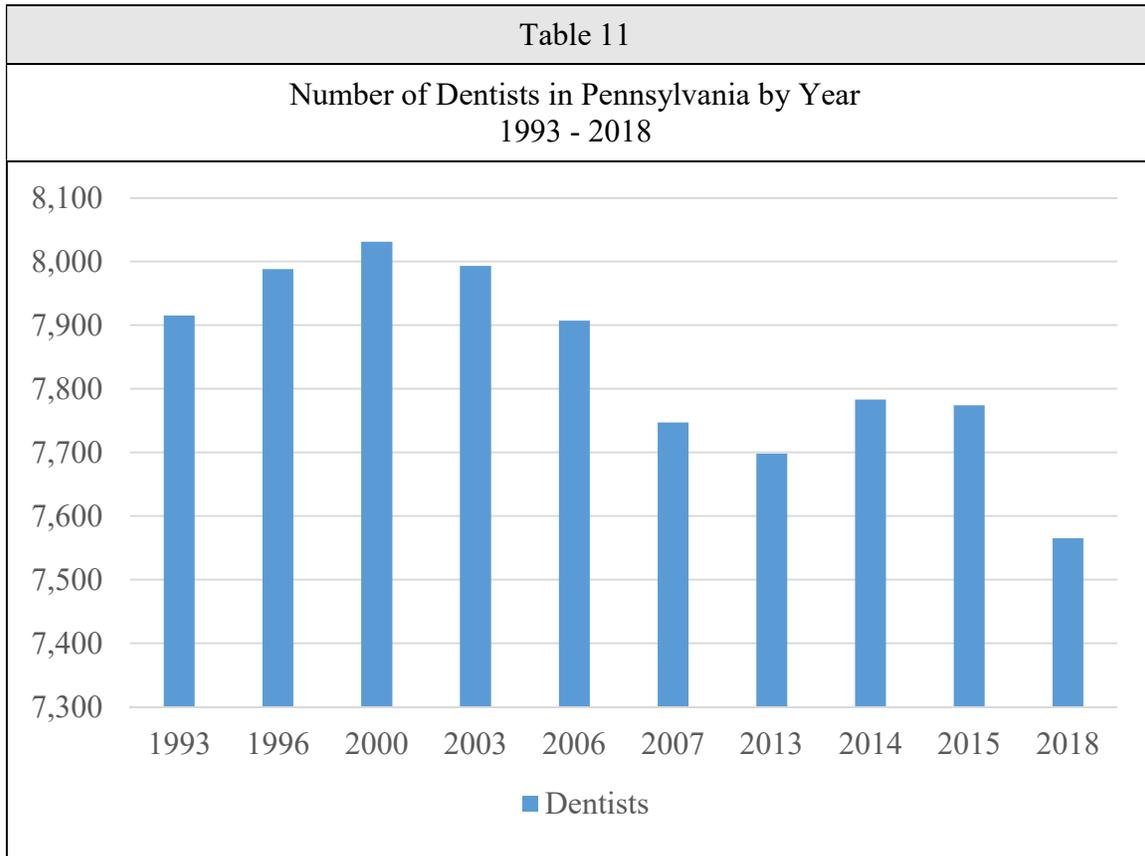
⁷³⁵ 49 Pa. Code § 33.103(a).

⁷³⁶ 49 Pa. Code § 33.105(a).

⁷³⁷ Kaiser Family Foundation, "State Health Facts – Professionally Active Dentists," (Oct. 2018),

<https://www.kff.org/other/state-indicator/total-dentists/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D>.

between 1993 and today, with roughly 500 fewer dentists in practice today than at the peak in 2000.⁷³⁸ See Table 11.



Source: JSGC Staff from data compiled from the CDC (1993-2007, 2013-2015) and the Kaiser Family Foundation (2018).

The number of dentists in Pennsylvania per 100,000 people had declined from 66 in 1993 to 62 in 2007, but was still above the national average of 60.⁷³⁹ Other data from the CDC, examining the period 2001-2015, indicated that the number of dentists in Pennsylvania per 100,000 people in 2013, 2014, and 2015 was 60.22, 60.83, and 60.72, respectively, while the national average had increased by 2015 to 60.89 dentists per 100,000 people.⁷⁴⁰

The Pennsylvania Department of Health’s (DOH) *2015 Pulse of Pennsylvania’s Dentist and Dental Hygienist Workforce* report breaks down the number of Pennsylvania dentists by county of primary practice. As part of the licensure renewal process, the DOH sent out a detailed survey to be completed by Pennsylvania-licensed dentists. Of the 9,479 Pennsylvania-licensed dentists who received the survey, 7,590 responded, of whom 5,987

⁷³⁸ United States Centers for Disease Control and Prevention, “Active Dentists, By State: United States, Selected Years 1993-2007,” <https://www.cdc.gov/nchs/data/hus/2010/109.pdf>.

⁷³⁹ *Id.*

⁷⁴⁰ United States Centers for Disease Control and Prevention, “Active Dentists, By State: United States, Selected Years 2001-2015.” <https://www.cdc.gov/nchs/data/hus/2016/086.pdf>.

practiced in the Commonwealth. Allegheny County had the most dentists, with 14 percent of the total number practicing there, followed by Philadelphia and Montgomery Counties, with 13 percent and 9 percent of dentists practicing in those counties, respectively. Six rural counties – Cameron, Forest, Fulton, Juniata, Potter, and Sullivan – each had fewer than six dentists working within them in 2015.⁷⁴¹

However, these data points may give an inaccurate or incomplete picture of the Commonwealth’s dentists on a county-by-county basis, as they are based on a self-reported survey from only 77 percent of the Commonwealth’s actively practicing dentists.⁷⁴² The Health Resources and Services Administration’s (HRSA) data indicated that in 2016 Pennsylvania had a total of 7,749 practicing dentists. Of those, 1,057 practiced in Allegheny County, 943 in Philadelphia County, and 847 in Montgomery County, representing 13.6 percent, 12.1 percent, and 10.9 percent of all practicing dentists in the Commonwealth, respectively. At the other end of the spectrum, Cameron and Forest Counties have no practicing dentists, Sullivan County has just one, Juniata and Fulton Counties have three, and Potter has four.⁷⁴³

These low numbers of dentists is why HRSA has designated most of the rural areas in the northern half of the state and the central part between suburban Philadelphia and Pittsburgh as a Health Professional Shortage Area for dentistry, as shown in Map 7.⁷⁴⁴

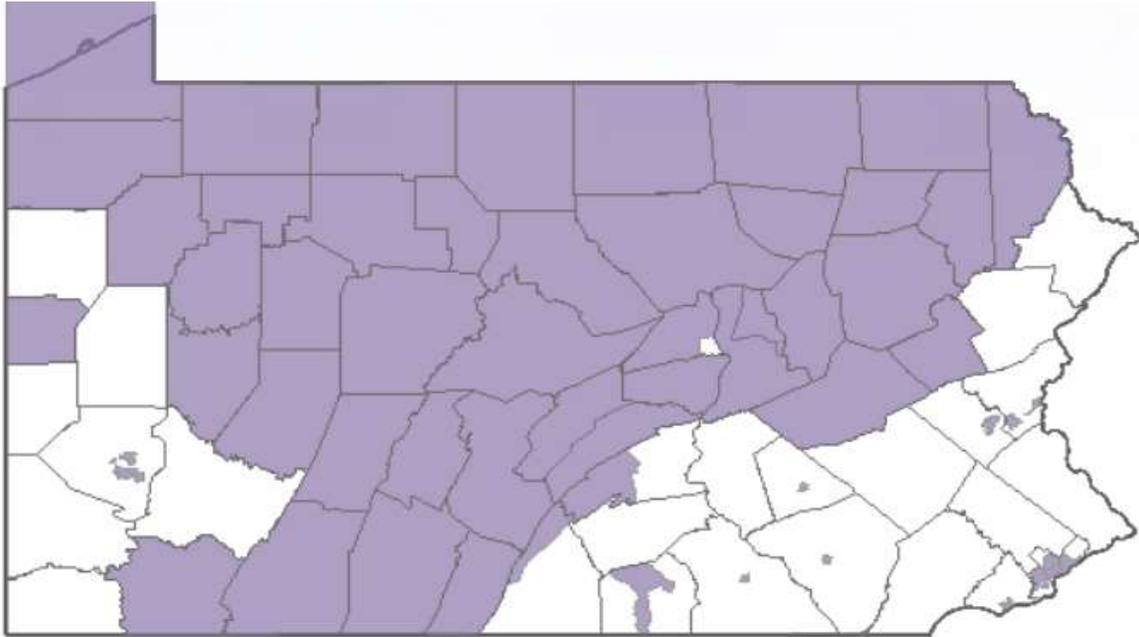
⁷⁴¹ Pennsylvania Department of Health, “2015 Pulse of Pennsylvania’s Dentist and Dental Hygienist Workforce,” Vol. 7, (Mar. 2018), p. 72, https://www.health.pa.gov/topics/Documents/Health%20Planning/V3_2015%20Dentist%20and%20Dental%20Hygienist_Final.pdf.

⁷⁴² The 5,987 actively practicing Pennsylvania dentists who responded to the DOH survey made up 77 percent of the 7,774 total actively practicing dentists in the Commonwealth in 2015, according to CDC data provided *supra* at n. 740.

⁷⁴³ United States Department of Health and Human Services, Health Resources and Services Administration, “Area Health Resource Files, Pennsylvania County Information, Dentist, 2016,” <https://data.hrsa.gov/topics/health-workforce/ahrf>.

⁷⁴⁴ United States Department of Health and Human Services, Health Resources and Services Administration, “HPSA Find, Pennsylvania – All Counties – Dental Health.” <https://data.hrsa.gov/tools/shortage-area/hpsa-find> (data in table format); United States Department of Health and Human Services, Health Resources and Services Administration, “Quick Maps – Dental Health Professional Shortage Areas,” <https://data.hrsa.gov/hdw/Tools/MapToolQuick.aspx?mapName=HPSADC> (map).

Map 7
Pennsylvania Health Professional Shortage Areas - Dental



Source: United States Department of Health and Human Services, Health Resources and Services Administration, “Quick Maps – Dental Health Professional Shortage Areas.”

A 2013 analysis by the RAND Corporation, building on the data collected and examined by the DOH and HRSA cited above, examined the ratio of full-time equivalent (FTE) dentists to the population.⁷⁴⁵ The use of “full-time equivalent” rather than the overall number of dentists was used as a metric because in Pennsylvania only 70 percent of dentists practice 40 hours or more per week, while the remainder work part time.⁷⁴⁶ The researchers utilized the data to analyze the number of FTE dentists by specialty, benchmarked against a 0.2 dentists per 1,000 people ratio, as this is the ratio at which HRSA considers an area to be experiencing a shortage.⁷⁴⁷

With regard to dental specialists, 15 of the Commonwealth’s counties had none, while every county had 0.2 dentists or fewer per 1,000 people.

The researchers noted that the majority of the counties, with the exception of Juniata and Potter, meet the overall FTE dentists per 1,000 people guideline.⁷⁴⁸ This is also the case with general, pediatric, and geriatric dentists.⁷⁴⁹ However, with regard to

⁷⁴⁵ Matthew D. Baird *et al.*, “Access to Dental Providers in Pennsylvania: Exploration of the County-Level Distribution of Dental Providers and Populations in 2013,” RAND Corporation, https://www.rand.org/content/dam/rand/pubs/research_reports/RR1300/RR1351/RAND_RR1351.pdf.

⁷⁴⁶ *Id.* at p. 2.

⁷⁴⁷ *Id.* at p. 1.

⁷⁴⁸ *Id.* at p. 8.

⁷⁴⁹ *Id.* at p. 9.

dental specialists, 15 of the Commonwealth's counties had none, while every county had 0.2 dentists or fewer per 1,000 people.⁷⁵⁰ Further, the number of FTE pediatric dentists per 1,000 children under the age of ten is zero in the majority of counties, and is at or below 0.2 per 1,000 such children in most of the remaining counties which have at least one pediatric dentist.⁷⁵¹ This means that children in need of specialized care must travel hours away from their home just to receive the needed care. This disparity is even greater when examining FTE pediatric dentists accepting Medicaid per 1,000 CHIP enrollees under the age of ten, as 40 counties have no pediatric specialists who accept Medicaid.⁷⁵²

As with other health care professions, the landscape of dentistry is changing. These changes are being driven by how dental care is paid for and how dental care is used, as well as who is providing the care.⁷⁵³ For instance, the percentage of adults who visit a dentist has been dropping for the past decade among all income groups, but the percentage of children who saw a dentist grew, driven largely by the expansion of public health programs. Further, the prevalence and severity of dental decay in permanent teeth has declined over the last several decades. This will lead to a shift in services from restorative care to cosmetic and preventative services.⁷⁵⁴

Some of those cosmetic services will not be provided by dentists. One emerging trend is invisible aligners prescribed over the Internet and delivered by mail to patients, competing directly with traditional braces offered by orthodontists. The aligners are clear plastic manufactured from a mold that patients send to the company. The process is managed by dentists, but the patients do not meet face-to-face with the dentists and communicate principally with customer service representatives. Orthodontists, dental specialists who work to correct the alignment of teeth, are concerned with this "hands-off" approach to treatment because the invisible aligners are not clinically appropriate for every case and a dental X-ray would need to be taken to determine whether the teeth within the bone would align properly with a given orthodontic treatment.⁷⁵⁵

Another cosmetic service being offered by non-dentists is teeth whitening. In the 1990s, relatively inexpensive teeth whitening products became available to consumers and some enterprising individuals set up stores or salons in places like shopping malls, offering teeth whitening products for sale as well as explaining how to use them and providing a comfortable space for patrons to use the products.⁷⁵⁶ However, since 2005, at least 14 states prohibit anyone except a licensed dentist, hygienist, or dental assistant from offering teeth whitening services, according to a state law survey by the Institute for Justice, a non-

⁷⁵⁰ *Id.* at p. 10.

⁷⁵¹ *Id.* at p. 15.

⁷⁵² *Id.* at p. 16.

⁷⁵³ Joel Diringer, *et al.*, *supra* n. 140.

⁷⁵⁴ *Id.* at p. 5.

⁷⁵⁵ Catherine Saint Louis, *Well* blog, "Straighter Teeth by Mail," *New York Times*, (Feb. 1, 2015), <https://well.blogs.nytimes.com/2015/02/01/a-trip-to-the-mail-box-not-the-orthodontist/>.

⁷⁵⁶ Campbell Robertson, "A Clash Over Who is Allowed to Give You a Brighter Smile," (May 25, 2013), https://www.nytimes.com/2013/05/26/us/clash-over-who-is-allowed-to-whiten-your-smile.html?_r=0.

profit civil rights law firm.⁷⁵⁷ Within the Commonwealth, it is not clear if teeth whitening is restricted to only dentists, as no regulation directly addressing the issue has been promulgated, but the position of the Pennsylvania State Board of Dentistry is that teeth whitening falls within the definition of the “practice of dentistry” as set forth in the statute governing the practice of dentistry, and therefore can only be performed by a dentist.⁷⁵⁸

In 2014, a Federal Trade Commission (FTC) challenge on antitrust grounds to North Carolina’s State Board of Dental Examiners’ proclamation that teeth whitening would be considered the practice of dentistry in that state made its way to the U.S. Supreme Court. In a 6-3 decision, the Court held that the North Carolina State Board of Dental Examiners was not entitled to immunity from antitrust regulation as a governmental body because the State Board of Dental Examiners was made up of dentists – market participants who had a vested economic interest in the Board’s decisions – and the Board’s actions were inadequately supervised by the state.⁷⁵⁹

While nominally a victory for North Carolina’s non-dentist teeth whiteners, the case was decided on a narrow antitrust ground. The Court simply concluded that the Sherman Antitrust Act “does not authorize the States to abandon markets to the unsupervised control of active market participants, whether trade associations or hybrid agencies. If a State wants to rely on active market participants as regulators, it must provide active supervision if state-action immunity . . . is to be invoked.”⁷⁶⁰ The Court’s ruling does not prevent other states’ dental regulators from banning non-dentists from engaging in teeth whitening so long as such regulators are either not market participants or are adequately supervised by the state. Although it is not clear how this will affect the demand for dentist-provided teeth whitening or dentists overall, over-the-counter at-home teeth whitening kits are still available, as long as the consumer who buys the product administers it at home.

As for education, Pennsylvania is home to four dental schools – University of Pittsburgh School of Dental Medicine, University of Pennsylvania (Penn Dental Medicine), The Maurice H. Kornberg School of Dentistry at Temple University, and LECOM School of Dental Medicine.⁷⁶¹ LECOM’s dental school did not open until 2012. Although these schools educate students from all over the country, and their graduates go all over the country to work, 70 percent of all Pennsylvania-licensed dentists graduated from one of the then-three dental schools located in Pennsylvania.⁷⁶² Generally, it can be said that Pennsylvania’s dentists are educated locally. Of the actively practicing dentists

⁷⁵⁷ Angela C. Erickson, Institute for Justice, “White Out: How Dental Industry Insiders Thwart Competition From Teeth-Whitening Entrepreneurs,” (Apr. 2013), <https://ij.org/wp-content/uploads/2015/03/white-out1.pdf>.

⁷⁵⁸ Lisa P. Deem, “Tooth Whitening in Pennsylvania – The Issues,” Pennsylvania State Board of Dentistry Newsletter, August 2009, <https://www.dos.pa.gov/ProfessionalLicensing/LicensingServices/2009/DentistryAugust2009.pdf>.

⁷⁵⁹ *North Carolina State Bd. of Dental Examiners v. FTC*, 135 S.Ct. 1101 (2015).

⁷⁶⁰ *Id.* at 1117.

⁷⁶¹ Pennsylvania Dental Association, “Pennsylvania Dental Schools,”

https://www.padental.org/Online/Public/Dental_Students/Pennsylvania_Dental_Schools.aspx.

⁷⁶² 2015 Pulse of Pennsylvania’s Dentist and Dental Hygienist Workforce, *supra* n. 741 at p. 5.

who provided direct patient care in Pennsylvania, 73 percent graduated from one of the then-three dental schools in the Commonwealth.⁷⁶³

As mentioned previously in this report, the cost of dental school is placing a great financial burden on new dentists with the average dental school graduate debt having grown to \$200,000 and 41 percent of dental school seniors say that their educational debt has a great influence on their professional choices after graduation. This dynamic, combined with rising costs of providing dental care, is creating pressure for dental hygienists and dental assistants to provide greater preventative and restorative services.⁷⁶⁴

Further pressure on dentists is coming from how dental services are paid for, with publicly-funded programs and out-of-pocket payments making up an increasing share of payments.⁷⁶⁵ To put this in perspective, the percentage of adults with private dental insurance decreased from 62 percent in 2001 to 56 percent in 2010, while 66 percent of adults aged 65 and over had no dental coverage.⁷⁶⁶ It should also be noted that the Affordable Care Act of 2010 established pediatric dental care as a mandatory health benefit in the individual and small group market, and an estimated three million children could obtain dental coverage through this legal mandate. However, adult dental coverage is not mandated.⁷⁶⁷

Scope of Practice for Optometrists

The practice of optometry is defined in Pennsylvania as “[t]he use of any and all means or methods for the examination, diagnosis and treatment of conditions of the human visual system and shall include the examination for, and adapting and fitting of, any and all kinds and types of lenses including contact lenses.”⁷⁶⁸ Optometrists may also prescribe and administer prescription and non-prescription drugs as approved by the Secretary of Health. The practice of optometry does not include surgery, including laser surgery, the use of injections for the treatment of ocular disease, the use of Schedule I or Schedule II controlled substances, the treatment of “systemic disease,” and the treatment of glaucoma, except that optometrists may use topical pharmaceutical agents in the treatment of open angle glaucoma, exfoliation glaucoma, and pigmentary glaucoma. An optometrist must renew his or her license every two years.⁷⁶⁹

As can be seen, the scope of practice of optometrists is detailed by statute and outlines which procedures can and cannot be performed by optometrists. Other states permit a wider scope of practice for their optometrists. For instance, in Kentucky, optometrists may perform laser eye surgery as well as cosmetic work around the eyes.⁷⁷⁰

⁷⁶³ *Id.* at p. 13.

⁷⁶⁴ Joel Diringer, *supra* n. 140 at p. 8.

⁷⁶⁵ *Id.* at p. 10.

⁷⁶⁶ *Id.* at pp. 10-11.

⁷⁶⁷ *Id.* at p. 14.

⁷⁶⁸ Act of December 16, 2002, (P.L. 1950, No. 225, § 1); 63 P.S. § 244.2.

⁷⁶⁹ Act of October 30, 1996, (P.L. 721, No. 130, § 5); 63 P.S. § 244.5.

⁷⁷⁰ Ky. Rev. Stat. Ann. § 320.200 *et seq.*

The reasoning behind this expansion in the scope of practice was to ensure the availability of treatments, as Kentucky has four optometrists for each ophthalmologist (a physician who specializes in eye diseases and conducts surgical procedures involving the eye).⁷⁷¹

The Pennsylvania Academy of Ophthalmology, the professional organization representing ophthalmologists, opposes any expansion of optometrists' scope of practice to include surgical procedures. They note that legislation similar to that passed in Kentucky has been introduced in Alaska, Florida, Georgia, Illinois, Iowa, Nebraska, and North Carolina.⁷⁷²

To be qualified to be an optometrist in the Commonwealth, one must possess a Doctor of Optometry degree from an accredited optometric educational institution in the U.S. or Canada. An applicant for a license to practice optometry must also pass an examination.⁷⁷³ There are currently 23 colleges of optometry in the U.S., according to the Association of Schools and Colleges of Optometry (ASCO). Pennsylvania has one school of optometry, Salus University, formerly known as the Pennsylvania School of Optometry.⁷⁷⁴

According to the U.S. Department of Labor's Bureau of Labor Statistics (BLS), Pennsylvania has 1,800 optometrists practicing throughout the Commonwealth. This is the fifth-highest number of optometrists of any state, behind only California, Texas, New York, and Illinois. Three of the top ten metropolitan areas with the highest concentration of optometrists are in Pennsylvania – Altoona, State College, and East Stroudsburg.⁷⁷⁵

While the Commission staff is not making a formal recommendation on whether to expand the scope of practice of optometrists like certain other states have done, the staff advises that this particular issue is one the General Assembly should be cognizant of going forward.

Expanding Role and Supply of Pharmacists

In the Commonwealth, the practice of pharmacy is defined as the provision of health care services by a pharmacist, which includes the interpretation, evaluation, and implementation of medical orders regarding the provision of pharmaceutical services or the prescription of drugs. This includes the delivery, dispensing, or distribution of

⁷⁷¹ Wolters Kluwer Law & Business, "Optometrists vs. Ophthalmologists in Pennsylvania: Who Can Do What?" (Jan 27, 2012), <http://health.wolterskluwerlb.com/2012/01/optometrists-vs-ophthalmologists-in-pennsylvania-who-can-do-what/>.

⁷⁷² Pennsylvania Academy of Ophthalmology, "Safe Eye Surgery," <https://www.paeyemds.org/safe-eye-surgery.html>.

⁷⁷³ Act of October 30, 1996, (P.L. 721, No. 130, § 3); 63 P.S. § 244.4.

⁷⁷⁴ Association of Schools and Colleges of Optometry, "ASCO Member Schools and Colleges," <https://optometriceducation.org/students-future-students/member-schools-and-colleges/>.

⁷⁷⁵ United States Department of Labor Bureau of Labor Statistics, "Occupational Employment Statistics, Occupational Employment and Wages, (May 2017), 29-1041 Optometrists," <https://www.bls.gov/oes/2017/may/oes291041.htm>.

prescription drugs, participation in drug device selection, drug administration, drug regimen review, drug-related research, compounding, managing drug therapy, and patient counseling, among other activities. “Drugs” is defined to mean the articles recognized as such in the official U.S. Pharmacopoeia, the official Homeopathic Pharmacopoeia of the U.S., or the official National Formulary or its successor.⁷⁷⁶

To be eligible to become a licensed pharmacist in Pennsylvania, an applicant must have a Bachelor of Science or an advanced degree in pharmacy granted by a school or college of pharmacy which is accredited by the Accreditation Council for Pharmacy Education (ACPE), the accrediting body recognized by the State Board of Pharmacy.⁷⁷⁷ The prospective pharmacist must also pass the North American Pharmacist Licensure Examination (NAPLEX) and the Multistate Pharmacy Jurisprudence Examination (MPJE).⁷⁷⁸ There are seven schools of pharmacy in Pennsylvania that are accredited by the ACPE.⁷⁷⁹

In Pennsylvania, the role of the pharmacist in the health care system has been gradually expanding. In 2015, Act 8 permitted pharmacists to administer the flu vaccine to children nine years of age or older.⁷⁸⁰ In the General Assembly’s 2019-2020 Session, House Bill 91 has been introduced and would permit pharmacists to administer any immunization to a child aged nine years or older with parental consent.⁷⁸¹ Pharmacists have been able to offer injectable medications, biologicals, and immunizations to people aged 18 or over since 2002.⁷⁸²

Pennsylvania is well-represented by pharmacists, with approximately 13,630 practicing across the Commonwealth as of 2017, according to the BLS. This puts Pennsylvania fifth in overall number of pharmacists, behind California, Texas, New York, and Florida.⁷⁸³

There are developing issues in the pharmacy industry that should be discussed, although they are national phenomena and are not specific to Pennsylvania. Rapid growth in pharmacy school graduates is one of them. From 1987 to 2014, the number of pharmacy schools grew from 72 to 130, a 66 percent increase. Another five opened in the two-year span of 2015-2016.⁷⁸⁴ The number of pharmacy school graduates increased by 85 percent between 2000 and 2013, from roughly 7,000 to 13,000. However, the number of available

⁷⁷⁶ Act of September 27, 1961, (P.L. 1700, No. 699, § 2); 63 P.S. § 390-2.

⁷⁷⁷ Act of September 27, 1961, (P.L. 1700, No. 699, § 3); 63 P.S. § 390-3; 49 Pa. Code § 27.21(b) (State Board of Pharmacy regulation stating that the degree must be from an ACPE-accredited school or college).

⁷⁷⁸ 49 Pa. Code § 27.21(a).

⁷⁷⁹ Accreditation Council for Pharmacy Education, “Programs by State – Pennsylvania,” <https://www.acpe-accredit.org/accredited-programs-by-state/>.

⁷⁸⁰ Act of June 26, 2015, (P.L. 29, No. 8); 63 P.S. §390-9.2(a).

⁷⁸¹ Pennsylvania H.B. 91, P.N. 93 (Sess. 2019-2020).

⁷⁸² Act of June 29, 2002, (P.L. 673, No. 102, § 2).

⁷⁸³ United States Department of Labor Bureau of Labor Statistics, “Occupational Employment Statistics, Occupational Employment and Wages, May 2017, 29-1051 Pharmacists,” <https://www.bls.gov/oes/2017/may/oes291051.htm>.

⁷⁸⁴ *Id.*

jobs for pharmacists increased by only 22 percent between 2002 and 2012, from 225,000 pharmacists to 275,000.⁷⁸⁵

The BLS is also predicting a slower-than-average growth in the number of pharmacists between 2016 and 2026, with six percent growth in this profession versus a seven percent growth in all occupations and a 16 percent growth in “health diagnosing and treating practitioner” professions. The U.S. Department of Labor also noted that “[t]he number of pharmacy schools has grown in recent years, creating more pharmacy school graduates and therefore more competition for jobs.”⁷⁸⁶ The U.S. Health Resources and Services Administration is also projecting that between 2012 and 2025, the supply of pharmacists in the U.S. will grow by 35 percent, while the demand for pharmacists will grow by only 16 percent.⁷⁸⁷

Once again, the Commission staff is not making any formal recommendation regarding the pharmacist workforce, however, the staff advises that the General Assembly be aware of the noted supply trends and expanding role of pharmacists going forward.

⁷⁸⁵ Alex Barker, “The Pharmacy Job Crisis Explained,” *Pharmacy Times*, (August 3, 2015), <https://www.pharmacytimes.com/contributor/alex-barker-pharmd/2015/08/the-pharmacy-job-crisis-explained>.

⁷⁸⁶ United States Department of Labor Bureau of Labor Statistics, “Occupational Outlook Handbook, Pharmacists,” <https://www.bls.gov/ooh/healthcare/pharmacists.htm#tab-6>.

⁷⁸⁷ United States Department of Health and Human Services, Health Resources and Services Administration, “Health Workforce Projections: Pharmacists,” <https://bhw.hrsa.gov/sites/default/files/bhw/nchwa/projections/pharmacists.pdf>.

CONCLUSION

Pennsylvania's need to invest in its health care workforce cannot be overstated. As mentioned previously, Pennsylvania, along with the country as a whole, is experiencing an unprecedented increase in demand for health care professionals and their services due to a number of factors including an aging Baby Boomer generation, an increased insured population attributable to the Affordable Care Act, and the on-going opioid epidemic. In many health care professions, that increase in demand is significantly outpacing the Commonwealth's supply of those professionals. To reduce the shortfall of health care professionals within Pennsylvania and the glaring disparities in access to health care that comes as a result, the General Assembly should be aware of a number of health care workforce needs as well as some potential solutions it may consider in order to address those needs.

The Commonwealth's health care workforce needs more attention drawn to the possibility of earlier educational exposure to and preparation for health care careers. Earlier educational exposure and preparation can be accomplished through state-created pipeline programs or an expansion of state grant money to pipeline programs designed to help attract and prepare minority and other underrepresented students at both the high school and college level to pursue a career in health care. Pipeline programs, if properly administered, can increase minority and disadvantaged students' participation in medical school programs, physician assistant programs, nursing programs, and other health career programs. Increased diversity within the health care workforce can lead to an increase in access to health care for minority and underserved communities as racial and ethnic minority health providers are more likely to serve in underserved minority communities.

Sizeable increases in the cost of education in recent years have served as a barrier to many qualified students who desire to become a physician, physician assistant, dentist, or nurse. Consequently, there is a need within the health care workforce to reduce the financial burdens associated with student loan debt. Health professionals like physicians and dentists have some of the highest levels of student debt among today's professionals. If the Commonwealth wants to encourage more qualified individuals to become physicians, physician assistants, dentists, nurses, and other health care professionals, there needs to be an expansion of funding for loan repayment programs designed specifically for these professions. The Commonwealth may be able to reduce its disparities in access to health care in both rural and underserved minority communities if it offers higher loan repayment amounts in exchange for moderately longer years of service commitments in underserved areas.

In an effort to reduce the growing physician shortage in the Commonwealth, especially within rural and underserved minority communities, Pennsylvania agencies should make a concerted effort to expand physician residencies within its borders. To do

this, residencies could be set up in primary care disciplines reserved for graduating medical students who failed to match into a graduating medical education position, potentially in rural or underserved areas. As the cornerstone of a physician's education, increased residencies could ultimately help more physicians enter the profession and incentivize them to stay in Pennsylvania after completing their residency.

Due to the increasing complexity of health care and the accompanying demand for highly skilled nurses, the health care workforce needs increased encouragement for nurses to pursue and obtain advanced nursing degrees as well as nurse faculty careers. The Commonwealth can provide this by establishing easier educational pathways for nurses to obtain advanced degrees. Some examples of these pathways could involve the increased roles of community colleges, utilization of bridge programs, online nursing education programs, nurse residency programs and tuition reimbursement incentives for nurses pursuing advanced degrees and careers in nurse education.

Pennsylvania should also consider looking internationally to attract qualified physicians and nurses by focusing on the continued utilization of recruitment tools such as Conrad 30 Visa Waiver programs for international medical graduates.

To strengthen its health care workforce, the Commonwealth must do a better job of addressing nurse attrition and turnover by improving the current nurse work environment in health care facilities. The General Assembly should consider implementing staffing requirements within health facilities. While a mandated nurse-to-patient ratio is one possible solution, this option has both support and opposition among the stakeholders within the health care field, and the arguments for and against it should be weighed carefully. A potential alternative to a mandated nurse-to-patient ratio would be the implementation of statewide staff level reporting requirements for health facilities within Pennsylvania and also the requirement that health facilities establish staffing committees with partial composition of registered nurses involved in direct care to assist administrative personnel bring about new effective staffing solutions.

The role of non-physician health care practitioners such as nurse practitioners (NPs) and physician assistants (PAs) will also play an important role in strengthening the health care workforce by reducing the impact of the Commonwealth's growing physician shortage. The recent development of these new professional roles has occurred in response to a need to provide care for minor or less complex cases and decrease physicians' case load or increase the capacity of larger hospitals or outpatient facilities. Pennsylvania should enable physicians' offices, hospitals, clinics, and other medical facilities to make better use of the Commonwealth's NPs and PAs, by loosening the restrictions on the practice of NPs and PAs. Legislation aimed at reducing involvement of the Board of Medicine in the advanced practice professional-physician-patient relationship by eliminating Board approval of supervision agreements (while still making such agreements available to the Board) would allow advanced practice professionals and their supervising physicians to determine the scope of practice of the PA or NP, without going so far as to allow the PA or NP to practice without physician oversight.

Pennsylvania's health care workforce undoubtedly needs a greater push for expanded use of technology when it comes to providing access to care. The Commonwealth should encourage the increased use of telemedicine health services through the implementation of parity laws that ensure health insurers are reimbursing health care providers for telemedicine services at the same rate they would for face-to-face consultations. Without such parity laws, physicians and other health practitioners may be discouraged from providing telemedicine services if they believe they will receive lower compensation for such services than for in-person care. Increased use of telemedicine is more important than ever today because it can help reduce the geographical barriers that contribute to the growing gap in access to quality health care in many regions of the Commonwealth that are undersupplied in health care professionals.

The Commonwealth also must address the need to attract and retain more long-term health care workers. Many long-term health care facilities argue that their inability to attract and retain qualified health care workers such as registered nurses, licensed practical nurses, and certified nursing assistants is connected to their inability to provide more competitive wages due to their reliance on Medicaid, which in turn, leads to an inability to provide adequate staffing levels. The General Assembly needs to consider legislation that will address the low wages of its workers and invest in a career ladder program available to nursing homes and other long-term care facilities to develop career ladders and other training programs for nursing aides. Improved wages, training and career development options could help facilities attract more workers.

With the increase in demand for mental health services, Pennsylvania's health care workforce needs to reduce existing deterrents to practicing psychiatry within the Commonwealth. Some key deterrents highlighted in this report are the strict limitations on mental health information sharing as well as the low reimbursement rates psychiatrists receive in comparison to other physicians who provide physical health services. The General Assembly should consider revising its health information confidentiality laws, specifically regarding mental health information and substance abuse information, to be more aligned with the less strict federal law provisions. Doing so will help eliminate barriers to efficient coordinated care, reducing frustrations many psychiatrists face when treating patients while still maintaining a reasonable level of patient confidentiality. To address the reimbursement inequities psychiatrists are facing, the Commonwealth should pass stricter mental health parity legislation requiring health insurers to report the processes they engage in when determining coverage and reimbursement rates to prove compliance with federal parity law.

The Commonwealth should consider taking a limited regulatory approach on limiting the restrictions of non-compete agreements for physicians. For example, the General Assembly could create a bright line limitation on the geographical and temporal scope of valid non-compete agreements pertaining to physicians, as many other states have done. These limitations may help provide clarity for physicians practicing within Pennsylvania and may help the Commonwealth retain more physicians.

If the Commonwealth really intends to adequately address its health care workforce needs, it must also make a concerted effort to improve its health care workforce data collection and analysis. Relying on federal workforce projections that lack specific numbers and types of health professionals currently employed, location of employment, and the roles of employment, will not provide legislators with an accurate depiction of Pennsylvania's needs and issues. The Commonwealth should create an entity as an independent body or within an appropriate department or agency tasked with the responsibility to generate comprehensive health care workforce data collection and analysis. This will lead to more accurate and complete workforce projections and will ultimately increase state legislators' ability to address the health care workforce needs of Pennsylvania.

In addition to the foregoing list of needs and recommendations above, the General Assembly should be cognizant of other issues such as the Pennsylvania Supreme Court's proposed amendment to the change of venue procedural rules for medical malpractice claims, the changing landscape of the dental profession, as well as the expanding scope of optometry practice and expanding roles and supply of pharmacists.

THE GENERAL ASSEMBLY OF PENNSYLVANIA

HOUSE RESOLUTION

No. 754 Session of 2018

INTRODUCED BY BENNINGHOFF, MARCH 13, 2018

REFERRED TO COMMITTEE ON LABOR AND INDUSTRY, MARCH 13, 2018

A RESOLUTION

1 Directing the Joint State Government Commission to study the
2 long-term workforce and workforce training needs of the
3 Commonwealth's health care sector.

4 WHEREAS, Pennsylvania is the sixth most populous state in the
5 United States with diverse demographics and ever-changing health
6 care needs; and

7 WHEREAS, This Commonwealth's growing aging population, steady
8 increase in chronic disease and the ever-present threat of
9 emerging health crises, such as the current opioid epidemic,
10 make patient access to high-quality health care, regardless of
11 location, more important than ever before; and

12 WHEREAS, This Commonwealth's ability to maintain a world-
13 class health care system is dependent on the availability of a
14 well-skilled, well-trained workforce and the ability of its
15 providers to attract and retain that workforce; and

16 WHEREAS, Health care and social assistance is the largest
17 employment sector in this Commonwealth; and

18 WHEREAS, The strength of this Commonwealth's health care
19 sector significantly impacts not only the health and well-being

1 of patients, but also the long-term economic prosperity and
2 stability of communities; therefore be it

3 RESOLVED, That the House of Representatives direct the Joint
4 State Government Commission to study what the long-term health
5 care workforce and workforce training needs of this Commonwealth
6 will be over the next five years; and be it further

7 RESOLVED, That the Joint State Government Commission study
8 how current Federal and State statutes and regulations impact
9 the ability of this Commonwealth's health care system to meet
10 those needs identified by the commission; and be it further

11 RESOLVED, That the study include recommendations to ensure
12 that this Commonwealth is able to adequately train, attract and
13 retain the workforce needed to meet those needs identified by
14 the Joint State Government Commission; and be it further

15 RESOLVED, That, for its report, the Joint State Government
16 Commission shall solicit input from representatives of all
17 aspects of the health care sector and continuum of care; and be
18 it further

19 RESOLVED, That the Joint State Government Commission issue
20 the report with its findings and any recommendations to the
21 House of Representatives no later than one year after the
22 adoption of this resolution.

GLOSSARY

AACN - American Association of Colleges of Nurses

AAMC - Association of American Medical Colleges

AAN - American Academy of Nursing

AANP - American Association of Nurse Practitioners

ACA - Affordable Care Act

ACGR - Adjusted Cohort Graduation Rate

ACPE - Accreditation Council for Pharmacy Education

ADN - Associate Degree in Nursing

AMA - American Medical Association

ANCC - American Nursing Credentialing Center

APRNS - Advanced Practice Registered Nurses

ARC - Appalachian Regional Commission

ARC-PA - Accreditation Review Commission on Education for the Physician Assistant

ASCO – Association of Schools and Colleges of Optometry

BHP - Bureau of Health Professions

BLS - U.S. Bureau of Labor and Statistics

BSN - Bachelor of Science in Nursing

CAAHEP - Commission on Accreditation of Allied Health Education Programs

CAHEA - Committee on Health Education and Accreditation

CDC - Centers for Disease Control and Prevention

CHA - California Hospital Association

CHGME - Children's Hospital Graduate Medical Education Program

CHIP - Pennsylvania's Children's Health Insurance Program

CHWS - Center for Health Workforce Studies

CMS - Centers for Medicare and Medicaid Services

CNAs - Certified Nursing Assistants

CNOs - Chief Nursing Officers

CNS - Clinical Nurse Specialist

CPRC - Pennsylvania Supreme Court Civil Procedural Rules Committee

CRNP - Certified Registered Nurse Practitioner

CWIA - Center for Workforce Information and Analysis

DOD - Department of Defense

DNP - Doctor of Nursing Practice

DGME - Direct Medical Education Payments

DOH - Pennsylvania Department of Health

DOS - Pennsylvania Department of State

EHB - Essential Health Benefits Insurance Plans under the ACA

EMS - Emergency Medical Service

FPA - Physicians Freedom of Practice Act

FTC – Federal Trade Commission

FTE - Full-Time Equivalent

GME - Graduate Medical Education

HCFA - Pennsylvania's Health Care Facilities Act

HCFPA - Pennsylvania's Health Care Facilities Planning Act

HCOP - Health Careers Opportunity Program

HHS - U.S. Department of Health and Human Services

HICPN - Health Insurance Coverage Parity and Nondiscrimination Act

HIPAA - Health Insurance Portability and Accountability Act

HPSAs - Health Professional Shortage Areas

HRSA - Health Resources and Services Administration

IME - Indirect Medical Education Payments

IMGs - International Medical Graduates

IMU - Index of Medical Underservice

JAMA - Journal of the American Medical Association

LBFC - Legislative Budget and Finance Committee

LPNs - Licensed Practical Nurses

LRP - Pennsylvania Primary Care Loan Repayment Program

MCARE - Medical Care Availability and Reduction of Error Act

MCAT - Medical College Admissions Test

MHPA - Mental Health Parity Act

MHPAEA - Mental Health Parity and Addiction Equity Act

MHPC - Massachusetts Health Policy Commission

MPJE - Multistate Pharmacy Jurisprudence Examination

MUAs - Medically Underserved Areas

MUPs - Medically Underserved Populations

NAM - National Academy of Medicine

NAMI - National Alliance on Mental Illness

NAPLEX - North American Pharmacist Licensure Examination

NCBH - National Council for Behavioral Health

NCCPA - National Commission on Certification of Physician Assistants

NCLEX – National Council Licensing Exam

NCQP - Nursing Care Quality Protection Act

NCSBN - National Council of State Boards of Nursing

NHSC - National Health Service Corps

NMHC - Nurse Managed Health Clinic

NP - Nurses of Pennsylvania

NRMP - National Resident Matching Program

NSAL - Nurse Staffing by Acuity Law

NQTLs - Nonquantitative Treatment Limitations

OPIS - Overdose Prevention in States

OSCAR - Online Survey Certification and Reporting System

PAs - Physician Assistants

PA-AC - Pennsylvania Action Coalition

PCANE - Pennsylvania Coalition for the Advancement of Nursing Education

PDAACA - Pennsylvania Drug and Alcohol Abuse Control Act

PHCA - Pennsylvania Health Care Association

PTSD - Post-Traumatic Stress Disorder

RFA - Request for Application

RNs - Registered Nurses

RPM - Remote Patient Monitoring

SCLTC - Senate Commission on Long-Term Care

SOP - Scope-of-Practice

SWAP - Strategic Workforce Action Planning Committee

THCGME - Teaching Health Centers GME Program

UCDHS - University of California Davis Health System

UHC - University Health System Consortium

USCIS - U.S. Citizenship and Immigration Services

VA - U.S. Department of Veterans Affairs

VTC – Video Conferencing Systems

WTW - Willis Tower Watson