Building a Sustainable Oral Health Workforce in Pennsylvania: Strategies for Reinvigorating Dental Careers and Strengthening the Pipeline

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Abbreviations

Abbreviation	Explanation
ADA	American Dental Association
ADA-HPI	American Dental Association Health Policy Institute
ADEA	American Dental Education Association
AHEC	PA Area Health Education Center
ASTDD	Association of State and Territorial Dental Directors
BLE	Benefit Limit Exception
CCHW	Certified Community Health Workers
CDA	Certified Dental Assistants
CDC	Centers for Disease Control
CHW	Community Health Worker
CITA	Council of Interstate Testing Agencies, Inc.
CODA	Commission on Dental Accreditation
CoP	PA Oral Health Workforce Community of Practice
CRDTS	Central Regional Dental Testing Service, Inc.
CSDH	Certified School Dental Hygienist
CTE	Career and Technical Education
D.D.S.	Doctor of Dental Surgery
D.M.D.	Doctor of Dental Medicine
DA	Dental Assistant
DANB	Dental Assisting National Board
DDH	Dentist and Dental Hygienist Compact
dHPSA	Dental Health Professional Shortage Areas
DHS	PA Department of Human Services
DOH	PA Department of Health
EFDA	Expanded Function Dental Assistant
FQHC	Federally Qualified Health Center
HHS	U.S. Department of Health and Human Services
HRSA	Health Resources and Services Administration
LBFC	Legislative Budget and Finance Committee
LEA	Local Education Agency
MCH	Maternal and Child Health
NACHC	National Association of Community Health Centers
NERB	North East Regional Board of Dental Examiners, Inc.
OHP	Oral Health Program
PACHC	PA Association of Community Health Centers
PASSHE	PA State System of Higher Education

PCB	PA Certification Board
PCOH	PA Coalition for Oral Health
PDE	PA Department of Education
PHDHP	Public Health Dental Hygiene Practitioner
Plan	PA Oral Health Plan 2020-2030
PORH	PA Office of Rural Health
RDH	Registered Dental Hygienist
RHC	Rural Health Clinic
RHS	Radiation Health Safety
SRTA	Southern Regional Testing Agency, Inc.
WIC	Women, Infants and Children
WREB	Western Regional Examining Board

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Executive Summary

Overview

A sufficient healthcare workforce is essential for meeting the health needs of the population and improving overall health outcomes. The ability to prevent, diagnose, and treat illnesses without a robust network of providers is compromised, leading to poorer health outcomes and increased strain on the entire healthcare system.

PA's oral health landscape was greatly reshaped with the COVID-19 pandemic. The healthcare workforce was significantly strained, exposing weaknesses in the healthcare infrastructure and worsening already present provider shortages. Pandemic-related disruptions have had lasting effects, with many providers retiring early or relocating, further exacerbating the dental workforce shortage in PA. To address this crisis, oral health advocates, dental professionals, educators, and policymakers must collaborate to understand the factors impacting the workforce pipeline and develop strategies that address immediate needs while building a strong foundation for future access to quality dental care in PA.

The Case for Collaboration

The PA Oral Health Plan 2020-2030 (Plan), developed by the PA Department of Health (DOH) Oral Health Program (OHP) to address persistent oral health disparities, unites stakeholders with a common goal of improving oral health outcomes statewide. The Plan stresses that "no single organization, coalition, or state agency can work alone to combat oral disease," underscoring the need for collaborative efforts. Furthermore, to attain this goal, the Plan calls for strengthening the oral health workforce, with a specific focus on strategies to ensure enough public and private providers are available to meet the state's oral health needs.

In developing the key recommendations within this oral health workforce pipeline report, a range of state-specific data, national trends, and stakeholder observations were reviewed. This report was further informed by the Oral Health Workforce Community of Practice (CoP), a multi-sector group of statewide key partners that convenes monthly to analyze workforce challenges statewide. The CoP collaborated to identify solutions to address dental Health Professional Shortage Areas (HPSAs), assess the effects of COVID-19 on the oral health workforce, and identify priorities in order to draft strategies that strengthen Pennsylvania's oral health workforce pipeline. To broaden input beyond this core group, the Pennsylvania Coalition for Oral Health (PCOH) initiated a workforce webinar series. These webinars elevated ongoing stakeholder efforts, created a forum to share challenges and barriers experienced at the local level, and provided valuable feedback that helped shape the final set of recommendations.

The recommendations presented in this report are intended to guide future efforts to build a strong and sustainable dental workforce pipeline for PA, ultimately improving oral health outcomes across the state. These recommendations are intended as guidance and do not constitute mandated actions. Implementation of these recommendations would require additional resources, dedicated funding, and cross-sector support to proceed effectively.

Key Recommendations

To build a sustainable oral health workforce that is equipped to meet the needs of all Pennsylvanians, the following recommendations are proposed:

1. **Increase the Available Supply of Oral Health Providers**: Focus on strategies that attract new professionals into the state's dental workforce pipeline, including increasing students pursuing dental pathways, offering incentives and expanding recruitment efforts.
2. **Increase the Reach of Existing Oral Health Professionals**: Enhance the roles of dental hygienists, assistants, and other oral health professionals to maximize the existing workforce's impact.
3. **Boost Retention Rates for Current Oral Health Providers**: Implement measures to reduce burnout and increase job satisfaction among existing dental providers, ensuring they remain in practice within PA.
4. **Develop Targeted Pipeline Strategies by Provider Type**: Acknowledge the unique role each available healthcare provider has as part of a dental team and embrace solutions that elevate awareness of dental career pathways and improve accessibility.

By embracing these recommendations and fostering collaboration among key stakeholders, PA can address dental workforce challenges, improve access to oral health care, and enhance overall public health.

Introduction

Oral health is a key indicator of overall health yet is often isolated from traditional physical health services and for some considered a luxury service. Similarly, dental providers are often not recognized as members of the primary care workforce despite holding the same mission of preventing, evaluating, diagnosing, and treating disease.

Individuals across the Commonwealth are struggling to access the oral health care they need. This is partially due to the continued decline in workforce capacity because of decreased providers and support staff. The healthcare provider shortage that PA is experiencing, while not unique to one sector, does present an opportunity to improve existing support structures and embrace innovative solutions. Since 2018, the U.S. News & World Report "100 Best Jobs" listed professions in dentistry among its top jobs. The U.S. Bureau of Labor Statistics predicts employment growth of 5%, which equates to 7,300 new dentist jobs nationwide through the year 2033.[i] However, an analysis from the American Dental Association Health Policy Institute (ADA-HPI), commissioned by the PA Coalition for Oral Health (PCOH), indicated that the supply of dentists in PA is expected to fall per capita through 2030 before an improvement will occur.[ii] The analysis also showed that between 2010 and 2020, the number of dentists per 100,000 people in PA fell statewide with steeper projections of attrition for dental hygienists and dental assistants.[iii] PA needs to prioritize workforce innovation that eases the burden on current providers and engages the next generation of oral health workers.

PA's oral health workforce crisis presents an opportunity to implement strategies that will fortify the necessary support for the current dental workforce, and nurture sustainability through the promotion of accessible and livable oral health career pathways. PA must focus on reducing the barriers that are preventing students from entering the field and driving practicing providers away.

Current State of Pennsylvania's Oral Health Workforce

Health care workforce shortages are not unique to the dental profession. However, addressing Pennsylvania's 148 designated dental health professional shortage areas requires four times as many dental practitioners compared to the number of primary care or mental health providers needed to alleviate those shortages.[iv] Multiple government agencies, such as the Health Resources Services Administration (HRSA), the Pennsylvania Department of Health (DOH), and the Department of Human Services (DHS); professional organizations like the American Dental Association (ADA) and the American Dental Education Association (ADEA); and non-profit organizations like the PA Coalition for Oral Health (PCOH) actively monitor and evaluate Pennsylvania's dental workforce trends. These groups consistently find that PA is failing to replace the number of dental providers it is losing.[v]

Most of the inflow to PA's oral health workforce comes from state-based training programs. Of the 70 accredited dental schools in the United States, three are located in PA, with one additional school operating a clinic in the state. Together, these institutions produce approximately 350-360 dental graduates annually.[vi] Additionally, there are 13 dental hygiene programs accredited by the Commission on Dental Accreditation in Pennsylvania, producing about 336 graduates each year. The state also has 10 approved expanded function dental assistant (EFDA) training programs, along with various dental assisting pathways offered through career and technology centers, community colleges, and chairside training in dental offices, all contributing to the dental workforce pipeline.

While the availability of dental training programs in PA appears adequate, they are often unevenly dispersed geographically and are particularly absent in rural areas. To maximize the impact of this dental pipeline, it is crucial to retain the majority of trainees within the state. However, this presents a significant challenge due to the high number of providers leaving the workforce through retirement and relocation. By 2040, the outflow of dentists is projected to be between 30-40 percent, further exacerbating the shortage.[vii]

Defining Pennsylvania's Oral Health Workforce

The oral healthcare workforce is a vital component of the nation's healthcare infrastructure. As of 2020, the U.S. oral health workforce comprised over 750,000 practitioners, including a wide range of roles essential for providing comprehensive dental care.[viii] It is important to note that while states employ similar types of dental professionals, the governing bodies or regulating authorities, licensure and certification requirements, and scopes of practice can vary significantly from state to state.

PA employs direct care providers to deliver dental services across various settings. The PA State Board of Dentistry, operating under Act 216 of 1933, the state's Dental Law, is responsible for overseeing the licensing and certification of dentists, dental hygienists, and expanded function dental assistants. The Board ensures that dental professionals are qualified by issuing, suspending, and revoking licenses and certificates as needed. It also monitors their compliance with regulations, handles complaints, and sets standards for professional conduct and continuing education to maintain high standards of care.[ix]

- *Expanded Function Dental Assistant (EFDA):*
  EFDAs perform advanced dental tasks under a dentist's supervision, such as polishing, placing restorations, and applying fluoride. To qualify, candidates must complete a board-approved dental assistant program, a dental hygiene program with restorative instruction, or an EFDA-specific program, and pass a written exam. They must also complete 3 hours of initial continuing education on child abuse recognition and reporting, with 10 hours required for biennial renewal, including 2 hours on child abuse.

- *Registered Dental Hygienist (RDH):*
  RDHs clean teeth, take X-rays, and provide other dental care under a dentist's supervision. To become licensed, candidates need an associate's degree from an accredited dental hygiene school, pass the National Board Dental Hygiene Examination, and a regional clinical exam. They must complete 3 hours of continuing education in child abuse recognition and reporting for initial licensure and 20 hours for biennial renewal, including 2 hours in child abuse.

- *Public Health Dental Hygiene Practitioner (PHDHP):*
  PHDHPs are licensed dental hygienists who independently perform educational, preventive, and therapeutic dental procedures without dentist supervision. To qualify, they must meet the same educational and exam requirements as RDHs, complete 3,600 practice hours under a dentist, and obtain certification. For biennial renewal, they need 20 hours of continuing education, including 5 hours in public health courses.

- *Certified School Dental Hygienist (CSDH):*
  CSDHs are licensed hygienists with special certification to provide dental care in schools. They develop and deliver dental health programs, provide care instructions and referrals, and conduct screenings. They need a valid dental

hygienist license, an Educational Specialist - Dental Hygienist Certificate, and a bachelor's degree. They must also complete coursework and a 60-hour supervised practicum. Certification is regulated by both the PA State Board of Dentistry and the PA Department of Education (PDE).

- *Dentist/Dental Specialists:*
  Dentists diagnose and treat issues related to the teeth, jaws, and oral structures. They must hold a Doctor of Dental Surgery (D.D.S.) or Doctor of Dental Medicine (D.M.D.) degree from an accredited school, pass the National Board Dental Hygiene Examination, and a regional clinical exam. For initial licensure, they need 3 hours of continuing education in child abuse recognition and reporting, and 30 hours for renewal, including 2 hours on child abuse. The PA State Board of Dentistry oversees the biennial licensure and ongoing education requirements. For dental specialists, an additional residency/training program is required to become board-certified.

Beyond these regulated positions, the oral healthcare workforce in PA also includes roles for auxiliary personal and community-based roles that help individuals access and navigate the dental care system.

- *Dental Assistant (DA):*
  Dental Assistants support dentists by performing tasks like chairside assistance, equipment sterilization, and taking X-rays. In PA, there are no specific state requirements for dental assistants, but they must pass the Dental Assisting National Board (DANB) Radiation Health and Safety (RHS) exam to take X-rays. Certification or licensure is not required, although DANB certification is available.

- *Community Health Worker (CHW):*
  CHWs help improve health outcomes in their communities by offering support and services based on shared backgrounds. To become a certified CHW in PA, individuals need to complete 75 hours of training from a PA Certification Board (PCB)-accredited provider, have one year of relevant work experience, and provide a signed job description. While certification is regulated by the PA Certification Board, it is not required for employment and does not need to be maintained.

The diverse roles within the dental care continuum are essential for providing comprehensive oral healthcare. Direct care providers, community-based support, and other professionals collaborate to meet the varied needs of patients. However, workforce shortages and vacant positions exacerbate the challenges faced by both patients and providers. One in three dentists reports not having full appointment schedules due to difficulties in staffing, leading to an estimated 11% reduction in dental practice capacity.[x, xi] These shortages contribute to increased demand, placing the dental workforce at risk of burnout and career dissatisfaction. This situation not only makes it harder for patients to access care but also increases healthcare costs, hinders our response to potential public health emergencies, and exacerbates health disparities. [xii]

Strategic Approaches to Building a Sustainable Workforce

A foundational first step in supporting the dental workforce is elevating the Pennsylvania Department of Health's Oral Health Program. The Pennsylvania State Oral Health Program, housed within the Bureau of Health Promotion and Risk Reduction, leads the effort in addressing the spectrum of oral health needs in the Commonwealth. The program facilitates collaboration between governmental agencies, external partner organizations, and stakeholders to develop and implement the goals of the Pennsylvania Oral Health Plan 2020-2030, which includes the identified priority of building a sufficient public and private oral health workforce. Designated funding would secure the infrastructure necessary to fulfill the 10 Essential Public Health Services to Promote Oral Health as defined by the Association of State and Territorial Dental Directors (ASTDD). To achieve equity and optimal oral health, this framework informs public policies, systems, and communities on methods to protect vulnerable populations and remove barriers resulting in health inequities. A strengthened Oral Health Program can better assess and address the factors influencing a community's oral health by establishing and implementing continuous surveillance systems like screening surveys that can adequately investigate and evaluate oral health needs. It is also best positioned to develop and mobilize resources to communicate policy needs and ensure safe oral health practices and build an oral health infrastructure that increases access to quality and culturally humble care.

At this time, Pennsylvania does not allocate dedicated state funding specifically for the oral health program. This recommendation intends to build upon the vital work already being done to achieve a healthy Pennsylvania for all. The Pennsylvania Department of Health oral disease prevention and workforce programs are currently federally funded through the Centers for Disease Control (CDC) and Health Resources and Services Administration (HRSA). The CDC Oral Health Cooperative Agreements and HRSA Oral Health Workforce grants are opportunities for states and territories to access funding that can enable necessary prevention and surveillance programs as well as funding for innovative workforce solutions that target dental health professional shortage areas (dHPSA).[xiii,xiv] Multi-year funding has shown a positive return on investment for states improving their workforce and access to care.[xv] The cooperative agreements through CDC and HRSA are extremely competitive and parity does not exist across states. Dedicated state funding would improve the oral health status of Pennsylvanians by increasing certainty for the continuation of existing programs aimed at improving access to providers and preventative services.

Strategic approaches to building a sustainable oral health workforce are essential for addressing the significant loss of dental professionals during the COVID-19 pandemic, meeting the growing demand for dental care, and enhancing overall public health. Pennsylvania must engage in proactive workforce planning that addresses the needs of the current dental workforce while seizing opportunities to develop the future workforce. By leveraging legislative and administrative changes, financial resources, and educational opportunities, supported by the dedicated leadership of the PA DOH's Oral Health Program, the state can establish a resilient and effective oral health infrastructure (see full table in Appendix, Table 1).

Increase the Available Supply of Oral Health Providers

PA's oral health workforce continues to decline, creating a pressing need to build a sustainable network of dental providers capable of meeting the state's disease burden and ensuring access to quality dental care. Both short- and long-term strategies are needed to address this challenge, including administrative changes, financial supports, and education opportunities to retain actively practicing providers, recruit providers in the state, and increase the number of individuals pursuing dental careers.

Recommendations:

POLICY	• Implement a dual insurance enrollment and credentialing process for new dental professionals • Increase license reciprocity opportunities through an interstate dental licensure compact • Expand available provider types delivering preventive and restorative treatment • Reduce barriers for foreign-trained dentists to be licensed in PA
FINANCIAL	• Increase dedicated funding to dental professions in the Primary Care loan repayment program • Increase flexibility for loan repayment programs to include current students • Remove tax on state awarded loan repayment dollars • Allocate funding to increase the number of dental education programs in underserved areas • Develop oral health focused scholarship opportunities
EDUCATIONAL	• Increase local health workforce pipeline development programs • Increase number of Pennsylvania applicants to dental school • Increase local dental training opportunities through Career and Technology Education (CTE) programs and community colleges • Develop programs that expose students to dental occupations • Support interested candidates through mentoring, tutoring, test prep, etc.

Policy Recommendations

Policy changes aimed at increasing the available supply of oral health providers must address undue administrative burdens that create a barrier for prospective individuals to participate in Pennsylvania's dental workforce. These solutions can be simple like developing a dual enrollment and credentialing process for new dental professionals that streamline their participation in commercial and public dental insurance. This would provide an efficient pathway to practice to more intensive regulatory considerations.

Interstate occupational licensure compacts currently exist for 15 professions, including dental, with two more in development.[xvi] The Dentist and Dental Hygienist (DDH) Compact reached activation status in 2024 and currently includes 10 participating states. Pennsylvania is one of two additional states with pending legislation that, if passed, would permit them to join the DDH Compact. Implementing and participating in a dental licensure compact eases the ability for providers to move between states while decreasing the excess administrative paperwork

and costs associated with securing and maintaining licenses in multiple states. By entering into a dental licensure compact, Pennsylvania could simplify the license reciprocity process and broaden the pool of available dental professionals.

PA currently uses four main provider types (DAs, EFDAs, RDHs, dentists/dental specialists) in the prevention and treatment of dental diseases. There was an expansion of licensed dental provider types in other states to specifically address workforce shortages in underserved communities and rural areas, similar to nurse practitioners or physician assistants. Dental therapists, currently authorized to work in 14 states under the supervision of a dentist, are licensed dental providers who provide routine care that compliments the work of dental hygienists and permits dentist to focus on more intensive services.[xvii] The implementation of an additional dental provider can ease the current demand on dentists and create an additional rung on the dental career ladder.

Another method to increase the pool of available providers in PA includes taking steps to reduce barriers for foreign-trained dentists. This can help integrate these skilled professionals into the workforce more effectively, leveraging their expertise to alleviate shortages. To practice in PA, a foreign-educated dentist is required to obtain a degree from an American Dental Association Commission on Dental Accreditation (CODA) dental education program.[xviii] Advanced standing programs are a pathway for foreign-trained dentists to enter dental school in the second or third year to obtain a degree. Of the 65 dental schools in the United States, 32 offer an advanced standing program. This includes the three PA-based dental schools.[xix] Foreign-trained dentists have the potential to increase the diversity of the workforce, while caring for underrepresented communities and contributing to the expertise of the dental profession; however, the pathway to practice is narrow and expensive.[xx]

Financial Recommendations

Enhanced financial support is pivotal to bolstering the oral health workforce and addressing critical shortages. The average education debt for predoctoral senior dental students is $312,700.[xxi] Increasing dedicated funding for dental professions through initiatives such as the Primary Care Loan Repayment Program administered by the PA DOH's Primary Care Office can significantly ease the financial strain on new and existing dental professionals. The Primary Care Loan Repayment Program provides educational loan repayment to primary care practitioners that work in designated Health Professional Shortage Areas or serve a minimum of 30% low-income patients. Decreased for 2023, dental hygienists are now eligible for up to $48,000 and dentists up to $80,000 for a two-year commitment.[xxii] In the four-year period between 2019-2022, dental providers represented 23.2% of total awardees.[xxiii] In their 2023 report on rural dental health access in PA, the Legislative Budget and Finance Committee (LBFC) suggested changes to the General Assembly on ways to improve loan repayment to incentivize providers, including shifting eligibility to include current students as well as offering additional funds for current providers to continue practicing in underserved areas, or by including part time service requirements over decreased reimbursement amounts. By expanding the flexibility of loan repayment programs to include current dental students and ensuring that loan repayment awards are not subject to Pennsylvania state tax, we can alleviate some of the financial barriers that deter Pennsylvania residents from pursuing or continuing careers in dentistry.[xxiv] Developing targeted oral health-focused

scholarship opportunities will further incentivize students to pursue dental careers by reducing their financial burden and encouraging them to enter fields with high community impact. Moreover, allocating funds to increase the number of dental education programs in underserved areas will enhance access to dental training for students from diverse geographic locations. This supports local workforce development and addresses regional disparities in provider availability.

Educational Recommendations

Enhancing the pipeline of dental professionals also involves funding efforts to expand and diversify the locations of dental education programs across the state. Although research on the topic is still emerging, there is early evidence to suggest that there is a correlation between the location of origin of dental students and where they ultimately decide to practice after graduation. Currently, with a concentration of training programs in non-rural areas, students from rural regions face significant barriers to accessing dental education, contributing to a disproportionate number of providers practicing in urban settings. Increasing local dental training opportunities through community colleges and Career and Technical Education (CTE) programs and supporting programs that expose students to dental occupations early on can foster a more robust and geographically balanced dental workforce.

Expanding educational opportunities is critical to increasing the number of individuals entering the oral health workforce pipeline. PA produced an average 125,000 high school graduates annually in the past 5 academic years; over 62% went onto some form of postsecondary education including college/university specialized associate degree-granting institutions, and non-degree postsecondary programs.[xxv] These numbers are positive for the future potential of PA's workforce; however, the majority of students are often undecided upon entry to college or change their major before they graduate. Data from the American Dental Education Association (ADEA) show that PA only produced 301 total applicants to US dental schools and less than 9% of applicants to PA's dental schools are in-state applicants. To address this, it is essential to establish comprehensive pipeline programs that offer mentoring, tutoring, and test preparation to guide and support students interested in dental careers. These programs should also facilitate connections between high school students, community colleges, rural universities, and dental schools to create clear, accessible pathways into dental education. Supporting the development of these pathways will help to increase the number of local applicants to dental schools and ensure that more students from diverse backgrounds are prepared and motivated to enter the field.

A dental assistant is considered an entry-level role in the dental field, often serving as a starting point for individuals interested in oral health careers. By providing on-the-job training in communities lacking formal dental assisting programs, we can build a local workforce and create entry points for individuals interested in advancing their careers in dentistry. Together, these efforts to enhance educational support and training opportunities will help to cultivate a larger, more diverse pool of dental professionals, addressing current shortages and improving access to care across the state.

Increase the Reach of Existing Oral Health Professionals

Increasing the number of individuals entering dental career pathways is crucial, but it will take several years to realize the effects due to the length in training. While we grow the pipeline of dental providers, we need to support those currently in the field to deliver care without compromising quality.

Recommendations:

POLICY	• Develop teledentistry and mobile dentistry practice guidelines • Expand scope of practice for RDHs and PHDHPs • Incentivize value-based care models
FINANCIAL	• Reimburse all preventive dental services for all provider types • Allow certified community health workers (CCHW)to bill for oral health related services
EDUCATIONAL	• Develop a sustainable pathway for certified school dental hygienists (CSDH)

Policy Recommendations

One of the positive lasting impacts from the COVID-10 pandemic is the increased acceptance of using telehealth practices to overcome traditional barriers to access, such as geographical distance, mobility issues, and limited availability of services or providers in rural or underserved areas. Teledentistry enables dental providers to consult, diagnose, and provide follow-up care remotely. Capitalizing on the potential of teledentistry to increase access to routine care can in turn permit dental providers to dedicate office time to complex procedures. Per PA Act 42 of 2024, there is parity of covered dental services delivered through telehealth for in network providers of public health plans, but this does not extend to services completed by out of network providers. There are also no practice regulations in the PA Dental Law related to teledentistry. Similarly, mobile dentistry extends the reach of the dental providers by connecting them to communities that otherwise may not be able to access a dental office. Developing practice regulations for teledentistry and mobile dentistry will ensure that quality care is consistent with the current practice regulations while delivering clear guidelines for dental providers on how to incorporate this into their practice.

The role of a dental hygienist as part of the dental team is to work with other health professionals in addressing oral disease through assessment, diagnosis, care delivery and education.[xxvi] Despite research indicating that a broader scope of practice for dental hygienists is associated with significant improvements in oral health outcomes, there is a wide variation in how states choose to license the scope of practice for dental hygienists.[xxvii] In PA, registered dental hygienists are licensed professionals that work under the supervision of a licensed dentist in the clinic setting. Dental hygienists do have the opportunity to obtain a certification as a public health dental hygiene practitioner (PHDHP), which enables them to provide dental care in defined public health settings such as schools, correctional facilities, and long-term care settings without being supervised by a licensed dentist.[xxviii] In a comparison of allowable tasks for dental hygienists in public health settings, PA PHDHPs are permitted to perform all of the identified tasks in a RDH scope of practice other than the use of local anesthesia and the placement of subgingival agents, without prior examination by a dentist.[xxix] Expanding the ability for dental hygienists to address oral hygiene and preventive

care to the full extent for which they were educated and trained, especially without supervision of a licensed dentist in the public health setting, has the potential to connect the workforce pipeline directly to the community and keeps the dentist in the clinic setting to perform more complex care. In 2023 a new Pennsylvania law, Act 55, changed the scope, allowing PHDHPs to perform mandated school dental screenings. It was estimated that using a PHDHP to complete the mandated school dental screening could allow 170 patients more per year to be seen by a dentist in the clinic.[xxx]

Value-based care models incentivize dental providers by focusing on the prevention of dental disease and delivery care that keeps patients healthy.[xxxi] Shifting from a treatment model that incentivizes procedure volume to one that prioritizes disease prevention can reduce costly overhead associated with more complex dental treatments and restorative procedures.[xxxii] Additionally, decreasing the disease burden in a community might decrease patient demand for dental services and potentially reduce burnout among many dental providers.

Financial Recommendations

Despite being largely preventable, dental disease remains the most chronic condition among both children and adults. [xxxiii] Lack of access to preventive oral health care increases the disease burden of community which increases the demand for the services of licensed dentists or dental specialists to provide more complex and costly treatment interventions. Expanding provider types and the services eligible for reimbursement is another strategy to improve dental health. For example, CHWs are integral in connecting individuals to a dental home, which in Pennsylvania can take an average of 55 days for a first-time patient visit.[xxxiv] In addition to their role in helping individuals navigate the health care system, CHWs also provide oral health education that promotes healthy oral hygiene habits. Some states, like Minnesota, permit trained CHWs to be reimbursed for applying fluoride varnish under the supervision of a licensed medical professional.[xxxv]

Educational Recommendations

Using schools as an access point for health care services is a common intervention to overcome barriers to access to care for students. Certified school dental hygienists (CSDH) are unique to the dental workforce in that they require an Educational Specialist Certificate in Dental Hygiene issued by the PA Department of Education well as maintaining licensure requirements established by the PA State Board of Dentistry.[xxxvi] They play a critical role in delivery of clinical services and oral health education; while also provide career exposure as the biproduct of a dental hygiene services program in the school setting. Every school district in the state is eligible to hire a CSDH and provide a dental hygiene services program. However, there is an entry barrier for schools and dental hygienists due in part because there are no certification programs in PA for school dental hygienists. While the Pennsylvania Department of Health's Division of School Health does permit a pathway through emergency certification, interested providers are still required to participate in a practicum supervised by a CSDH.[xxxvii] The lack of certification programs and the dwindling availability of CSDHs for supervision will likely eliminate one arm of the oral health workforce rather than extending it.

Boost Retention Rates for Current Oral Health Providers

Strategies to expand the reach of dental providers through increased practice flexibilities must be balanced with efforts to improve the oral healthcare infrastructure and effectively encourage professionals to remain actively practicing in the state. An analysis completed by the Pennsylvania General Assembly's Legislative Budget and Finance Committee found that nearly 40% of dentists that left the state since 2015 moved to neighboring states.[xxxviii]

Recommendations:

POLICY	• Reform insurance reimbursement models • Improve the adult dental Medicaid benefit • Reduce administrative burdens for providers
FINANCIAL	• Increase provider reimbursement rates • Enhance reimbursement rates for underserved population groups • Implement a dental loss ratio, which would require insurers to spend a specific percentage of profits on care • Transition to a value-based care model • Subsidize new practice locations in geographically underserved areas
EDUCATIONAL	• Elevate the dental assistant career through certification requirements • Develop targeting trainings to support providers and optimize dental team coordination

Policy Recommendations

Reforming insurance reimbursement models that empower providers and decrease the burden of clerical tasks are two policy considerations to reduce provider burnout and improve retention rates.[xxxix]

In 2011, the comprehensive adult dental Medicaid benefit was removed from the state budget. This led to the loss of coverage for many critical services including crowns and caps. Before these cuts, a dental provider obtained prior authorization from Medicaid to provide the services needed to restore oral health, similar to most private insurance. In 2011, the benefit limit exception (BLE) was enacted as cost cutting measure and removed these services. As a result, dental providers have turned to extractions, rather than a full scope of restorative care. The BLE process not only limits the covered services dentists can provide but adds a layer of administration that burdens the provider.

Lack of a comprehensive Medicaid dental benefit also impacts how dental professionals are trained. Dental schools rely on patients enrolled in Medicaid to meet their procedural requirements to graduate. Since the 2011 Medicaid changes, coverage only includes extractions to treat severe disease, and dentists have less opportunity to learn how to restore and thus preserve teeth. This impacts the quality of the workforce entering the field.

Financial Recommendations

Just as there is a myriad of internal and external factors that impact an individual's choice to pursue an oral health profession, there are also many identifiable factors that impact how and where they practice with educational debt being a large consideration. U.S. dental school seniors graduate with an average debt of $312,700, an increase of 10% from 2018.[xl] Paired with a sustained rise in healthcare costs and the high overhead costs for dental practice sites, it can be difficult to incentivize dental providers to participate with dental insurers; 16% report not accepting any public or commercial insurance. The state Medicaid reimbursement rate is 56% of commercial rates and is at least 15% lower than the reimbursement rates in four of the six states that border Pennsylvania.[xli] As a result, only 23% of dental providers licensed in PA participate with Medicaid. Oral health care is essential primary care, but without meaningful investment it is becoming a cash for care business.

Educational Recommendations

In order to practice, the majority of dental provider types in Pennsylvania require the completion of a training program accredited by the American Dental Association's Commission of Dental Accreditation (CODA). This includes expanded function dental assistants, dental hygienists, dentists, and dental specialists. The establishment of clear guidelines on professional requirements, including certification or licensure, provides knowledge and competency standards that elevate the quality of care. This also has the potential to attract individuals seeking a profession with portability and potential for advancement.

A specific recommendation is to elevate the dental assistant career through certification requirements. Dental assistants, while a critical part of the dental team, are not licensed or certified in Pennsylvania. There is no education or training requirement for dental assistants to work in this role. The role of a dental assistants is to prepare patients, sterilize equipment, provide chairside support and assist with basic supportive procedures under the direct supervision of a licensed dentist. To practice to the full extent possible, dental assistants can obtain a certification from the Dental Assisting National Board (DANB) by successfully passing the Radiation Health Safety (RHS) exam which is required by the Pennsylvania State Board of Dentistry to perform dental radiographic procedures. A limited survey of DANB-RHS certified assistants in Pennsylvania included testimony on frustrations related to their position as a dental assistant, responses included pay, feeling overworked and undervalued, as well as a lack of a career pathway. In a national survey completed by DANB, certified dental assistants (CDA) earned $4 more and reported higher levels of job satisfaction compared to non-certified dental assistants.[xlii] Post-secondary students pursuing dental assisting in Pennsylvania do have the opportunity to earn DANB CDA credentials after graduating from a CODA-accredited dental assisting program.[xliii]

Targeted Pipeline Strategies by Provider Type

Strengthening the Oral Health Program, increasing the available supply of oral health providers, enhancing the reach of existing professionals, and boosting retention rates are strategies aimed at improving the dental workforce pipeline through comprehensive policy, financial, and educational initiatives. These approaches address the broader infrastructure supporting oral health care providers. To effectively complement these efforts, it is also crucial to develop specific strategies designed to elevate the different oral health professions to increase visibility for students exploring healthcare careers and, improve career satisfaction and longevity for practicing oral health providers (see Table 2).

The dental provider shortages in PA impact the oral health workforce pipeline. An inadequate number of providers limits opportunities for students to be exposed to the dental profession. Early exposure to potential career paths is crucial in shaping students' interests and decisions about their future careers. Recognizing this, the Pennsylvania Department of Education's Academic Standards for Career Education and Work begin in third grade.[xliv] Oral health stakeholders and dental professionals can partner with schools and community organizations like the Pennsylvania Area Health Education Centers (PA-AHEC) to offer exposure to the different roles within the dental team and mentorship on how to pursue a dental career. Exposure must be paired with a viable path for students to pursue. There is a concern that students interested in pursuing a dental career may be deterred by geographic or financial barriers. Creative solutions can be used to extend current educational settings, including establishing new training programs, apprenticeships, dual-enrollment partnerships with community colleges, and accelerated training pathways.

Additionally, increasing access to ongoing training opportunities is essential to the effort of improving career satisfaction and longevity for practicing oral health providers. The National Association of Community Health Centers (NACHC) compiled a report exploring the impact of the COVID-19 pandemic and found that professional growth was ranked as the third most reason for staff departure.[xlv] An effective oral health workforce pipeline needs to include accessible opportunities for providers to further develop their skills not only to stay current with industry advancements but also to encourage professional growth and movement along the dental career ladder.

Conclusion

Pennsylvania's oral health workforce is at a critical juncture. The COVID-19 pandemic exacerbated existing challenges, exposing significant weaknesses in the state's healthcare infrastructure, particularly within the dental sector. The Pennsylvania Oral Health Plan 2020-2030 outlines a comprehensive approach to addressing many of these associated challenges, emphasizing the importance of collaboration among oral health advocates, dental professionals, educators, and policymakers.

Pennsylvania can strengthen its dental workforce pipeline by ensuring a sufficient supply of providers, maximizing the reach of existing professionals, and improving retention rates. To achieve these goals, it is crucial to empower the Pennsylvania Department of Health's Oral Health Program. Additionally, addressing financial barriers, improving educational pathways, and adopting innovative solutions like telehealth and mobile dentistry will be essential in building a sustainable and resilient oral health workforce.

By embracing these strategies, Pennsylvania can address its current workforce shortages and lay the groundwork for a future where all residents have access to quality oral health care. This will ultimately lead to better health outcomes, reduced disparities, and a stronger healthcare system overall.

Appendix

Table 1: Methods To Build a Sustainable Oral Health Workforce

Goal	Levers to impact change:		
	Policy	**Financial**	**Educational**
Increase the Number of Oral Health Providers Practicing in Pennsylvania	• Implement a dual insurance enrollment and credentialing process for new dental professionals • Increase license reciprocity opportunities through an interstate dental licensure compact • Expand available provider types delivering preventive and restorative treatment • Reduce barriers for foreign-trained dentists to be licensed in PA	• Increase dedicated funding to dental professions in the Primary Care loan repayment program • Increase flexibility for loan repayment programs to include current students • Remove tax on state awarded loan repayment dollars • Allocate funding to increase the number of dental education programs in underserved areas • Develop oral health focused scholarship opportunities	• Increase local health workforce pipeline development programs • Increase number of Pennsylvania applicants to dental school • Increase local dental training opportunities through CTE programs and community colleges • Develop programs that expose students to dental occupations • Support interested candidates through mentoring, tutoring, test prep, etc.
Increase the Reach of Existing Oral Health Professionals	• Develop teledentistry and mobile dentistry practice guidelines • Expand scope of practice for RDHs and PHDHPs • Incentivize value-based care models	• Reimburse all preventive dental services for all provider types • Allow certified community health workers (CCHW) to bill for oral health related services	• Develop a sustainable pathway for certified school dental hygienists (CSDH)

Increase Retention of Current Oral Health Providers	• Reform insurance reimbursement models • Improve the adult dental Medicaid benefit • Reduce administrative burdens for providers	• Increase provider reimbursement rates • Utilize enhanced reimbursement rates for underserved population groups • Implement a dental loss ratio • Transition to a value-based care model • Subsidize new practice locations in geographically underserved areas	• Elevate the dental assistant career through certification requirements • Develop targeting trainings to support providers and optimize dental team coordination

Table 2: Targeted Strategies by Provider Type

Certified Community Health Worker (CHW):	
Role: A trusted individual who contributes to improved health outcomes in the community. CHWs serve the communities in which they reside or communities with which they may share ethnicity, language, socioeconomic status, or life experiences. The term "community health worker," includes but is not limited to other titles such as outreach worker, patient navigator, and promotores de salud. **Requirements:** • **Education Requirement:** 75 total hours of education from a Pennsylvania Certification Board-accredited CHW training provider gained within the last five years • **Work Experience:** One (1) year of full-time volunteer or paid employment or 2000 hours of part-time or paid employment as a community health worker • **Current Volunteer/Job Description:** Copy of current community health worker volunteer/job description, obtained from current organization, and which must be signed by both the applicant and their immediate supervisor • **One-The-Job Supervision:** 60 hours of on-the-job supervision of qualifying work experience specific to the domains **Regulating Authority:** Pennsylvania Certification Board *NOTE: Individuals can work as a CHW without obtaining certification and are not required to maintain certification once it has been obtained.*	**Recommended Actions:** • Require certifications for all individuals working in the role of CHW • Require maintenance of certification and/or recertification • Permit CCHWs, or organizations that employ CCHWs, to be reimbursed for delivery of oral health services include education and referrals to a dental home
Dental Assistants (DA):	
Role:	**Recommended Actions:** • Require certification of dental assistants

<table>
<tr><td>Perform duties as assigned under the direct supervision of a dentist including chairside assistance, sterilizing equipment, and performing x-rays*

Requirements:
• Pennsylvania has no defined rules or regulations as it relates to defining requirements or duties for dental assistants.
• *DAs are required to pass the Dental Assisting National Board (DANB) Radiation Health and Safety (RHS) exam in order to operate radiograph equipment or perform radiological procedures.

Regulating Authority:
Dental assisting does not require certification or licensure in Pennsylvania.
Dental Assisting National Board (DANB) does offer dental assisting certifications.

NOTE: Dental assistants are not required to obtain certification or licensure to perform this role.</td><td>• Increase community-based access to cost effective training opportunities and certification programs including increases the number of dental assisting programs being offered at career and technology centers
• Develop online radiology exam preparation course to increase pass rate of Dental Assisting National Board Radiation Health and Safety exam for DAs not connected to a formal training program</td></tr>
<tr><td colspan="2">Expanded Function Dental Assistant (EFDA):</td></tr>
<tr><td>Role:
Performs functions under the supervision of a licensed dentist, such as coronal polishing, placing and condensing amalgam restoration and other restorative materials, fluoride treatments, including fluoride varnish, placing and removing rubber dams among other functions

Requirements:
• Education Requirement: Graduate of board-approved program - Applicant must complete one of the following:
○ (i) Graduation from a board-approved dental assistant program at a 2-year college or other institution accredited or provisionally accredited by an accrediting agency approved by the United States Department of Education Council on Postsecondary Accreditation which offers an associate degree
○ (ii) Graduation from a dental hygiene school which required the successful completion of at least 75 hours of clinical and didactic instruction in restorative functions accredited or provisionally accredited by the Commission on Dental Accreditation (CODA) of the American Dental Association
○ (iii) Completion of a board-approved EFDA program, which offers a certificate or diploma, consisting of at least 200 hours of clinical and didactic instruction from a dental assisting program accredited by one of the following:
▪ (a) The Commission on Dental Accreditation (CODA) of the American Dental Association
▪ (b) An accrediting agency approved by the United States Department of Education Council on Postsecondary Accreditation whose expanded function educational standards are approved by the board
• Examination Requirement: Candidates for certification as an expanded function dental assistants shall pass a written examination acceptable to the board</td><td>Recommended Actions:
• Public awareness campaign around the EFDA role and career ladder opportunities
• Increase access to EFDA training programs</td></tr>
</table>

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- **Continuing Education:**
  - 3 Hours (for initial licensure)
    - Applicants must complete three hours of board-approved continuing education in child abuse recognition and reporting for initial licensure.
  - 10 Hours (when renewing license)
    - 10 hours of continuing education is required for biennial renewal of license. Of those 10 hours, two hours must be board-approved continuing education in child abuse recognition and reporting.

Regulating Authority:
Pennsylvania State Board of Dentistry

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<tr><td colspan="2">Registered Dental Hygienist (RDH):</td></tr>
<tr><td>

Role:
Perform routine services to clean teeth, take dental x-rays, and provide other dental related services under the supervision of a dentist

Requirements:
- **Education Requirement:** Associate degree - Candidates for licensure as dental hygienists shall submit a certification of graduation from a dental hygiene school accredited or provisionally accredited by an approved United States Department of Education-recognized regional accrediting agency or the Commission on Dental Accreditation (CODA) of the American Dental Association.
- **Examination Requirement:** Two examinations Required - Candidates for licensure as a dental hygienist shall pass the National Board Dental Hygiene Examination (written examination) and the dental hygiene clinical examination administered by one of the following:
  1. The North East Regional Board of Dental Examiners, Inc. (NERB)
  2. The Southern Regional Testing Agency, Inc. (SRTA)
  3. The Western Regional Examining Board (WREB)
  4. The Central Regional Dental Testing Service, Inc. (CRDTS)
  5. The Council of Interstate Testing Agencies, Inc. (CITA)
- **Continuing Education:**
  - 3 Hours (for initial licensure)
    - Applicants must complete three hours of board-approved continuing education in child abuse recognition and reporting for initial licensure.
  - 20 Hours (when renewing license)
    - 20 hours of continuing education is required for biennial renewal of license. Of those 20 hours, two hours must be board-approved continuing education in child abuse recognition and reporting.

Regulating Authority:
Pennsylvania State Board of Dentistry

</td><td>

Recommended Actions:
- Develop dual enrollment or advanced pathway opportunities utilizing partnerships between high schools and dental hygiene programs

</td></tr>
<tr><td colspan="2">Public Health Dental Hygiene Practitioner (PHDHP):</td></tr>
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<tr>
<td>Role:
A licensed dental hygienist who may perform educational, preventive, therapeutic and intra-oral procedures which the hygienist is educated to perform, and which require the hygienist's professional competence and skill, but which do not require the professional competence and skill of a dentist without the authorization, assignment or examination of a dentist, and who is certified by the state board of dentistry as having satisfied the requirements

Requirements:
• Degree Requirement: Same as RDH
• Examination Requirement: Same as RDH
• Experience: 3,600 hours - To qualify for certification as a public health dental hygiene practitioner, the applicant must provide to the board a certification statement signed by a licensed dentist verifying that the dental hygienist has completed 3,600 hours of practice as a licensed dental hygienist under the supervision of the licensed dentist.
• Continuing Education:
o When renewing license:
▪ 5 hours - A public health dental hygiene practitioner shall complete 5 of the required 20 hours of continuing education (to comply with dental hygienist requirements) in public health-related courses.

Regulating Authority:
Pennsylvania State Board of Dentistry</td>
<td>Recommended Actions:
• Increase use of PHDHPs to integrate dental care into medical settings, including Federally Qualified Health Centers (FQHCs), Rural Health Clinics (RHCs), hospitals, Women, Infants and Children (WIC) offices, local health departments, etc.</td>
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<tr>
<td colspan="2">Certified School Dental Hygienist (CSDH):</td>
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<td>Role:
Dental hygienist with instructional certificate to address the dental care needs of school-aged children in school settings that have a dental hygiene services program. Certified school dental hygienists are permitted to develop and present educational and preventative dental health programs and services to students; provide supplemental instruction in the care and reservation of teeth, dental appliances, and dental hygiene; and perform dental screenings to students in lieu of a dentist's exam.

Requirements:
• License Requirement: Must hold a valid dental hygiene license (see requirements for dental hygienist above.)
• Certification Requirement: Educational Specialist - Dental Hygienist Certificate issued by the Pennsylvania Department of Education
o Bachelor’s degree
o Good moral character and U.S. citizenship
o Transcripted coursework from an accredited college/university to meet the competencies stated in the guidelines (Specialist-Dental Hygienist K-12):
▪ Methods of health/health care instruction
▪ Organization, administration, law and operation of public schools</td>
<td>Recommended Actions:
• Permit schools to bill Medicaid to create sustainable funding for oral health services delivered in the school setting by CSDHs
• Establish at least one virtual program through PA State System of Higher Education (PASSHE) that offers the required transcripted coursework necessary to earn the Dental Hygienist K-12 Educational Certificate
• Increase the number of school districts that utilize a dental hygiene services program</td>
</tr>
</table>

▪ Adolescent and child development ○ A supervised practicum (at least 60 hours) serving as a school dental hygienist. The practicum may be met by working on a Pennsylvania public long-term emergency certificate under a certified education specialist - school dental hygienist. If the Local Education Agency (LEA) does not have a licensed hygienist, the principal may supervise and a certified hygienist from a neighboring district may mentor the candidate. PDE has a list of certified hygienists willing to mentor. **Regulating Authorities:** Pennsylvania State Board of Dentistry and Pennsylvania Department of Education	
Dentist/Dental Specialists:	
Role: A licensed healthcare professional who diagnoses, treats, operates on, or prescribes for any disease, pain or injury, or regulates any deformity or physical condition, of the human teeth, jaws, or associated structures **Requirements:** • **Degree Requirement:** Doctor of Dental Surgery or Doctor of Dental Medicine- Candidates for licensure as dentists shall submit certification of graduation from a dental school accredited or provisionally accredited by the Commission on Dental Accreditation of the American Dental Association. • **Examination Requirement:** Two examinations required - Candidates for licensure as a dentist shall pass the National Board Dental Hygiene Examination (written examination) and the dental hygiene clinical examination administered by one of the following: 1. The North East Regional Board of Dental Examiners, Inc. (NERB). 2. The Southern Regional Testing Agency, Inc. (SRTA). 3. The Western Regional Examining Board (WREB). 4. The Central Regional Dental Testing Service, Inc. (CRDTS). 5. The Council of Interstate Testing Agencies, Inc. (CITA). • **Experience:** Satisfied through completion of degree requirement ○ Candidates for licensure as dentists shall show compliance with this requirement by submitting certification of graduation from a dental school accredited or provisionally accredited by the Commission on Dental Accreditation of the American Dental Association. ○ Candidates for licensure who received their professional education outside the United States in a nonaccredited school may satisfy the education requirement by submitting their credentials to an accredited or provisionally accredited school and obtaining additional preclinical and clinical training that will lead to the awarding of the D.M.D. or D.D.S. degree by that school. • **Continuing Education:** ○ 3 Hours (for initial licensure)	**Recommended Actions:** • Focus on rural recruitment of future providers or develop rural focused training program location • Modify loan repayment programs and public service loan forgiveness to decrease administrative burdens, eliminate associated taxes, and weight incentives based on service location or population serviced • Increase capacity of current dental programs located in the state

▪ Applicants must complete three hours of board-approved continuing education in child abuse recognition and reporting for initial licensure. ○ 30 Hours (when renewing license) ▪ 30 hours of continuing education is required for biennial renewal of license. Of those 30 hours, two hours must be board-approved continuing education in child abuse recognition and reporting. **Regulating Authority:** Pennsylvania State Board of Dentistry	

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