Pennsylvania Oral Health Plan 2020-2030

Oral Health Program

August 2020



I. Acronyms	3
II. Message from the Pennsylvania Department of Health	4
III. Acknowledgements	5
IV. Executive Summary	6
V. Introduction	7
VI. Background Oral Health in America Oral Health in Pennsylvania	7 7 8
VII. Plan Development/Stakeholder Involvement	11
VIII. The Pennsylvania State Oral Health Plan 2020-2030 Framework	13
IX. The Pennsylvania State Oral Health Plan 2020-2030 PRIORITY A Access, Prevention and Education	16
PRIORITY B Oral Health Workforce PRIORITY C Infrastructure Improvement	19 21
X. Future Considerations	23
XI. Citations	24
XII. Appendices Appendix A – Oral Health Surveillance Indicators for Pennsylvania	26 26
Appendix B - Healthy People 2020 Oral Health Objectives	29
Appendix C – Pennsylvania Oral Health Plan Logic Model Appendix D – Association of State and Territorial Dental Directors Essential Denta Health Services	31 I Public 32
Appendix E - Spring 2019 Stakeholder Survey	33
Appendix F - Fall 2019 Stakeholder Survey	37

I. Acronyms

Abbreviation	Explanation
ADA	American Dental Association
ASTDD	Association of State and Territorial Dental Directors
CDC	Centers for Disease Control and Prevention
CHIP	Children's Health Insurance Program
CWF	Community Water Fluoridation
DHPSA	Dental Health Professional Shortage Area
FQHC	Federally Qualified Health Center
HRSA	Health Resources and Services Administration
MCO	Managed Care Organization
Plan	Oral Health Plan
DEP	Pennsylvania Department of Environmental Protection
DHS	Pennsylvania Department of Human Services
DOH	Pennsylvania Department of Health
PCOH	Pennsylvania Coalition for Oral Health
PDE	Pennsylvania Department of Education
RHC	Rural Health Clinic
SHIP	State Health Improvement Plan
SOHP	State Oral Health Program
SOHSS	State Oral Health Surveillance System
SSP	School Sealant Program

II. Message from the Department of Health

Dear Pennsylvanians:

Oral disease is a preventable public health issue that affects overall health. Despite many recent improvements in oral health both in the United States and Pennsylvania, profound oral health disparities unfortunately still exist for many groups related to their socioeconomic status, education level, race, ethnicity, geographic location, health care status and age. Such disparities require actions and strategies that directly address the common social determinants of health known to negatively impact economic advancement and individual health, productivity, social isolation, and self-esteem, among many other variants. Oral health inequities can be addressed through integration, collaboration, education and focused planning and action among and between community leaders, partners, stakeholders, decision-makers, healthcare providers and all Pennsylvanians.

Our progress toward better oral health outcomes over the last five years has been nothing short of astounding. Pennsylvania now has a sturdy network of oral health stakeholders to communicate the needs and potential opportunities in the Commonwealth. We must not backstep in this progress, but ensure we continue to move forward in achieving complete health for Pennsylvanians.

It is my pleasure to share with you the Pennsylvania 2020-2030 Oral Health Plan (Plan). The Plan is intended to be used as a blueprint by all who share the vision of coordinating efforts to combat oral disease in the Commonwealth of Pennsylvania. While the Pennsylvania Department of Health (DOH) and its key partner, Pennsylvania Coalition for Oral Health (PCOH), led the Plan development efforts, significant time, talents and resources were committed over the past 18 months by many stakeholders towards the formation of the Plan. Thank you!

A core component of the Plan is in its collaborative development and planned implementation. Not one organization, coalition or state agency can work alone to combat oral disease. Private and public approaches must focus on developing the resources, skills and opportunities to implement strategies that will positively affect oral health status.

Please review this Plan and find your role in its implementation. We need you to join us to be effective and successful in this endeavor. I encourage all Pennsylvanians to see how the strategies within the Oral Health Plan can help improve not only oral health but overall health in their community.

Dr. Rachel Levine Secretary of Health

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III. Acknowledgements

The Pennsylvania Department of Health (DOH) thanks the Oral Health Core Stakeholder Team and Pennsylvania Coalition for Oral Health (PCOH) for their vision, leadership and expertise in crafting this plan in the fight against oral disease.

DOH also acknowledge the more than 100 individuals and organizations that participated in regional meetings in 2019 and those who completed online surveys, providing valuable input that is reflected in this document.

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IV. Executive Summary

The 2020-2030 Pennsylvania Oral Health Plan (Plan) represents the combined effort of a diverse group of stakeholders including federal, state and local government agencies; voluntary health organizations; academic institutions; health systems; and those professional associations, foundations, consumers, corporations and communities with an interest in oral health. This document provides the blueprint of how efforts, resources and interests can be combined to strengthen the collective capacity in Pennsylvania to ultimately prevent oral disease and assist individuals in achieving a lifetime of good oral health and general health.

The three main oral health priority areas, defined by a stakeholder engagement process that included statewide surveys and meetings across Pennsylvania in the spring and fall of 2019, are:

A. Access, Prevention and Education

B. Workforce

C. Infrastructure Improvement

This Plan outlines these priorities with measurable outcomes to address the needs of the population, as expressed by stakeholders during development. By building upon this input, the DOH, PCOH and other stakeholders believe that these are the areas most likely to maintain stakeholder collaboration during implementation and support for a more comprehensive Plan in the future. Commitment to the execution of this Plan from DOH and contributing stakeholders will be the first step in moving Pennsylvanians toward better oral health and, thus, overall health.

The Plan will be reviewed annually to assess progress toward goals, consider emerging oral health needs and best practices, and determine annual work plans. The State Oral Health Program (SOHP) in the DOH will leverage existing federal grants to jump start this work as it seeks sustainable funding through additional grants and intergovernmental collaborations.

Ongoing input and engagement are welcome and encouraged as the Plan is implemented. Together the DOH's vision of a healthy Pennsylvania for all can be achieved.

V. Introduction

The mission of the SOHP in the DOH is to promote oral health as an integral part of the well-being of all Pennsylvanians, reinforcing the concept that you cannot be truly healthy without good oral health. The SOHP puts special emphasis on populations that have limited access to preventive and treatment sources and information on oral health. The 2020-2030 Oral Health Plan also includes an evaluation component and a strategy for sustainability. The Plan provides direction for action and collaboration to achieve better overall physical, mental and social health through improved oral health.

VI. Background

Oral Health in America

Oral health is an essential part of everyday life and is a critical component of overall physical, mental and social health and well-being, regardless of age, race, ethnicity or other factors. Dental, oral and craniofacial conditions are the result of a complex matrix of biological, behavioral, environmental and systems-level factors. In fact, a healthy mouth (defined as the teeth, gums, hard and soft palates, linings of the mouth and throat, tongue, lips, salivary glands, chewing muscles, and upper and lower jaws) reduces the risk of developing and/or exacerbating diseases such as diabetes, cardiovascular disease and respiratory issues that can lead to chronic illness and undesirable outcomes. Some research even shows that inflammation caused by periodontal disease in pregnant women may result in pre-term birth and/or low birthweight infants.¹

Oral disease, infection and pain hinder daily functions such as speaking, chewing, swallowing, smiling and making other facial expressions to show feelings and emotions at home, in the workplace and at school. Dental caries, the disease that causes cavities, is the most common chronic childhood disease and five times more prevalent than asthma.² It leads to missed school days and negatively impacts school performance, as well as nutritional intake. For some individuals, it leads to emergency department visits and even hospitalizations. It is noteworthy that non-dental providers are significantly more likely to write an opioid prescription for dental pain versus any other type of pain,³ perhaps due to general lack of integrated training and/or interprofessional relationships with dental professionals. For many adults, the bad breath from gum disease and the inevitable tooth loss lowers their self-esteem and causes avoidance of eye contact and smiling, which can hinder social interactions. It can even impact an employer's perception of someone's capabilities based on outward appearance, which can curtail an individual's socioeconomic status.

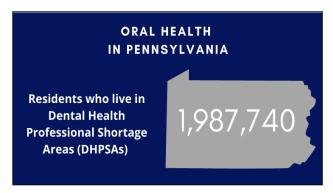
While there has been significant progress in the oral health of Americans thanks to effective prevention and treatment efforts, these gains have not been shared by all. Oral diseases, which can include dental caries (cavities), periodontal (gum) disease, abscesses, oral and pharyngeal cancer, and other maladies, cause acute and chronic pain, disability, and disfigurement for millions of Americans each year. Oral health disparities stem from persistent and pervasive health inequities such as reduced access to prevention and treatment strategies, leading to higher rates of new and unmet oral health needs.⁴

A complex myriad of factors contributes to oral health inequities that result in fewer dental visits and lower receipt of clinical and preventive oral health services for many families and individuals. These factors include:

- Lack of integration between the medical and oral health delivery systems that includes financing of care, recordkeeping and electronic record systems, interprofessional education, and service delivery:
- High cost of oral health care;
- Lack of adequate private and public dental insurance and plan benefits;
- Low oral health literacy;
- Inability to access or navigate available and convenient oral health services due to lack of transportation, inability to take time off work and related issues;
- Maldistribution and shortage of the private and public health dental workforce, including specialists, especially in remote and rural areas;
- Chronic medical conditions that limit mobility and cause physical and cognitive impairment; and
- Lack of awareness of the social implications of poor oral health and the impact of poor oral health on overall health.

Oral Health in Pennsylvania

Access



Pennsylvania faces a dilemma with strong coverage for oral health care in certain markets and vast areas where residents remain underserved for oral health services. The actual number of dentists practicing in Pennsylvania would appear to provide a favorable dentist-to-patient ratio. However, most dentists practice in urban or suburban areas, resulting in a significant geographic maldistribution of the dental workforce. This leaves many rural Pennsylvanians without accessible care. ⁵ According to 2020 federal

shortage designations, Pennsylvania has 149 individual Dental Health Professional Shortage Areas (DHPSAs), meeting only 47.86% of the oral health care needs in the state.⁶ These designations document the maldistribution of the dental workforce and serious disparities in access to care for low-income populations. It is well-documented that individuals living in poverty have more oral health problems, and one in five Pennsylvanians are enrolled in Medical Assistance.⁷ Transportation, language, geographic and cultural barriers all compound the difficulty these individuals have in accessing care.

Pennsylvania's safety net system for oral health care consists of options such as Federally Qualified Health Centers (FQHCs), Rural Health Clinics (RHCs), and free and charitable clinics. In 2020, nearly 90% of FQHC dental sites were providing dental services in just over half the counties in Pennsylvania.⁸ Sixteen of the state's 70 RHCs offer some type of oral health education, oral health services and/or a dental referral system. Rural health clinics serve the 48 rural counties with county-wide dental professional shortage designations.⁹ Out of the 63 free and charitable clinics in the state, nearly 20 sites offer dental services.¹⁰

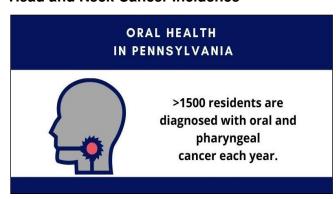
Workforce

Pennsylvania has a variety of dental providers in its licensed and certified workforce. In addition to the traditional workforce categories of dentist and dental hygienist, the Pennsylvania State Board of Dentistry has certified more than 2,000 expanded function dental assistants (EFDAs) who have restorative services in their scope of practice, and more than 800 certified public health dental hygiene practitioners (PHDHPs) who are able to provide preventive treatment and education



services without supervision in public health settings (with limitations). These providers are not distributed across Pennsylvania in a manner that addresses the oral health needs of the population.

Head and Neck Cancer Incidence

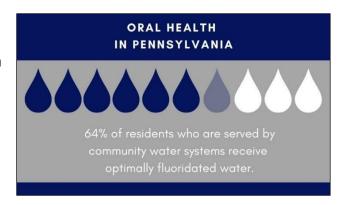


More than 1,500 Pennsylvanians are diagnosed with oral and pharyngeal cancers annually and the age-adjusted incidence rate for oral and pharyngeal cancers increased slightly since 2010.¹¹ Utilizing the Pennsylvania Cancer Registry data, the incidence and mortality rates of oral and pharyngeal cancers, also known as head and neck cancers, are continually monitored in Pennsylvania residents. Oral cavity cancers (lip, mouth, tongue and hard palate) are most associated with tobacco

and alcohol use, two high-risk and preventable behaviors. The Centers for Disease Control and Prevention (CDC) cites that 70% of oropharyngeal cancers (tonsils, tongue base and soft palate) are linked directly to human papillomavirus (HPV) infection, which has now surpassed the incidence of HPV-related cervical cancers. ¹² HPV infection also is preventable with the HPV vaccine that can be administered to children and adults. ¹³

Community Water Fluoridation

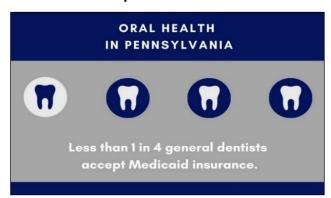
Community water fluoridation (CWF) is the single most effective and efficient public health measure to prevent cavities in children and adults, regardless of race or income level. As of March 2019, 64% of Pennsylvanians (compared to 73% nationally) connected to community water systems receive drinking water with the optimal level of 0.7 mg/L of fluoride or 0.7 parts per million. Among all state residents, including those who receive their water from



private wells, 57% are reached by optimally fluoridated water compared to the national average

of 62%. According to the Pennsylvania Department of Environmental Protection (DEP), Bureau of Safe Drinking Water, just 193 of the state's more than 2,000 public water systems adjust the fluoride concentration to reach the optimal level. ¹⁴

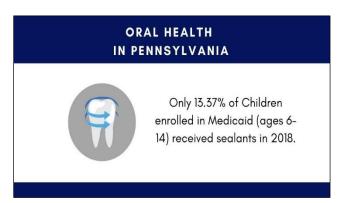
Underserved Populations



Pennsylvania has struggled to meet the oral health needs of low-income individuals and families that rely on Medicaid for their health plan coverage. Currently, adults enrolled in Medicaid have coverage for routine exams, basic cleanings, fillings and extractions. Medicaid does not cover emergency exams by a general dentist or any of the more advanced periodontal cleanings necessary for the treatment of gum disease. Treatment such as crowns, endodontic care (root canals) and more than one set of

dentures/partials are rarely covered, except through the <u>Benefit Limit Exception (BLE)</u> process, an exception given to those with life threatening or life altering conditions. According to the 2015 Pulse of Pennsylvania's Dental Workforce report, only 23% of general dentists are currently accepting Medicaid.¹⁵

For those in rural areas, it is not uncommon for individuals to travel across counties and wait months to see a dental provider. When last analyzed in 2014 by the American Dental Association's (ADA) Health Policy Institute, Pennsylvania's Medicaid fee-forserve program paid just 43.1% of commercial dental insurance charges for adult dental services. 16 Pennsylvania utilizes a predominately managed care model to improve the Medicaid program. Managed care organizations (MCO) are contracted



through the Pennsylvania Department of Human Services (DHS) to better serve member needs and are required to meet network adequacy requirements. Each MCO is able to adjust the state-recommended schedule as needed to meet the specific needs of the providers and to improve access. For individuals who are uninsured, underinsured or not eligible for Medicaid coverage, access can be even more difficult.

Pennsylvania State Oral Health Program

The SOHP is housed within the Bureau of Health Promotion and Risk Reduction at the DOH and consists of two Public Health Program administrator positions and a part-time Public Health dental director position. The program was established in 1996 to focus on implementing dental health policies and programs throughout Pennsylvania. Like many states' programs, limited resources and insufficient infrastructure have been a challenge from its inception.

The SOHP works closely with the PCOH, to help administer federal funds and track implementation of the Plan. This SOHP is currently funded through a blended stream of federal grants from the CDC and Health Resources and Services Administration (HRSA).

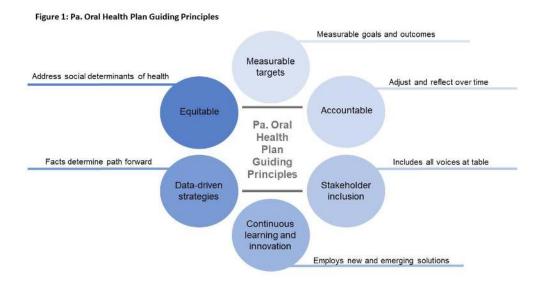
In 2019, a State Oral Health Surveillance System (SOHSS) was initiated by the SOHP through the development of the Pennsylvania State Oral Health Surveillance Plan and a compilation of 42 data indicators (Appendix A). This system will provide a baseline of the oral disease burden in Pennsylvania to better monitor and assess the oral health outcomes of residents.

The SOHP currently implements two community programs in Pennsylvania. One of these is the School-Based Sealant Programs (SSP), which provide pit and fissure sealants to prevent dental cavities in children in low socioeconomic areas, using portable equipment in school settings. The second is the Donated Dental Services (DDS) program in Pennsylvania, which provides dental services for indigent residents of Pennsylvania who are either over age 65, have physical or mental disabilities, or are otherwise medically compromised.

VII. Plan Development

The Plan is the result of a collaboration among the DOH, PCOH, and members of the public health, dental and medical communities. This Plan would not be possible without oral health stakeholders committed to advancing the oral health and general well-being of all Pennsylvanians. PCOH assisted in facilitating the Plan development and convening statewide stakeholders. PCOH is a diverse group of leaders advancing policies and practices that increase access to oral health services, education and prevention, especially for underserved Pennsylvanians.

Guiding principles for the Plan are depicted in Figure 1 and call for the Plan to be measurable, accountable, inclusive, innovative, data-driven and equitable. The principles aim to ensure the Plan is actionable and responsive to existing and emerging data and best practices, as well as centered on the oral health needs of all Pennsylvanians.



The guiding principles for the Plan were developed in collaboration with the Public Health Dental Consultant (PHDC) upon completion of a comprehensive review of multiple resources that paired conceptually consistent themes across similar health plan frameworks and an evaluative self-reflection of the last Pennsylvania statewide oral health plan. These resources included the Association of State and Territorial Dental Directors (ASTDD) and the federal Department of Health and Human Services (DHHS) State Oral Health Plan frameworks, the Children's Dental Health Project (CDHP) State Oral Health Plan Comparison Tool, and the Healthy People 2020

oral health objectives (used in lieu of Healthy People 2030 oral health objectives that were not available as the Plan was being developed, but will inform future planning and implementation). In addition, the preparatory evaluation reviewed various existing state oral health plans with relevance to Pennsylvania.

Further, PCOH and the Pennsylvania Oral Health Plan 2017-2020 Independent Evaluator conducted a qualitative survey of Pennsylvania Oral Health Plan 2017-2020 stakeholders (OHP 1.0 Survey) in April 2019 (Appendix E). The survey yielded valuable information regarding suggested revisions of goals in the Pennsylvania Oral Health Plan 2017-2020, recommended goals for the next state oral health plan, and general comments. This information was then used to facilitate group discussions held at stakeholder meetings in May 2019 in eastern Pennsylvania locations of Danville and Collegeville and in western Pennsylvania locations of Butler and Altoona in September 2019. These stakeholder meetings had a total attendance of 108 individuals and organizations. A second survey (OHP 2.0 Survey) was conducted and sent electronically in October 2019 (Appendix F). Stakeholders were able to reflect on the identified priorities and their preferred action strategies. All input from both surveys and all stakeholder meetings was then quantitatively compiled to identify the biggest concerns and issues.

Finally, the evaluation of the Pennsylvania Oral Health Plan 2017-2020 conducted by the PHDC also provided needed perspective as to what was successfully addressed in the current plan, as well as identifying critical gaps, such as inadequate infrastructure and irregular acquisition of surveillance data. This evaluation was shared with stakeholders at the fall 2019 stakeholder meetings for additional input.

VIII. The Pennsylvania State Oral Health Plan 2020-2030 Framework

Pennsylvania's priority areas, as determined by the oral health stakeholders, can be grouped into three priority areas:

- A. Access, Prevention, and Education
- B. Workforce
- C. Infrastructure Improvement

The framework for the Plan was developed in collaboration with the PHDC upon completion of a comprehensive review of multiple resources that paired conceptually consistent themes across similar health plan frameworks and an evaluative self-reflection of the Pennsylvania Oral Health Plan 2017-2020. The Plan uses the same five overarching domains as a specified sphere of knowledge to view each priority and establish next steps to address it. It will be revisited annually by DOH, PCOH and the plan evaluator, with input from stakeholders, to determine the individual strategies that should be employed each year.

The Plan was developed with 22 measurable outcomes within the three priorities. It is understood that not all progress can be measured with data points, and the measurable outcomes are not meant to be inclusive of all the efforts under the Plan. Measurable outcomes are based on anticipated data sources available at the time of development.



Structural Domains

- Health Systems support and expand the interconnected set of key structural elements (government, partnerships, individuals and workforce) needed to ensure that there is a system capable of meeting the oral health needs of Pennsylvanians.
- 2. Health Surveillance and Evaluation develop and implement a state surveillance system in Pennsylvania that is aligned with the CDC National Oral Health Surveillance System to measure key indicators of oral health and oral health status; inform adoption and implementation of evidence-based approaches that improve programs and policies; monitor oral health, service delivery systems, and infrastructure needs and development; and improve collection, reporting and availability of key data elements.

Operational Domains

- 3. Health Equity improve the health of all Pennsylvanians and eliminate inequities across the lifespan by addressing healthy habits, prevention intervention and determinants of health to attain healthy communities.
- 4. Health Policy and Advocacy support and enact state and local policies that address gaps in oral health service coverage, public understanding of the importance of oral health to overall health, payment and financing systems, oral health care delivery, oral disease prevention strategies, workforce capacity and integration, data collection and analysis, and infrastructure capability.
- 5. Health Community diversify and enhance the base of individuals, providers and organizations that support and promote a health care system that values and integrates oral health and overall health.

Though the overall priorities and domains will remain throughout the term of the Plan, the strategies employed to reach its goals will be determined annually. The first three years of the Plan will focus mainly on achieving the structural domains of Health Infrastructure and Health Surveillance and Evaluation. After year three, the focus of the Plan will turn to the achievement of oral health goals in Health Equity, Health Policy and Advocacy, and Health Community. By

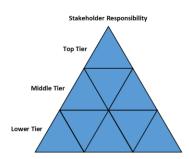
building on a base of sound data, networks and infrastructure that communicate and function well, Pennsylvania will be well poised to undertake these later goals.

Oral Health Plan Logic Model Summary Graphic

Base of established data, networks and infrastructure Leadership and support from PADOH and PCOH Resources Engagement from public health, medical and dental communities Focus Years 1-3 Focus Years 4-10 Health Equity: Improve the health of all Pennsylvanians Health Infrastructure: Support and expand the and eliminate disparities across the lifespan by addressing interconnected set of key structural elements healthy habits, prevention intervention, and determinants government, partnerships, individuals, and workforce) of health to attain healthy communities. needed to ensure that there is a system capable of meeting the oral health needs of Pennsylvanians. Health Policy and Advocacy: Support and enact state and local policies that address gaps in oral health service Activities Health Surveillance and Evaluation: Develop and coverage, public understanding of the importance of oral implement a state surveillance system in PA that is health to overall health, payment and financing systems, aligned with the CDC National Oral Health Surveillance oral health care delivery, oral disease prevention strategies System to measure key indicators of oral health for workforce capacity and integration, data collection and tracking purposes; inform use of evidence-based analysis, and infrastructure capability. approaches that improve programs and policies, monitor oral health status, service delivery systems Health Community: Diversify and enhance the individuals, and infrastructure needs and development; and providers, and organizations that support and promote a improve collection, reporting, and availability of health care system that values and integrates oral health key data elements. and overall health. A1. Increase percentage of people served by community water systems receiving optimally fluoridated water A2. Increase preventive oral health care (dental visit) for children A3. Increase preventive oral health care (dental visit) for children with special health care needs A4. Increase preventive oral health care (dental visit) for pregnant women A5. Increase preventive oral health care (dental visit) for adults A6. Reduce the percentage of untreated decay in children A7. Reduce incidence of tooth loss in adults 18-64 A8. Reduce incidence of tooth loss in seniors 65+ A9. Increase the percentage of third grade children with dental sealants A10. Increase number of programs providing children ages 6-14 with sealants A11. Increase number of underserved children with an age one dental visit A12. Reduce the incidence of children receiving dental services undergeneral anesthesia Short-term A13. Reduce incidence of oral cancer and oropharyngeal cancer goals (2030)B1. Increase the percentage of hygienists, general dentists, and specialists participating in the Medicaid program B2. Increase the number of general dentists who bill \$10,000+ per year in the Medicaid program B3. Decrease the number of DHPSA county-level designations B4. Increase the number of primary care medical providers who bill Medicaid for oral health services B5. Increase the number of community health workers (or similar) providing or all health education to their clients either in community health centers or place of residence C1. Implement/maintain a comprehensive state or all health surveillance system (SOHSS) in accordance with the National Oral Health Surveillance System C2. Foster and grow a diverse, sustainable, and collaborative state oral health coalition C3. Evidence of effective cross-governmental partnerships with internal DOH and external government entities to develop and partner on educational initiatives, data collection, analysis and reporting, policy initiatives, and program priorities C4. Establish a robust state or al health program with the capacity to meet the ASTDD's 10 Essential Dental Public Health Services created from the CDC model Decrease barriers to accessing dental care Enhance the overall Increase preventive services across populations health of all Improve the oral health literacy of healthcare providers and Mid-term Long-term Pennsylvanians the general public goals goals through improved Build a sufficient, diverse and competent or al health workforce oral health Maintain a strong oral health program infrastructure to sustain proper state oral health surveillance

Stakeholders

Pennsylvania needs all individuals, organizations and entities to work together toward achieving unified oral health goals. At the same time, there are stakeholder groups that have more opportunity to influence certain actions and outcomes than others. Within each priority area and domain, the individuals or groups that may be best positioned to leverage the work in that area and domain have been identified. Though all residents in the commonwealth can and should play a role in improving oral health,



key stakeholders who will implement the Plan include, but are not limited to:



Government and policymakers

State government and legislature, state departments and agencies



Community organizations

Any group that values improving the quality of life for its community through bettering health outcomes



Education sector

Primary and secondary schools, higher learning institutions, educators (pre-K through graduate school, medical/dental professions)



Insurance companies/ managed care organizations

Insurance and health plans who provide services to Pennsylvania residents



Associations/coalitions

Groups of like-minded individuals and organizations who have similar missions to improve health



Health providers

Members of the medical and dental communities, including hospitals, safety net programs, and individual providers



Funders

Community foundations, corporate sponsors, federal grant-making entities, etc.



Community support systems

Including home visitors, community health workers, etc.



Individuals

Self-advocates, affected individuals and families with a stake in Pennsylvania, etc.

Sustainability

Through continued work with stakeholders, the SOHP will leverage federal grants awarded through CDC and HRSA in 2018 with funding through 2023 to complete the basic staffing needs of the program as well as implement strategies to measure oral disease burden and engage the oral health workforce. The success reached through the current federal grants will increase the likelihood of Pennsylvania being awarded future cycles of funding. There are also potential cross-cutting collaborations with other state government programs, including maternal and child health programs, in addition to the programs that focus on chronic disease including tobacco, diabetes and cancer. Linking oral health to systemic disease and other public health programming bolsters recognition that good oral health is essential to overall health.

Within each priority area, potential work efforts are listed under each domain as bullet points. These are simply possibilities that can and should be explored as potential activities and proximal indicators to make progress under the Plan that map to the outcomes. Short- and long-term activities will be annually determined, as infrastructure and needs of the state can change. A logic model was developed to visualize these possibilities and can be found in Appendix C. The Plan will be revisited annually by DOH, PCOH, and the plan evaluator, with input from stakeholders, to determine the individual strategies that should be employed each year.

PRIORITY A Access, Prevention and Education

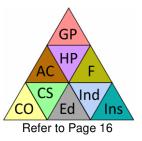
Many Pennsylvanians are unable to seek regular oral health care for a variety of reasons. The Plan goals must focus on removing barriers to accessing dental care, adding preventive services for more of the population, and raising the oral health literacy of health care providers and the general public. Access to dental care includes affordability as well as availability, and accessibility of providers who can offer quality care. The Plan can improve the health of Pennsylvanians by addressing the social determinants of poor oral health and promoting healthy habits and other prevention interventions and education to attain healthier communities.

Measurable Outcomes:

- A1. Increase percentage of people served by community water systems receiving optimally fluoridated water
- A2. Increase preventive oral health care (dental visit) for children
- A3. Increase preventive oral health care (dental visit) for children with special health care needs
- A4. Increase preventive oral health care (dental visit) for pregnant women
- A5. Increase preventive oral health care (dental visit) for adults
- A6. Reduce percentage of untreated decay in children
- A7. Reduce incidence of tooth loss in adults 18-64
- A8. Reduce incidence of tooth loss in seniors 65+
- A9. Increase the percentage of third grade children with dental sealants
- A10 Increase the number of programs providing children ages 6-14 with dental sealants
- A11. Increase the number of underserved children with an age one dental visit
- A12. Reduce the incidence of children receiving dental services under general anesthesia
- A13. Reduce incidence of oral cancer and oropharyngeal cancer

Domain 1: Health Infrastructure

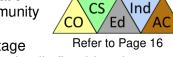
- Develop and maintain an accessible list of communities that receive optimally fluoridated water from a CWS
- Replicate best practice models for school-based and school-linked sealant programs
- Expand the provision of oral health services at FQHCs and RHCs
- Assess the status of teledentistry programs
- Support and promote oral health literacy campaigns and programs that educate the public about oral health care and prevention of tooth decay



- Assess the status of long-term care facilities that have annual dental treatment provided by an oral health professional
- Expand accessibility of dental homes to children and adults with special health care needs
- Develop a patient-centered dental access database

Domain 2: Health Surveillance and Evaluation

- Identify and assemble the appropriate data sources and methods to assess oral health trends for access, prevention and education
- Collect appropriate data to track access, prevention and education needs across all age groups
- Report reconciled CWF state data to the CDC Water Fluoridation Reporting System to track the percentage of people on community water systems that provide optimally fluoridated water



- Determine data set to track baseline and changes to percentage of people served by community water systems that provide optimally fluoridated water
- Implement recommendations of the State Fluoridation Plan
- Develop a database of medical and dental providers who offer oral health services to underserved populations

Domain 3: Health Equity

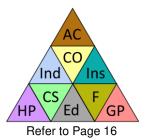
- Develop culturally literate and sensitive messages for target populations
- Reduce oral health disparities according to income, race, ethnicity. age, geographic residence, disability status and education levels
- Increase access to oral health services for people residing in dental health professional shortage areas
- Increase access to optimally fluoridated water for people residing in dental health professional shortage areas



- Refer to Page 16
- Explore alternative means of providing preventive benefits of fluoride to Pennsylvanians served by water systems that do not provide optimally fluoridated water
- Find or develop oral health literacy courses or resources to train dental and medical providers in cultural competency while interacting with their patients

Domain 4: Health Policy and Advocacy

- Initiate and adopt policy around teledentistry
- Reduce total health care costs through policies and advocacy that enhance access to oral disease prevention and treatment services
- Initiate policy(ies) to expand the oral health workforce in venues serving underserved populations to provide more opportunities for access to treatment, prevention and education services
- Initiate a policy on Medicaid reimbursement for community health workers (and similar groups) for home visiting, education services and appropriate referral to dental homes.



- Advocate for the use of an oral health curriculum and training program for certified community health workers to assist them in assessing oral disease risk and appropriate referrals
- Support policies that recommend an excise tax on tobacco and sugar-sweetened beverages
- Support policies that increase access to healthy beverage choices
- Remove payment barriers for providers who treat individuals with intellectual and developmental disabilities

Domain 5: Health Community

- Increase oral disease screenings, risk assessments, preventive treatments and referrals by medical primary care providers
- Expand oral health preventive care, risk assessment and connection with dental homes for communities through health fairs, pharmacies, food pantries, and other local events and locations



- Encourage bi-directional referrals between dental and medical offices
- Incorporate chronic medical disease prevention in dental provider practice
- Increase the number of dental professionals who recommend the HPV vaccine
- Support dental providers assessment of diabetes and prediabetes risk
- Incorporate tobacco/nicotine cessation or reduction services into dental provider practices
- Incorporate oral disease prevention messaging into other health fields, including physical, mental and behavioral health
- Integrate information on oral disease prevention into health field undergraduate and residency curricula
- Promote oral health, basic oral hygiene and access to dental services for long-term care facility residents
- Promote dental provider use of silver diamine fluoride for dental caries control for individuals who cannot receive traditional restorative treatment
- Support programs that reduce dental disease treatment under general anesthesia and sedation

PRIORITY B Oral Health Workforce

A sufficient, diverse and competent public and private oral health workforce is needed to ensure oral health needs are met. The health workforce includes not only dental providers, but medical providers and non-clinical support such as community health workers. The dental workforce refers to the number, distribution, and characteristics of dental providers and support staff involved in the provision of oral health care. Pennsylvania has an aging workforce of predominantly white dentists in urban and suburban areas. Practice design is evolving from a solo provider, entrepreneurial family practice to corporate and group practices in which providers are not the business owners. Workforce planning must be linked to a philosophy of health promotion that embraces quality care and prevention (not simply treatment of disease) and addresses oral health needs and demands.

Measurable Outcomes:

- B1. Increase the percentage of hygienists, general dentists, and specialists participating in the Medicaid program
- B2. Increase the number of general dentists who bill \$10,000+ per year in the Medicaid program
- B3. Decrease the number of DHPSA county-level designations
- B4. Increase the number of primary care medical providers who bill Medicaid for oral health services
- B5. Increase the number of community health workers (or similar) providing oral health education to their clients either in community health centers or place of residence

Domain 1: Health Infrastructure and Capacity

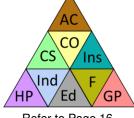
- Support programs that increase the number of dental providers in designated health professional shortage areas
- Explore new workforce models while fully utilizing the current dental workforce
- Facilitate medical and dental service integration with Head Start programs and other early learning services
- Increase the number of community health workers providing oral health education and referrals



Refer to Page 16

Domain 2: Health Surveillance and Evaluation

- Support the development and maintenance of an accurate and current central workforce database that includes professionals listed by specialty and practice location
- Establish a system for assessing oral health workforce capacity
- Facilitate bi-annual access to Medicaid-participating workforce data
- Coordinate the development of a community health worker database

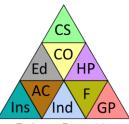


Refer to Page 16

Identify gaps in the oral health workforce and develop strategies to address them

Domain 3: Health Equity

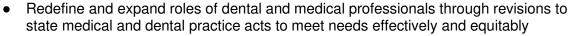
- Promote and support the use of community health workers/navigators in traditionally underserved communities
- Incorporate underserved/rural community practice recruitment into dental and dental hygiene curricula
- Develop and support a diverse and well-qualified workforce to provide evidence-based dental care to all populations, including those with intellectual and developmental disabilities
- Identify and support pipeline program development to ensure a competent and diverse future oral health workforce
- Provide guidance and education to dental and medical health professionals and staff to better understand social determinants of health that impact oral disease risk



Refer to Page 16

Domain 4: Health Policy and Advocacy

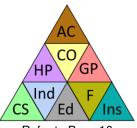
- Advocate for mandated and increased base level funding for the Medicaid dental fee schedule
- Revise current programs to allow for oral health services to be provided in school settings
- Develop or revise financial assistance programs for dental professionals who practice in rural areas and/or dental health professional shortage areas
- Develop recruitment and retention activities for retaining oral health professionals in FQHCs and similar centers



• Identify key decision makers and public champions who can advocate and promote oral health from a health equity perspective

Domain 5: Health Community

- Increase interdisciplinary clinical and professional collaboration between the medical, behavioral and oral health workforce communities
- Promote education and training of medical primary care practitioners in the assessment and provision of basic oral health services
- In dental health professional shortage areas, utilize hospital personnel to provide oral health referrals
- Collaborate with external partners such as primary care associations, home visiting programs, advocacy organizations, philanthropic foundations and others to promote oral health programs, activities, strategies and policies
- Develop programs to reduce the use of emergency departments for non-traumatic dental care
- Increase the number/percentage of medical providers who conduct oral cancer screenings/exams



Refer to Page 16

Refer to Page 16

PRIORITY C Infrastructure Improvement

In order to ensure that progress is being made, regular surveillance of specific oral health indicators must be tracked. According to the CDC, an oral health surveillance system is designed to monitor the burden of oral disease, use of the oral health care delivery system, and status of community water fluoridation on the state level. To maintain proper state oral health surveillance, a strong oral health program infrastructure consisting of the appropriate systems, people, relationships and resources must exist to provide a framework for support.

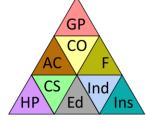
Measurable Outcomes:

- C1. Implement/maintain a comprehensive state oral health surveillance system (SOHSS) in accordance with the National Oral Health Surveillance System
- C2. Foster and grow a diverse, sustainable, and collaborative state oral health coalition
- C3. Evidence of effective cross-governmental partnerships with internal DOH and external government entities (e.g., DEP, DHS, PDE) to develop and partner on educational initiatives, data collection, analysis, and reporting, policy initiatives, and program priorities
- C4. Establish a robust state oral health program with the capacity to meet the ASTDD's 10 Essential Dental Public Health Services created from the CDC model (Appendix D)

Domain 1: Health Infrastructure and Capacity

- Recommend that the SOHP has the capacity and influence (staffing, funding, etc.) to effectively carry out the 10 Essential Dental Public Health Services including a state oral health surveillance system, ideally consisting of an epidemiologist, sealant coordinator, CWF coordinator, and health educator
- Secure state and federal funding for adequate oral health infrastructure in the SOHP at DOH according to CDC and ASTDD infrastructure criteria

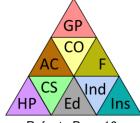
• Diversify the funding sources for state and local oral health



- Refer to Page 16
- programsMaintain funding and support to the state oral health coalition to
- Maintain funding and support to the state oral health coalition to adequately accomplish
 its mission and vision to improve the oral health of all Pennsylvanians through its many
 partners and collaborators
- Maintain the state dental director position to guide oral health priorities for DOH in collaboration with pertinent government agencies and external partners.
- Advocate for programs that will increase broadband internet access into rural areas
- Assist the SOHP in working with other DOH agencies (e.g., Maternal and Child Health, Chronic Disease, Cancer Prevention, Tobacco Prevention, Health Innovation, WIC) to develop shared program strategies and break down health information silos

Domain 2: Health Surveillance and Evaluation

 Provide funding and support for a sustainable SOHSS that is in accordance with Council of State and Territorial Epidemiologists criteria, aligned with the National Oral Health Surveillance System, and overseen and administered by a state-recruited epidemiologist



Refer to Page 16

- Recruit and hire a state epidemiologist dedicated to oral health and all related activities to monitor the SOHSS
- Utilize annual surveillance data to maintain periodically disseminated burden reports
- Utilize the SOHSS to monitor oral health-related trends and to evaluate and develop new programs, priorities and policies
- Develop an evaluation plan to assess the relevance, progress, efficiency, effectiveness and impact of the SOHP
- Assure timely data is available for the SOHSS

Domain 3: Health Equity

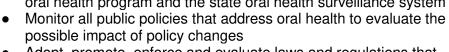
- Secure state and federal funding to implement, administer and operate statewide dental public health programs designed to enhance oral health equity
- Improve the SOHSS to oversample populations who have an increased risk for oral diseases



Conduct surveillance of oral diseases to develop key oral health indicators in the state oral health surveillance system that
 All the state oral health surveillance system that addresses the magnitude of oral health disparities among certain underserved population groups

Domain 4: Health Policy and Advocacy

 Share surveillance data reports with partners and funders to demonstrate the need for increased and continued funding of the state oral health program and the state oral health surveillance system



 Adopt, promote, enforce and evaluate laws and regulations that promote oral health and educate stakeholders to ensure safe oral health practices



- Collect data and stories to educate and build support among decision makers and
- Ensure payment models that allow providers to be reimbursed for value-based care

Domain 5: Health Community

- Use qualitative and quantitative data to inform medical professionals and their associations about the links between oral and systemic disease across populations
- Share evidence-based data and information to promote collaboration and awareness among dental and non-dental providers as well as the public

consumers for expanding oral health coverage



Refer to Page 16

X. Future Considerations

As the first long-term oral health plan in Pennsylvania, the Plan will serve as a guide to assist stakeholders in collective efforts to improve oral health across the commonwealth. The Plan seeks to improve population health and health equity while continuing to build on the significant progress made in infrastructure and capacity. The successful implementation of this Plan will require ongoing collaboration and collective intention from all partners.

Beginning in 2020, annual Plan Core Team meetings will be held to review action plans for the upcoming year. A focus on surveillance and infrastructure will be the highest priority for the first three years of the Plan, to ensure a solid foundation for improvements in equity, policy and health outcomes. The Plan Core Team will use the meetings, as well as continual communication with stakeholders throughout each year, to monitor accountability.

Moving forward, flexibility from stakeholders will be required to achieve the goals of the Plan. A 10-year plan, though helpful in long-range planning, will need to be adaptable to the changing political, corporate and health environments of Pennsylvania. Regular evaluations will be conducted to measure success. Funding will be directed first toward meeting the priorities of the Plan with the acknowledgement that there is room for new and innovative ideas that may be revealed years after publishing. Progress will be revisited annually, and commitment to an ongoing continuous review and evaluation process will ensure that objectives and action steps remain in alignment with public health goals.

In summary, oral health contributes significantly to overall general health and better social outcomes. Pennsylvania is now poised to focus on and prioritize oral health for all. Over the last 10 years, significant attention and efforts have been directed toward the integration of oral health into primary care practice and increasing access to quality oral health services. This Plan and foundation will lead to better population health, and more efficient health systems in pursuit of the DOH's vision of a healthy Pennsylvania for all.

XI. Citations

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XII. Appendices

- A. Surveillance Indicators for Pennsylvania
- B. Healthy People 2020 Oral Health Objectives
- C. Pennsylvania Oral Health Plan Logic Model
- D. ASTDD Essential Dental Public Health Services
- E. Spring 2019 Stakeholder Survey
- F. Fall 2019 Stakeholder Survey

Appendix A

Oral Health Surveillance Indicators for Pennsylvania

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Target Population	rget Population Indicator (related HP2020 Data Collection Timeline Data Source Data Source Availability		Baseline Data - May 2019	Year			
Children 0-20 years enrolled in Medicaid (90 continuous days)	Dental visit (OH 7) - any dental services, preventive services, or dental sealants			Any dental services: 49.56% (646,462 recipients) Preventive services: 45.45% (592,908 recipients) Sealants: 13.37% (77,038 recipients) Oral health services: 3.23% (42,174 recipients) Any dental or oral health services: 51.45% (671,102 recipients)	2018		
Children 1-17 years	Preventive dental visit (OH 7 and 8)	Annual	National Survey of Children's Health	Annually in October (based on that 2017 data was released in October 2018)	82.7% (79.2% saw a dentist and 3.5% saw other oral health provider)	2017	
Adolescents in grades 9-12	Never saw a dentist	Every 2 years, beginning in 2019	Youth Risk Behavior Surveillance System (YRBSS)	3rd Quarter of Even Calendar Years (i.e. 2019 released 3rd Quarter of 2020)	1.07%	2017	
Adults 18 years and older	Dental visit (OH 7)	Every 2 years, beginning in 2018	BRFSS	3rd Quarter of the Following Calendar Year	65.97% (within the past year)	2016	
Adults 18 years and older with diabetes	Dental visit (OH 7)	Every 2 years, beginning in 2018	BRFSS	3rd Quarter of the Following Calendar Year	57.51%	2016	
	Preventive dental visit before pregnancy			Pregnancy Risk		63.50%	2017
Pregnant women	Preventive dental visit during pregnancy	Annual	Assessment Monitoring System	Annually in January	48.80%	2017	
	Dental insurance coverage during pregnancy		(PRAMS)		83.30%	2017	
Children and adults	Received oral health services	Annual	Medicaid Claims	Annually in July	Dental services: 38.57% (1,100,912 recipients) Oral health services: 2.12% (60,476 recipients)	2018	
enrolled in Medicaid	Dental providers who participate in Medicaid	Every 2 years	Health Care Workforce Report (Pulse Report)	May of each odd year (raw data only); report released 3rd year after data collected	23% - general dentists 25% - all dental providers	2015	

INTERVENTIONS

Target Population	Indicator (related HP2020 objective)	Data Collection Timeline	Data Source	Data Source Availability	Baseline Data - May 2019	Year
Schoolchildren	Children served by CDC-qualified school-based sealant programs	Annual	DOH School Sealant Programs	Annually in August	996	2017-2018
	Molars with sealant placed by school- based sealant programs	lars with sealant placed by school-) 900 MMMS	Not collected yet	N/A
	Population served by community water systems	Annual			89.26% (11,431,687 people served by 1,940 community water systems)	2019
All state population	Population served by community water systems that are fluoridated	Annual	Pennsylvania Drinking Water Information System (PADWIS) *pulled by DEP	Annually in June	64.24% (7,343,621 people served by community water systems that are fluoridated) 57.34% of the entire state population receives fluoridated water	2019

RISK FACTORS

Target Population	Indicator (related HP2020 objective)	Data Collection Timeline	Data Source	Data Source Availability	Baseline Data - May 2019	Year
Children 0-17 years	Poverty		American Community	Annually beginning in	17%	2017
Children 0-18 years	Medical insurance	Annual	Survey (ACS)	September	96%	2017
Adolescents in grades 9-12	Smokeless tobacco use	Every 2 years, beginning in 2019	YRBSS	3rd quarter of even calendar year	5.97%	2017
	Diabetes prevalence			2nd more than a Calina	11.17%	2016
	Tobacco use	Annual	BRFSS	3rd quarter of the following calendar year	17.49%	2016
	Alcohol use			Tollowing calendar year	56.60%	2016
	Poverty				11.29%	2017
Education		ucation			Less than high school: 4.19% High school: 40.38% College: 23.04% Graduate: 11.04%	2017
Adults 18 years and older	Employment	ent			5.3% unemployment rate for those 16 years and older	2017
Race/Ethnicity		Annual	ACS	Annually beginning in September	White: 80.74% Black: 11.22% American Indian: 0.18% Asian: 3.47% Native Hawaiian: 0.05% Other: 4.34%	2017
	Disability				16.41%	2017
	Medical insurance				94.19%	2017

OUTCOMES

Target Population	Indicator (related HP2020 objective)	Data Collection Timeline	Data Source	Data Source Availability	Baseline Data - May 2019	Year
Newborns	Cleft lip with & without cleft palate (OH 15)	Annual	Birth certificates; birth defects	4th quarter of the following calendar year	5.0 per 10,000	2013-2017
	Cleft palate (OH 15)		registry	following calendar year	2.3 per 10,000	2013-2017
Public elementary	Dental caries experience (OH 1.2)				Not Available	
school children in	Untreated dental caries (OH 2.2)	Every 5 years, beginning in	Basic	1st quarter of the	Not Available	
grade 3	Urgent dental treatment needed	2020	Screening	following calendar year	Not Available	
grade 3	Dental sealants (OH 12.2)	1 727 200	Survey (BSS)		Not Available	
	Any tooth loss (OH 4.1)				29.09%	2016
	No tooth loss	F	Behavioral Risk	2nd avenue of the	46.84%	2016
Adults 18-64 years	1-5 permanent teeth lost	Every 2 years, beginning in 2018	Factor Surveillance	3rd quarter of the	20.56%	2016
	6 or more teeth lost	2018	System (BRFSS)	following calendar year	6.33%	2016
	All permanent teeth lost (OH 4.2)		10 10 10		2.20%	2016
	No tooth loss				5.22%	2016
Adults 65 years and	1-5 permanent teeth lost	Every 2 years, beginning in 2018	BRFSS	3rd quarter of the following calendar year	7.48%	2016
older	6 or more teeth lost				5.14%	2016
	All permanent teeth lost (OH 4.2)				3.57%	2016
All state population	Oral cavity & pharyngeal cancers; incidence and mortality	Annual	Cancer Registry	1st quarter of the following calendar year	Incidence: 12.2 per 100,000 age- adjusted Mortality: 2.3 per 100,000 age- adjusted	2016
	Oral cavity & pharyngeal cancers detected at early stages (OH 6)				3.8 per 100,000 age-adjusted	2016
	Oral health problems			Annually in October	One or more problems: 12.2% No problems: 87.8%	2017
Children 1-17 years	Condition of teeth	Annual	National Survey of Children's Health	(based on that 2017 data was released in October 2018)	Excellent or very good: 80.2% Good: 13.7% Fair or poor: 6.1%	2017
	Tooth decay/cavities				11.60%	2017

WORKFORCE

Target Population	Indicator (related HP2020 objective)	Data Collection Timeline	Data Source	Data Source Availability	Baseline Data - May 2019	Year	
	State oral health plan State oral health coalition	Annual Annual	PA Oral Health Program data &		Yes Yes	2018	
	State oral health surveillance system	Annual	ASTDD Synopses Report	Annually in the summer	No	2018	
	Number of dental professionals				Dentist: 9,479 Dental Hygienist: 8,829 Total: 18,308	2015	
	Number of dental professionals that work in PA (of those that returned the survey)				Providing Direct Patient Care: Dentist: 5,993 Dental Hygienist: 5,937 Total: 11,930	2015	
	Number of dental professionals that live in PA (of those that returned the survey)	Every 2 years, beginning in		Marifactual	Dentist: 6,300 Dental Hygienist: 6,572 Total: 12,872	2015	
All state population	Number of full time equivalent (FTE) licensed practicing dentists (of those that returned the survey)		Every 2 years, beginning in		Health Care Workforce Report	May of each odd year (raw data only) Report released 3rd	4,348
All state population	Number of FTE licensed dental hygienists (of those that returned the survey)	2019	(Pulse Report)	year after data collected (i.e. 2019 report will be released in 2022)	3,024	2015	
	Percentage of practicing dentists who work part time			l loisassa iii 2022,	27%	2015	
	Percentage of practicing dentists who plan to retire in one to five years (among those that provide direct patient care)				19%	2015	
	Percentage of practicing dentists who accept any and all Medicaid patients (among those that provide direct patient care)				25%	2015	
	Dental Health Professional Shortage Areas	Annual	HRSA Data Warehouse	Annually in June	Facility: 108 Geographic: 2 Low Income Population: 56 Total: 166	2018	

Appendix B

For the purposes of this report, the 2020 Healthy People objectives are listed below. When 2030 objectives are published, work efforts may be adjusted to stay in alignment.

Oral Health of Children and Adolescents

- **OH-1** Reduce the proportion of children and adolescents who have dental caries experience in their primary or permanent teeth
- **OH-1.1** Reduce the proportion of children aged 3 to 5 years with dental caries experience in their primary teeth
- **OH-1.2** Reduce the proportion of children aged 6 to 9 years with dental caries experience in their primary or permanent teeth
- **OH-1.3** Reduce the proportion of adolescents aged 13 to 15 years with dental caries experience in their permanent teeth
- OH-2 Reduce the proportion of children and adolescents with untreated dental decay
- **OH-2.1** Reduce the proportion of children aged 3 to 5 years with untreated dental decay in their primary teeth
- **OH-2.2** Reduce the proportion of children aged 6 to 9 years with untreated dental decay in their primary or permanent teeth
- **OH-2.3** Reduce the proportion of adolescents aged 13 to 15 years with untreated dental decay in their permanent teeth

Oral Health of Adults

- OH-3 Reduce the proportion of adults with untreated dental decay
- OH-3.1 Reduce the proportion of adults aged 35 to 44 years with untreated dental decay
- OH-3.2 Reduce the proportion of adults aged 65 to 74 years with untreated coronal caries
- OH-3.3 Reduce the proportion of adults aged 75 years and older with untreated root surface caries
- **OH-4** Reduce the proportion of adults who have ever had a permanent tooth extracted because of dental caries or periodontal disease
- **OH-4.1** Reduce the proportion of adults aged 45 to 64 years who have ever had a permanent tooth extracted because of dental caries or periodontal disease
- OH-4.2 Reduce the proportion of adults aged 65 to 74 years who have lost all of their natural teeth
- **OH-5** Reduce the proportion of adults aged 45 to 74 years with moderate or severe periodontitis
- OH-6 Increase the proportion of oral and pharyngeal cancers detected at the earliest stage

Access to Preventive Services

- **OH-7** Increase the proportion of children, adolescents, and adults who used the oral health care system in the past year
- **OH-8** Increase the proportion of low-income children and adolescents who received any preventive dental service during the past year
- OH-9 Increase the proportion of school-based health centers with an oral health component
- **OH-9.1** Increase the proportion of school-based health centers with an oral health component that includes dental sealants
- **OH-9.2** Increase the proportion of school-based health centers with an oral health component that includes dental care
- **OH-9.3** Increase the proportion of school-based health centers with an oral health component that includes topical fluoride
- OH-10 Increase the proportion of local health departments and FQHCs that have an oral health program

- OH-10.1 Increase the proportion of FQHCs that have an oral health care program
- **OH-10.2** Increase the proportion of local health departments that have oral health prevention or care programs
- OH-11 Increase the proportion of patients who receive oral health services at FQHCs each year

Oral Health Interventions

- **OH-12** Increase the proportion of children and adolescents who have received dental sealants on their molar teeth
- **OH-12.1** Increase the proportion of children aged 3 to 5 years who have received dental sealants on one or more of their primary molar teeth
- **OH-12.2** Increase the proportion of children aged 6 to 9 years who have received dental sealants on one or more of their permanent first molar teeth
- **OH-12.3** Increase the proportion of adolescents aged 13 to 15 years who have received dental sealants on one or more of their permanent molar teeth
- **OH-13** Increase the proportion of the U.S. population served by community water systems with optimally fluoridated water
- OH-14 Increase the proportion of adults who receive preventive interventions in dental offices
- **OH-14.1** Increase the proportion of adults who received information from a dentist or dental hygienist focusing on reducing tobacco use or on smoking cessation in the past year
- **OH-14.2** Increase the proportion of adults who received an oral and pharyngeal cancer screening from a dentist or dental hygienist in the past year
- **OH-14.3** Increase the proportion of adults who were tested or referred for glycemic control from a dentist or dental hygienist in the past year

Monitoring, Surveillance Systems

- **OH-15** Increase the number of states and the District of Columbia that have a system for recording and referring infants and children with cleft lips and cleft palates to craniofacial anomaly rehabilitative teams
- **OH-15.1** Increase the number of states and the District of Columbia that have a system for recording cleft lips and cleft palates
- **OH-15.2** Increase the number of states and the District of Columbia that have a system for referral for cleft lips and cleft palates to rehabilitative teams
- **OH-16** Increase the number of states and the District of Columbia that have an oral and craniofacial health surveillance system

Public Health Infrastructure

- **OH-17** Increase health agencies that have a dental public health program directed by a dental professional with public health training
- **OH-17.1** Increase the proportion of states (including the District of Columbia) and local health agencies that serve jurisdictions of 250,000 or more persons with a dental public health program directed by a dental professional with public health training
- **OH-17.2** Increase the number of Indian Health Service Areas and Tribal health programs that serve jurisdictions of 30,000 or more persons with a dental public health program directed by a dental professional with public health training

Appendix C

Pennsylvania Oral Health Plan 2020-2030 Logic Model

(https://paoralhealth.org/wp-content/uploads/2020/08/OHP-2020-2030-logic-model.pdf)

RESOURCES	Health Infrastructure	Health Surveillance and Evaluation	ACTIVITIES Health Equity	Health Policy and Advocacy	Has th Community	SHORT-TERM GOALS	MIDTERM GOALS	LONG-TERM GOALS
	Develop and maintain an acceptible for of communities that necessive optimally fluoridated wear from a CWS. Replicate busy process models for phoso-based and school-lessed assists programs. Espect the provision of crush hash banckes at Scharlly qualified health custers and rural health cities. Assess the cathes of teledenticity programs. Support and promote crishwhalt facinity amplips: and groups not tell beath facinity amplitude to the contract of provision of such decay. Assess that acts of long-term ours flightlist have amplituded to the contract provision of such decay. Assess that source of long-term ours flightlists have amplied acceptability of dental homes to children and adults with provisional transverse provided by an our health productional. Expend acceptability of dental homes to children and adults with papel less library a reside. Expend acceptability of dental homes to children and adults with papel less library a reside. Expend acceptability of dental homes to children and adults with papel less library a reside.	Identify and assemble the appropriess data ascrete and methods to assess one health transfer for costs, prevention and electricis Collect appropriate data to track knows. Preport necessical Collection and electricis Report necessical Collection data to the CDC Where Pourisdices Reports System to track the parameter of passible on community water passes that provide optimally fluorists and water.	Develop culturally literates and amothis massages for anget populations. Reduce out health disparative according to income, reso, whiteley, age, pergundle medicence, disability setter, and education levels increase access to cust health professional districts are access to cognitively fluoridated weter for people mediting in destral health professional distrings areas. Cognitively fluoridated weter for people mediting in destral health professional distrings areas. Cognitively fluoridated weter for people mediting in destral health professional distrings areas. People mediting in destral health professional distrings areas. People mediting in destral health professional distrings areas. People mediting in destral health professional distrings are provided appreciately fluoridated weter. Find or develop and health Eternary courses or resource tax to be in extra and medital providers. Find or develop and health Eternary courses or resource tax to be in the country of the profession of the profession with their patients.	prevention, and aducation parvices talkite to policy where Medical combinates commonly health makes [and dimine groupd] for home visting education services and appropriate andered to describitures Advanta for the use of an oral health curriculum and training program for certified community health workes to seat them in assaining and desses risk and suppropriate infarith. Support policies that incommend an acide tax on totalacco and suppropriates.	increase and disease arrentings, risk assumments, preventive treatments and offerine by medical privacy care providers. Expend oral health prevention seen, risk assumment, and connection and retaral homes for communities through beat line, phannically, today partiting, and other house levels and locations. Choosing a find-indicated inferents through beat line, phannically, though partiting, and other house levels as the control of the control offered increases that member of detail growleder acreases the number of detail growleders are command the NPV vertices. Increases the number of detail growleders who command the NPV vertices. Increases the number of detail growleders are command the NPV vertices. Incorporate sold providers assumment of dishets and predishets risk incorporates and detail growleders assument of dishets and predishets risk incorporates and detail growleders assument of dishets and predishets risk incorporates and dishes a prevention in reduction that he field undergrowleds and reduction or reduction and account of the level providers and all the providers and account one health field, and account one health field undergrowleds and reduction or providers and account one health field undergrowleds and reduction or providers and account one health field undergrowleds and reduction or providers and advantage for detail annivers for longer programs that reduce detail disease treatment under general interactions and details.	A1 Increase paramage of people amend by community water speams receiving approach producted where the producted where the producted water of the producted water	Decrease bamiers to accessing destal care increase preventive serious populations improve the oral health literacy of healthcare providers and the general public	
Base of established data, networks and infrastructure Leadership and support from PADOH and PCDH Engagement from public health, medical and destal communities	areas Englare new workforce models while fully utilizing the current dental workforce	Support the development and maintenance of an accurate and current cereal workforce development and current cereal workforce development of the cereal presents and specially and practice location. Smalleth acption for assessing onlihealth workforce capacity. The cereal production of the cereal participating workforce data Courdinate the development of a community hands workforce datase. Cereal cereal cereal Cereal cereal cereal Cereal cereal cereal Cereal cereal Cereal cereal Cereal cereal Cereal cereal Cereal	Premote and support the use of community health workers/envigoror in traditionality undersomed communities because of communities because of communities because of community practice novolvement into detail and deemal highest curricular. On the community practice in the communities. Only the practice in the communities of the	centers Radeline and supand roles of dental and medical professionals through nevidors to state medical and dental practice acts to meet needs effectively and equitably Identify key decision malkers and public champions who	Increase interdisciplinary clinical and profesional collaboration between the medical behavioral, and oral health workforce commentates. Promote education and making all medical primary care practitioners in the execution and making all medical primary care practitioners in the execution and making all medical primary care specificances in a desertal health principlical promoted association and primary care of the execution of promote basic care the text of the execution of th	530,000 par year in the Medical gargum 83. Decreases the number of DMPSA county-level designations. 84. Increase the number of primary care medical provides who bit Medical for oral health senious.	Build a sufficient, diverse and competent oral health workforce	Enhance the overall health of all Pernsylvanians through my oved and health
	Secommend that the SOIP have the capacity and influence (pathing, funding, and to effectively curry out the 10 Earniel (letter) Public heart's Series no louding and are on I hash manulines option, death or an area on land in manulines option, death or an area on land in manulines option, death or an area of a specimization, cell-forcer desiration, and that the electrical section of the area of feeters in facilities for independs and health influencement in the SOIP at PADOPH excerding a to ECC and ASTOID wife street cells and influencement in the SOIP at PADOPH excerding a to ECC and ASTOID wife street cells and influencement in the SOIP at PADOPH excerding a to ECC and ASTOID wife street with the street of	Provide funding and support for a sustainable 50%S that is in accordance with Council of Street and Terrorised Epidemiologist critical and ownscene and diministrancilly a stret-recruised speciesmologist described son in health and all related activities to monitor the 50%SS. The control of the street of the s	develop key oral health indicators in the state oral health surveillance system that addresses the magnitude of oral health dispatities among certain underserved	Share surveillance data reports with partners and frunders to demonstrate the need for increased and continued forming one share our health program and the state our public policies that added and policy parently, we forms, and we had the set of repulsions that programs can leak the set of repulsions that programs can leak the set of the state of the set of the	One qualitative and quantitative data to inform medical professionals and their associations about the link between ord and operant, disease according populations. Own as inferred-based data and information to promote collaboration and parameters among dental and non-dental providers as well as the public.	C1. Implament/mainta in a serio on I hashib somilalines garen (DORS) in exceptance with the state of Oral Health Somellanes System C2. Feature and grow a disease, senti marble, and collaborative serio and last his salticen C3. Evidence of effective cross-governmental approximation and minimate PADDs and serio serior serior and promote mental serior belongs and protect on descending information of the oral properties of the collection, maybell, and reporting, policy information, and programs promotes of serior ser	Maintain a strong oral health program infrastructure to sustain proper state oral health surveillance	

Appendix D

The 10 Essential Dental Public Health Services 1

Essential Public Health Services to Promote Health and Oral Health in the United States

The 10 Essential Public Health Services provide the framework for many national programs, including the National Public Health Performance Standards Program, the PHAB National Voluntary Accreditation Program for health departments, and the Model Framework for Community Oral Health Programs. The corresponding 10 Essential Public Health Services to Promote Oral Health provide a framework for State Roles, Activities and Resources that comprise ASTDD's Guidelines and for ASTDD's State Oral Health Program Review process.

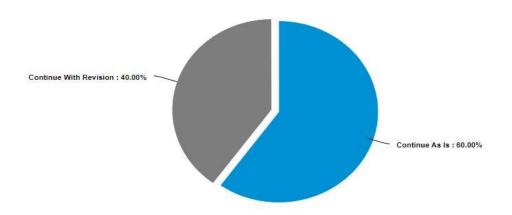
10 Essential Public Health Services ⁴	10 Essential PH Services to Promote Oral Health in the US
Assessment	Assessment
Monitor health status to identify and solve community health problems	Assess oral health status and implement an oral health surveillance system
Diagnose and investigate health problems and health hazards in the community	Analyze determinants of oral health and respond to health hazards in the community
Inform, educate and empower people about health issues	Assess public perceptions about oral health issues and educate/empower them to achieve and maintain optimal oral health**
Policy Development	Policy Development
Mobilize community partnerships and action to identify and solve health problems	Mobilize community partners to leverage resources and advocate for/act on oral health issues
Develop policies and plans that support individual and community health efforts	Develop and implement policies and systematic plans that support state and community oral health efforts
Assurance	Assurance
Enforce laws and regulations that protect health and ensure safety	Review, educate about and enforce laws and regulations that promote oral health and ensure safe oral health practices
Link people to needed personal health services and assure the provision of health care when otherwise unavailable	7. Reduce barriers to care and assure utilization of personal and population-based oral health services
Assure competent public and personal health care workforce	Assure an adequate and competent public and private oral health workforce
Evaluate effectiveness, accessibility and quality of personal and population-based health services	Evaluate effectiveness, accessibility and quality or personal and population-based oral health promotion activities and oral health services
10. Research for new insights and innovative solutions to health problems	Conduct and review research for new insights and innovative solutions to oral health problems

¹ Essential Public Health Services to Promote Health and Oral Health in the United States. (n.d.). Retrieved from https://www.astdd.org/docs/essential-public-health-services-to-promote-health-and-oh.pdf

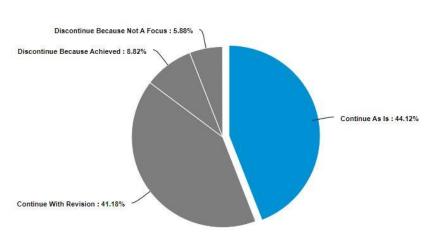
Appendix E

Spring 2019 Stakeholder Survey – This survey was distributed electronically to 756 individuals; 37 responses received. The survey listed the priorities and objectives from the Pennsylvania Oral Health Plan 2017-2020 and asked if the same topics should be continued in the next Plan.

1.1 Increase oral health prevention or care delivery programs. Objective: Increase the proportion of rural health clinics, or local health departments that have an oral health prevention or care delivery programs. Current Status - 13/70 Rural Health Clinics participating in oral health programs; 5/10 County and Municipal Health Departments have oral health programs

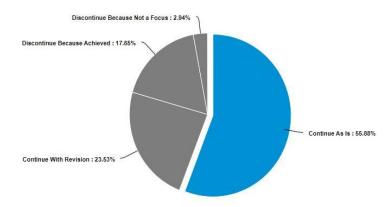


1.2 Increase sealant programs.Objective: Establish 3 best practice pilot sealant programs throughout the state.Current Status - Programs currently exist in 3 County and Municipal Health Departments; all programs are being shifted to best practice based on national standards

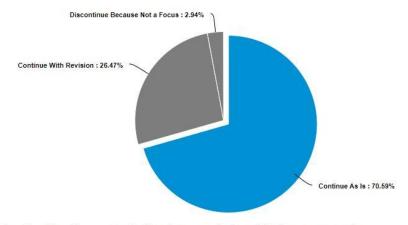


1.3 Increase oral health educational programs.Objective: Increase number of schoolsponsored and community-sponsored educational programs.Current Status - Oral Health Story Kit for Public Libraries distributed to 98.4% of PA libraries.

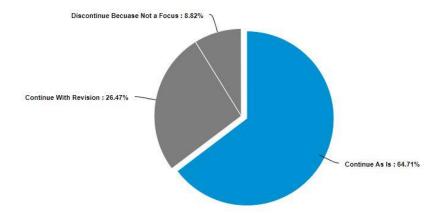




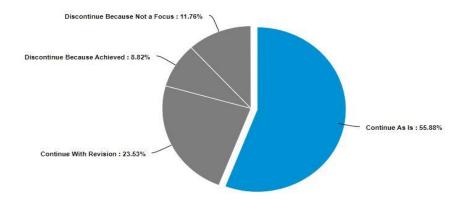
1.4 Encourage access to community water fluoridation. Objective: Support statewide and/or community-based efforts to sustain and increase the proportion of the PA population served by community systems with optimally fluoridated water.Current Status - 58% of PA population served by water systems with optimally adjusted fluoride



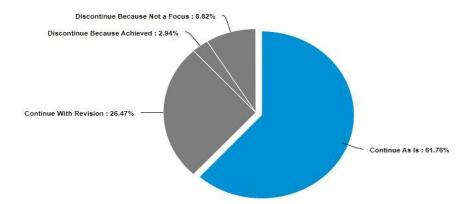
2.1 Increase ratio of oral health care professionals to population. Objective: Decrease the number of oral health designated health professional shortage areas. Current Status - 166 total DHPSAs



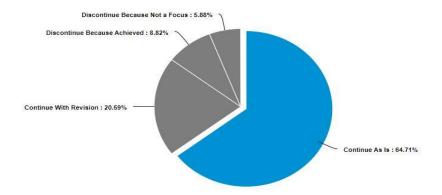
2.2 Promote policy that expands the use of dental paraprofessionals and auxiliaries. Objective: Initiate policy changes to support the utilization of dental paraprofessionals and auxiliaries by working with and educating regulatory agencies and health professionals and professional organizations. Current Status - Addition of Public Health Dental Hygiene Practitioners (PHDHPs) to Medicaid provider list in 2017.



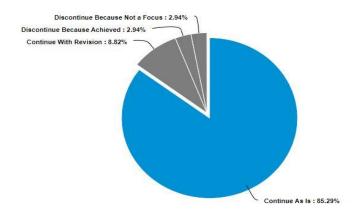
2.3 Develop programs that promote and support oral health careers. Objective: Create a comprehensive plan to improve the number of oral health professionals graduating and remaining in Pennsylvania. Current Status - 3 (4) full-time dental schools in PA, 12 dental hygiene programs, numerous EFDA programs. Need for process to assess the number who remain to practice in PA.



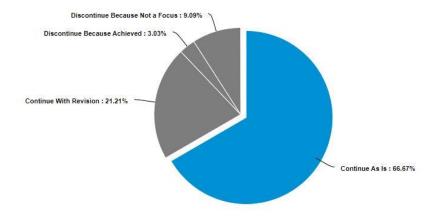
3.1 Increase statewide leadership of Pennsylvania's Department of Health's Oral Health Program. Objective: PADOH Oral Health Program will assess its staff and organizational needs and fill the position of dental director. Current Status - Added Oral Health program staff; dental director position pending



3.2 Create a plan to develop an oral health surveillance system for Pennsylvania. Objective: PADOH Oral Health Program and oral health stakeholders will develop a plan to create an oral health population-based surveillance system that meets CDC recommendations. Current Status - PA Oral Health Surveillance System (PaOHSS) in development



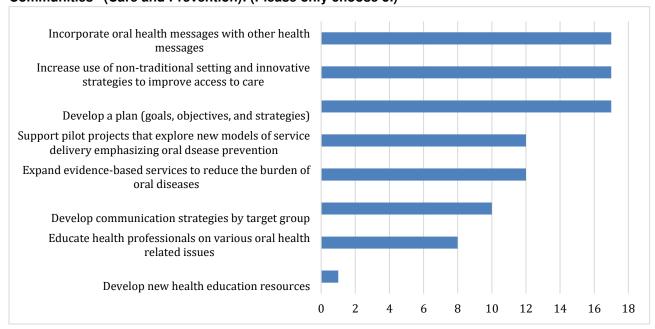
3.3 Utilize LiveHealthyPa.com as an online information hub.Objective: PA oral health stakeholders will adopt for use the LIVE HEALTHY PA online communications tool.Current Status - Many resources listed on site; requesting analytics



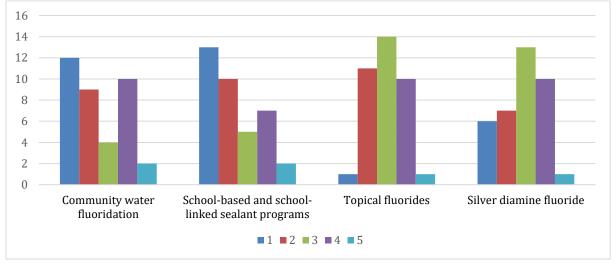
Appendix F

Fall 2019 Stakeholder Survey – Distributed electronically to 780 individuals; 37 responses received.

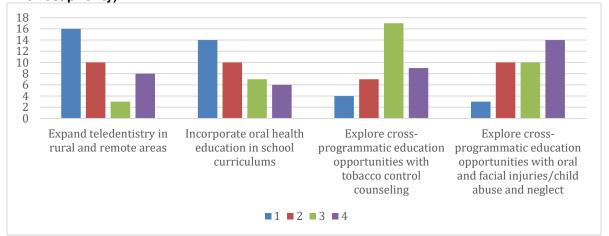
Question 1: Identify your top 3 areas of focus for the priority "Align for Healthy Communities" (Care and Prevention): (Please only choose 3.)



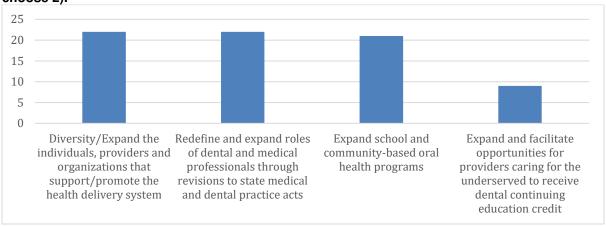
Question 2: If it is decided to include "expand evidence-based services to reduce the burden of oral diseases," please rank the following by priority: (1=highest priority, 5=lowest priority).



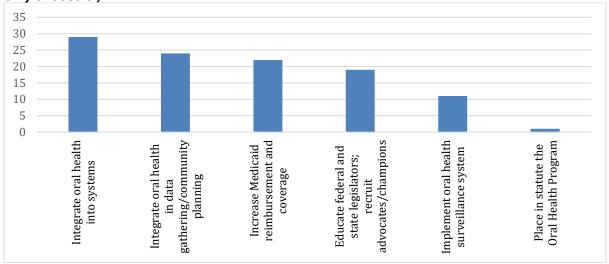
Question 3: If it is decided to include "increasing use of non-traditional settings and innovative strategies to improve access to care," please rank the following by priority (1=highest priority, 4=lowest priority).



Question 4: Identify your top 2 areas of focus for the priority "Develop Workforce": (please only choose 2).



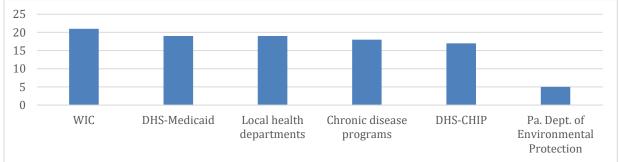
Question 5: Identify your top 3 areas of focus for the priority "Support Infrastructure": (Please only choose 3.)



Question 6: Please identify one area that you believe needs prioritized in 2020-2030 in order to make the greatest impact on improving the oral health for Pennsylvanians (open answer). (Please note these are the exact answers from stakeholders, grammar/punctuation has not been edited.)

- → Water fluoridation (2 responses)
- → Nutrition (SAD-Standard American Diet=poor health/oral health)
- → Integrating oral health services in medical settings
- → Dental Sealants and Oral Health Education in Schools
- → Reform around increased access to dental hygienists in schools (3 responses)
- → Better medical dental collaboration and allowing PHDHPs into medical offices to provide screenings and FI varnish application.
- → Digital data collection on oral health/Oral health surveillance system (3 responses)
- → Teledentistry
- → Support for infrastructure
- → Educating the public on the link between oral health and overall health
- → Increasing access to care (2 responses)
- → For dental hygienists to be able to practice independently of dentists
- → Education on oral health (2 responses)

Question 7: Which areas would you like to see increased integration/partnership? (Check all that apply.)



Question 8: Is there anything else you would like to share for consideration in the Pennsylvania Oral Health Plan 2020-2030?

- → Nutrition
- → Development of innovative oral health prevention education in non-traditional settings
- → Placement of RDHs in the Pennsylvania Department of Education
- → Attack maternal oral health illiteracy
- → I think it is imperative to develop a working OH statewide surveillance system where all OH programs can be accounted for and data collected.
- → Knowing that there are way more dental hygienists in the state compared to dentists and that number keeps getting higher, I feel that dental hygienists need to practice individually from dentists and work more on a referral basis. prevention is key and dentists don't do prevention
- → There is a need to expand the ways in which the public is educated on the importance of oral health