

Pennsylvania Oral Health Plan 2017-2020

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pennsylvania
DEPARTMENT OF HEALTH



Pennsylvania's Oral Health Plan 2017-2020

July 1, 2017

Dear Pennsylvanians:

It is my pleasure to share with you the Pennsylvania Oral Health Plan 2017-2020 (OHP). The OHP 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 (PADOH) and its key partner, Pennsylvania Coalition for Oral Health (PCOH), led the OHP development efforts, significant time, talents and resources were committed over the past 18 months by many stakeholders towards the formation of the OHP. Thank you!

A core component of the OHP 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 prevention and care.

Please review this 2017-2020 OHP and find your role in its implementation. We need you to join with 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 oral health in their community.

Dr. Rachel Levine
Acting Secretary of Health and Physician General

ACKNOWLEDGEMENTS

The department thanks the Oral Health Core Stakeholder Team and Pennsylvania Coalition for Oral Health for their vision, leadership and expertise in crafting this plan in the fight against oral health disease.

We also acknowledge the more than 100 individuals and organizations that participated in regional meetings in the summer of 2016, providing valuable input that is reflected in the document.

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EXECUTIVE SUMMARY

The **2017-2020 Pennsylvania Oral Health Plan (OHP)** represents the combined effort of diverse stakeholders; federal, state and local governmental agencies; voluntary health organizations; academic institutions; health systems; professional associations; foundations; consumers; corporations; and communities with an interest in oral health. This document provides the blueprint for how efforts, resources and interests can be combined to strengthen the collective capacity in Pennsylvania to ultimately improve oral disease prevention and assist individuals with oral disease in achieving a lifetime of good oral health.

The oral health priorities defined through the stakeholder process include: access to oral health care and prevention, oral health workforce development and oral health infrastructure. The 2017-2020 OHP outlines broad objectives with proposed actions to address the needs of the population, as expressed by stakeholders throughout the state during the development of this plan. This plan will provide the foundation for a more robust plan in 2020. Commitment to the execution of this plan from PADOH and contributing stakeholders will be the first step in moving Pennsylvanians toward better oral health and, thus, overall health.

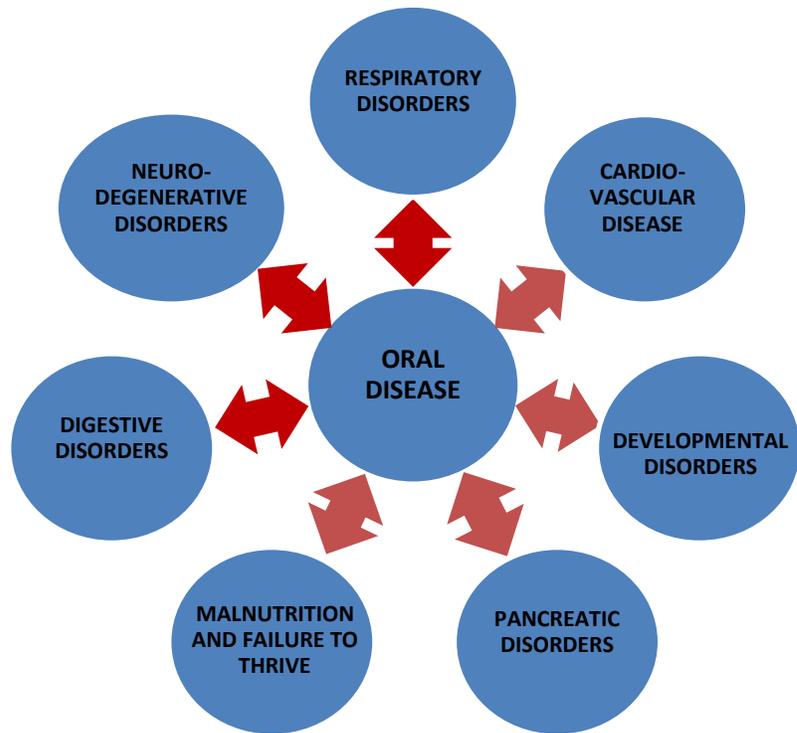
The three main priorities strongly reflect those ideas expressed by stakeholders during workshops held throughout Pennsylvania in spring and summer of 2016. By building upon this input, PADOH, Pennsylvania Coalition for Oral Health (PCOH) and other stakeholders believe that these are the areas most likely to generate stakeholder involvement during implementation and support for a more comprehensive plan in the future.

Each priority has goals and objectives on which action and implementation will be focused. These strategies outline broad objectives to address the needs of the population. This document will provide the foundation for a more robust plan in 2020. Commitment to implementing these strategies from the commonwealth and contributing stakeholders is the first step in moving Pennsylvanians toward better oral health and thus, overall health.

PLAN PURPOSE and DEVELOPMENT

The department and its oral health stakeholders are committed to advancing the oral health and overall quality of life of all Pennsylvanians.

“Oral health includes the ability to speak, smile, smell, taste, touch, chew, swallow and convey a range of emotions through facial expressions.”¹ Untreated dental problems can lead to pain, infection, sepsis and even death. Compromised oral health can have consequences for an individual’s overall health, as well as for family and social relationships, since oral health is an integral part of quality of life essentials, including physical, mental and social health. By developing the 2017-2020 Oral Health Plan to work with other state health improvement efforts, the benefits of improved oral health will influence the commonwealth population’s overall quality of life.



¹ Glick, Michael, et. al. *A new definition for oral health developed by the FDI World Dental Federation opens the door to a universal definition of oral health.* Journal of the American Dental Society. December 2016. Volume 147, Issue 12, Pages 915–917.

The OHP aligns with Pennsylvania’s State Health Improvement Plan (SHIP) and its Health Innovation in Pennsylvania Plan (HIP), focusing on three priorities and associated opportunities to improve oral health outcomes in the short term, namely access to care and prevention, oral health workforce development and oral health infrastructure.^{2,3} It does not inventory all oral health programs and assess all gaps in oral health policy. The OHP does identify ways in which people and organizations are already working, plan to work and are willing to work together to: prevent oral disease; increase access to services; develop and disseminate oral health information; and strengthen the oral health workforce.

Pennsylvania’s OHP builds upon existing stakeholder efforts to:

- increase access to dental services;
- strengthen the oral health workforce; and
- expand oral health infrastructure.

Research and development for the plan was driven by existing best practices. A survey by the Association of State and Territorial Dental Directors (ASTDD), a national non-profit organization representing the directors and staff of state public health agency programs for oral health, reports on the status of the state oral health programs. Areas of importance that are part of the questionnaire include demographics, infrastructure, workforce and administrative factors impacting the state programs. Services provided to constituents are also evaluated, and the information is reported on the [ASTDD website](#).

[Healthy People 2020](#) is another resource that outlines oral health goals for the nation. Data, evidence-based research and eLearning courses are developed and made available to the public via this government effort to guide health improvement efforts within the state and federal plans. Our goals and plan directives are in line with many of the measures that ASTDD and Healthy People 2020 consider relevant to a comprehensive OHP.^{4,5,6}

The scope of the OHP is limited to the priority areas defined by stakeholders. The department and PCOH, as lead architects of this plan, recognize that there are other areas that can be improved regarding oral health efforts in the state. This plan is the framework for a more comprehensive plan to

² State Health Improvement Plan 2016-2020: <http://www.health.pa.gov/Your-Department-of-Health/Offices and Bureaus/Health Planning/Documents/SHIP/2015-2020>.

³Health Innovation Plan for PA, June 2016. [http://www.health.pa.gov/Your-Department-of-Health/innovation/Documents/Health%20Innovation%20in%20Pennsylvania Coalition for Oral Health \(PCOH\): http://paoralhealth.org/OPA%20Plan%2020160630%20for%20CMMI.pdf](http://www.health.pa.gov/Your-Department-of-Health/innovation/Documents/Health%20Innovation%20in%20Pennsylvania%20Coalition%20for%20Oral%20Health%20(PCOH):http://paoralhealth.org/OPA%20Plan%2020160630%20for%20CMMI.pdf).

⁴ State Oral Health Program Infrastructure and Capacity Policy Statement Association of State and Territorial Dental Directors (ASTDD) Adopted: May 17, 2013.

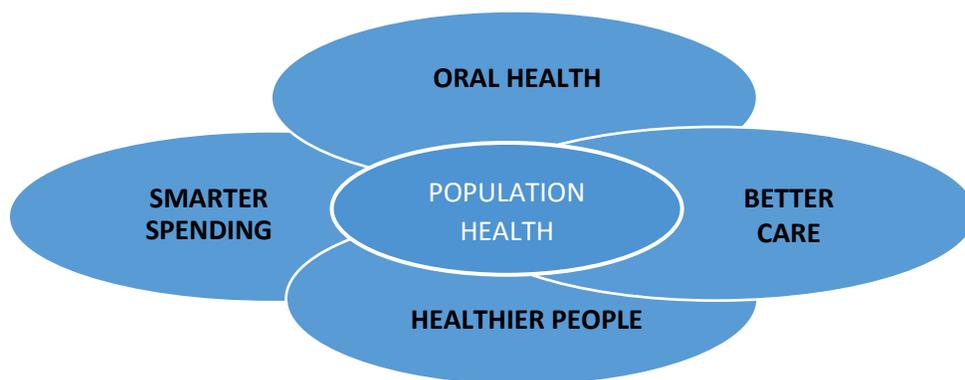
⁵ 2016 Synopses of State Dental Public Health Programs. Summary Report, Association of State and Territorial Dental Directors. June 2016.

⁶ Bloom, Barbara, Cohen, Robin. Dental Insurance for Persons under Age 65 Years with Private Health Insurance: United States, 2008. NCHS Data Brief Number 40. June 2016.

be developed in 2020 based on the continued concerns and efforts identified by stakeholders after implementation of this basic framework. The OHP focuses on addressing elevated risk factors for oral health, including dental health professional shortage areas, community water fluoridation, dental sealants, the number of people having a dental visit within a year, state government leadership and oral health data collection and dissemination.

The OHP is primarily written for oral health and primary care health professionals, program administrators and advocates for oral health. It serves as a resource to: (1) support the implementation of activities planned and those underway; (2) identify new policy and program initiatives; and (3) strengthen partnerships and collaboration that address the OHP priorities. It represents DOH commitment to employ its personnel, programs and state and external funding to reduce oral disease.

The OHP is timely, since Pennsylvania’s health policies are being evaluated and updated to align with health policy changes occurring at the federal level. Improved oral health improves population health through the “triple aim” of smarter spending, better care and healthier people.⁷



This plan will serve as a template to encourage improved physical and financial access to services with a more flexible and diverse workforce to provide for improved oral health and thus a healthier quality of life.^{8,9,10}

⁷ A. Snyder, *Oral Health and the Triple Aim: Evidence and Strategies to Improve Care and Reduce Costs* (Washington, D.C.: National Academy for State Health Policy, April 2015), <http://www.nashp.org/wp-content/uploads/2015/04/Oral-Triple-Aim.pdf>.

⁸ Healthy People 2020: Leading Health Indicators: <http://www.healthypeople.gov/2020/LHI>.

⁹ A. Snyder, *Oral Health and the Triple Aim: Evidence and Strategies to Improve Care and Reduce Costs* (Washington, D.C.: National Academy for State Health Policy, April 2015), <http://www.nashp.org/wp-content/uploads/2015/04/Oral-Triple-Aim.pdf>.

¹⁰ Wall and Nasseh. “Dental Related Emergency Department Visits are on the Rise in the United States”. Research Brief, Health Policy Institute of the American Dental Association. May 2013.

PENNSYLVANIA HEALTH PLANS: GOALS AND PRIORITIES

2015-2020 State Health Improvement Plan (SHIP)

Pennsylvania's five-year SHIP addresses oral health under its priority for primary care and preventive services. SHIP recognizes that the commonwealth has a shortage of accessible dental health professionals and frames a strategy to increase access to oral health for treatment and preventive care, especially for children and youth, and to improve residents' value for a healthy mouth. The OHP builds upon this foundation.¹¹

Population Health/Health Innovation Plan: Implementation, 2016 (HIP)

The HIP focuses on improving population health in the context of health-care delivery and payment reform, as well as health-information technology and workforce planning. It is designed to maximize the impact of state and local activities by improving alignment and coordination. Improving oral health, particularly among children, is one of the HIP's five priorities. Like the OHP, the HIP seeks to leverage strategic policy changes and successful practice-level innovations across the commonwealth.¹²

¹¹ State Health Improvement Plan 2016-2020: <http://www.health.pa.gov/Your-Department-of-Health/Offices and Bureaus/Health Planning/Documents/SHIP/2015-2020>

¹² Health Innovation Plan for PA, June 2016. [http://www.health.pa.gov/Your-Department-of-Health/innovation/Documents/Health%20Innovation%20in%20Pennsylvania Coalition for Oral Health \(PCOH\): http://paoralhealth.org/OPA%20Plan%2020160630%20for%20CMMI.pdf](http://www.health.pa.gov/Your-Department-of-Health/innovation/Documents/Health%20Innovation%20in%20Pennsylvania%20Coalition%20for%20Oral%20Health%20(PCOH):%20http://paoralhealth.org/OPA%20Plan%2020160630%20for%20CMMI.pdf).

Table 1. Pennsylvania Health Plans and Oral Health

2015-2020 State Health Improvement Plan	Population Health Implementation Plan/ Health Innovation Plan	Oral Health Plan
<p>Access to and Use of Primary Care and Preventive Services</p> <p>Improve access to primary care services through an expanded, extended, culturally competent workforce and facilities that provide affordable services.</p> <p>Increase the number of preventive health care service patients, specifically youth ages 1-20, through education of primary care physicians, dentists and caregivers.</p> <p>Improve health literacy through a public health coalition, education to the public and to providers, with capacity for literacy measurement.</p>	<p>Promote Better Oral Health</p> <p>Promote evidence-based benefits of community water fluoridation.</p> <p>Collaborate with family medicine physicians, dentists and pediatric providers to provide regular oral health assessments at well-child visits.</p> <p>Promote referrals from family physicians and pediatric providers to dentists for preventive oral care in children ages 6 to 12 years.</p>	<p>Reduce Oral Disease</p> <p>Improve access to care and prevention by providing dental services in shortage areas, increasing and/or improving facilities, increasing the number of sealant programs, increasing oral health education, and promoting community water fluoridation.</p> <p>Expand the workforce through provider assessment, auxiliary utilization, nontraditional location use and supporting prototypes from the 2016 PCOH Oral Health Innovative Workforce Summit.¹³</p> <p>Develop the oral health infrastructure through surveillance, an online hub for sharing and collaboration, and strengthened DOH leadership.</p>

¹³ PA Oral Health INNOVATION Summit: A Working Forum to Co-Create the Future of a Sufficient and Effective Workforce. Hosted by PA Coalition for Oral Health. November 2016. Harrisburg, PA.

METHODOLOGY

STAKEHOLDERS

The OHP is the result of a collaboration of the DOH, PCOH and members of the public health, dental and medical communities. This plan could not have been devised without involving oral health stakeholders committed to advancing the oral health and general well-being of all Pennsylvanians. In the drafting of this plan, PCOH was the key stakeholder, co-leading the development of the plan. PCOH is a diverse group of leaders advancing policies and practices that increase access to oral health services, education and prevention, especially for the most vulnerable Pennsylvanians.¹⁴

In 2016, stakeholders attended three regional workshops— in Allentown, Harrisburg and Homestead— to share ideas, existing oral health efforts in the state and priorities to be addressed in the OHP. These discussions defined a framework with goals that would clearly show how public and private organizations and individuals are working, are planning to work and will engage others in work to positively impact oral health and outcomes.

PROCESS STEPS

DOH and PCOH aimed to develop a foundational plan with few priorities and many opportunities for implementation. The Oral Health Core Stakeholder Team researched former Pennsylvania oral health plans and current oral health best practices.

Three relevant priorities were selected, and associated objectives were created. Stakeholders identified numerous problems with the delivery of dental services to the underserved in Pennsylvania: the oral health literacy of the population; limits to the state Medicaid benefit that went into effect in 2011; limited access to fluoridated water and the lack of oral health data collection in the state. Stakeholders also agreed that, if Pennsylvania hopes to move initiatives forward, a realigning of staff and other resources within the department and other state government agencies is needed.

Utilizing current federal and state specific data when available and collaborating with programs in process or in development will improve utilization of the OHP.

As development and research proceeded, stakeholders agreed that a large part of the plan needed to include assessing efforts already taking place in Pennsylvania, gathering and consolidating significant data on these efforts and utilizing the information to develop a more comprehensive plan. An OHP framework was shared with all the participating stakeholders to provide a statewide perspective and provide feedback for the OHP draft.

¹⁴ Pennsylvania Coalition for Oral Health (PCOH): <http://paoralhealth.org/>.

DentaQuest Foundation: <http://dentaquestfoundation.org/>.

The collaborative nature of this plan will allow resources to be directed toward executing goals that build on current oral health efforts and supported by data that has been evaluated and shared among interested parties. The limited period for the action items in this plan were established to encourage the larger plan to be ready for release in 2020. This timing for assessment, evaluation and execution will align with national oral health efforts.

ORGANIZATION AND USE

The OHP has been developed with extensive stakeholder engagement and input. The intent from the beginning of this process was to produce a plan with high probability for implementation by utilizing and enhancing grassroots and local efforts. Broadly, the OHP is organized at the highest levels into three priorities:

Access to oral health care and prevention

Oral health workforce development

Oral health infrastructure

The key focus of implementation is the proposed action areas shown in each priority area section. The proposed action areas strongly reflect the priorities expressed by stakeholders during workshops held throughout Pennsylvania in spring and summer of 2016. By building upon this input, DOH, PCOH and other stakeholders believe that these are the areas that are most likely to generate stakeholder involvement during implementation and support for a more comprehensive plan in the future. Local implementation efforts and collaborations to achieve these goals will be assessed by a third-party evaluation group, chosen by DOH, to determine the progress and success of the plan and provide for reassessment and further development of the plan. DOH will periodically report on progress and share best practices among stakeholders. The DOH and PCOH are committed to an aggressive implementation of these strategies to build a strong foundation for and ensure progress toward the comprehensive plan's effectiveness.

The OHP is envisioned to be a foundation for a more comprehensive plan to be developed in 2020.

The priority areas, goals and objectives for this plan are based on identified oral health concerns in the commonwealth. The program action areas are designed to utilize efforts in progress and prototypes developed with the support of the stakeholders influencing this plan and its execution. The plan is also designed to align with quality measures specified by the Dental Quality Alliance.^{15,16} See Table 2: OUTLINE OF STATE ORAL HEALTH PLAN.

¹⁵ *Quality Measurement in Dentistry: A Guidebook*. Dental Quality Alliance. June 2016.

¹⁶ Institute of Medicine (IOM). *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, D.C: National Academy Press; 2001.

POPULATION ORAL HEALTH DISPARITIES

More than 48 million people in the United States live in areas with dentist shortages. Pennsylvania has 164 dental health professional shortage areas (DHPSA), meeting only 39 percent of the dental care need in the state, based on a 5000-to-1 population-to-dentist ratio. Workforce distribution disparities contribute to the access to care crisis in Pennsylvania and the U.S. overall.¹⁷

Tens of millions of Americans go without needed dental care because they cannot find a dental provider, they cannot afford care, and they lack dental insurance or are unaware of the importance of dental care.¹³

Access to care is also limited for the 72 million children and adults who rely on Medicaid and the Children's Health Insurance Program (CHIP). Only about one-third of U.S. dentists accept public insurance. As of October 2016, Pennsylvania Medicaid enrollment equaled 2,804,943 persons, approximately half of whom were classified as children (up to age 21).¹⁸ According to the 2014 Department of Health's Oral Health Needs Assessment, dental decay remains a significant condition among Pennsylvania's children. Children from disadvantaged economic backgrounds had the most dental disease and the most untreated dental disease. This strongly suggests that access to preventive and restorative dental care, as well as effective preventive oral health education, is lacking for these children and their families.¹⁹

Children's oral health disparities in Pennsylvania are higher than in other states. A 2012 report from the Pew Center comparing children's oral health across 50 states graded Pennsylvania a D when evaluating eight benchmarks for policies that can improve children's dental health for relatively low cost. School dental sealant programs, community water fluoridation and Medicaid enrollment and reimbursement were among the failed benchmarks.²⁰

In 2012, more than 2 million people resorted to emergency room visits to treat dental problems only to receive costly palliative care, close to \$1.6 billion in 2012 alone. For many, the drugs prescribed in the ER are the only treatment they will receive for their dental problems without an adequate dental workforce to treat the underlying source of their pain and/or infection. Most oral disease can be prevented and/or managed before more severe complications develop.²¹

Untreated dental health problems lead to impaired social development, decreased ability to learn and focus, less favorable employability, lost time from work and school, and decreased productivity at all levels.¹³

¹⁷ Keiser Family Foundation. kff.org/other/state-indicator/dental-care-health-professional-shortage.

¹⁸ Pennsylvania Department of Health and Human Services, 2014 Monthly Data Report: <http://www.dhs.pa.gov/>.

¹⁹ State Health Improvement Plan 2016-2020: [http://www.health.pa.gov/Your-Department-of-Health/Offices and Bureaus/Health Planning/Documents/SHIP/2015-2020](http://www.health.pa.gov/Your-Department-of-Health/Offices-and-Bureaus/Health-Planning/Documents/SHIP/2015-2020).

²⁰ The State of Children's Dental Health: Making Coverage Matter. A Report by the PEW Center on the States. May 2011.

²¹ T. Wall, M. Vujcic. Emergency Department Use for Dental Conditions. Health Policy Institute Research Brief. American Dental Association. Available at http://www.ada.org/~media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_0415_2.pdf.

DEMOGRAPHIC PROFILE

A comprehensive OHP must to encompass all the needs of the population in the state. Various age groups have different treatment needs. Ethnic diversity can influence treatment decision and education efforts within different communities. Income levels and dental insurance also drive the utilization of dental services and access to those services.²² Pennsylvania is one of the largest states in the union, with a varied population that is concentrated in four major cities and widely dispersed throughout a vast rural area. Recognizing and addressing these challenges is imperative to the success of the plan's goals, objectives and actionable items.²³

POPULATION

The 2010 census estimated that Pennsylvania would be home to 12,802,503 residents by 2015. The 2010 census also reported that, while more than 78 percent of residents lived in urban areas, more than 2.7 million Pennsylvanians lived in rural communities.²⁴ A 2013 report from the American Dental Association (ADA) noted there were 60.2 dentists for every 100,000 people in Pennsylvania, comparable to the national average. However, a 2013 survey done by the Pennsylvania Office of Health Equity reported there were 33 percent fewer dentists and 24 percent fewer dental hygienists for every 1,000 rural residents as there were for urban residents.^{25,26,27} This population distribution in Pennsylvania accents the health equity problems that some strategies in this plan are trying to address. The Health Resources and Services Administration (HRSA) reports there are 164 DHPSAs in Pennsylvania.

RACE AND ETHNICITY

According to the 2010 Census, 81.9 percent of the population was white (79.2 percent non-Hispanic white), 11.3 percent was black or African-American, 0.3 percent American Indian and Alaska Native, 2.9 percent Asian and 1.9 percent from two or more races. A total of 5.9 percent of the population was of Hispanic or Latino origin (they may be of any race).²⁸ In a Centers for Disease Control and Prevention

²² Healthy People 2020: Leading Health Indicators: <http://www.healthypeople.gov/2020/LHI>.

²³ *2016 Synopses of State Dental Public Health Programs. Summary Report, Association of State and Territorial Dental Directors.* June 2016.

²⁴ U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates.

²⁵ *2013 Pulse of Pennsylvania's Dentist and Dental Hygienist Workforce. A Report on the 2013 Survey of Dentists and Dental Hygienists. PA Department of Health.* Vol. 6, September 2014.

³⁷ Bloom, Barbara, Cohen, Robin. *Dental Insurance for Persons under Age 65 Years with Private Health Insurance: United States, 2008. NCHS Data Brief Number 40.* June 2016.

³⁸ *The Oral Health Care System: A State by State Analysis.* American Dental Association Health Policy Institute. Dec. 9, 2015.

²⁸ Centers for Disease Control and Prevention. National Health Interview Survey. <https://www.cdc.gov/nchs/nhis/>.

(CDC) National Health Interview Survey brief published in 2010, it was found that, among persons under age 65 years with private health insurance, non-Hispanic black persons were more likely to have dental insurance than non-Hispanic white persons, non-Hispanic Asian persons or Hispanic persons.²⁹

EDUCATION

Nationally, from 2010-2014 89 percent of people 25 years and over had at least graduated from high school and 28 percent had a bachelor's degree or higher. Eleven percent had not graduated from high school.³⁰ Educational levels have been found to influence oral conditions, even though hygiene and dietary habits were the same. Periodontal status was significantly worse in lower educated members of the study group.³¹

HOUSEHOLD INCOME

Federal guidelines define poverty, as well as the number of participants taking advantage of the National School Lunch Program within a state.³² The median income of Pennsylvania households in 2010-2014 was \$53,115. Seventy-five percent of households received earnings and 2 percent received retirement income other than Social Security. Thirty-three percent of households received funding from Social Security.³³ "In Pennsylvania, blacks and Hispanics are approximately three times as likely as whites to be poor. As in most other states, children in Pennsylvania are substantially more likely than adults to live in a poor household. As of 2014, almost one in five (19 percent) Pennsylvania children under age 19 was living in poverty."³⁴

The ASTDD reports that it is well documented that individuals living in poverty have more oral health problems. In a study reported in the Journal of Dental Education in 2010, researchers found that, among children living in poverty, the utilization of dental care has increased with the apparent shift from private to public insurance. However, the same trend does not exist among adults due to the limited dental coverage afforded by public assistance or state provided plans.³⁵

²⁹ CDC National Center for Health Statistics. Data Brief No. 40, June 2010.

³⁰ U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates.

³¹ Paulnder, Axelsson, and Lindhe. Association between level of education and oral health status in 35-, 50-, 65- and 75-year-olds. Journal of Clinical Periodontology. Vol 30, Issue 8, August 2003.

³² *2016 Synopses of State Dental Public Health Programs. Summary Report, Association of State and Territorial Dental Directors.* June 2016.

³³ U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates.

³⁴ The Pennsylvania Health Care Landscape, Fact Sheet April 2016, the Kaiser Commission on Medicaid and the Uninsured.

³⁵ Wall, Vujicic, and Masseh. "Recent Trends of the Utilization of Dental Care in the United States." Journal of Dental Education Volume 76, Number 8.

HEALTH AND DENTAL INSURANCE

In 2014, 92 percent of all Pennsylvanians had health insurance. Almost six in 10 (59 percent) Pennsylvanians were covered under private health insurance, with 53 percent of Pennsylvanians covered by employer-sponsored insurance and the remaining 6 percent covered by individual coverage. Almost one-fifth (18 percent) were covered by Medicaid or other public coverage, and less than one in 10 (8 percent) of all Pennsylvanians were left uninsured. Children in Pennsylvania with family incomes above Medicaid eligibility levels are covered through the state's separate Children's Health Insurance Program (CHIP), which does provide for comprehensive dental coverage. National Center for Health Statistics reported a 3 to 1 ratio for people with medical coverage vs. those with dental coverage in 2010. Individuals who remained uninsured in 2014 were primarily low-income, in working families and white non-Hispanic.³⁶

Fifteen percent of Pennsylvanians, almost two million beneficiaries, were enrolled in Medicare in 2014. Medicare, the largest health insurance provider for adults 65 and older, does not provide coverage for routine dental care. Medigap, supplemental health insurance held by somebody who is already using Medicare, does not offer dental coverage. Some private Medicare Advantage managed care plans do offer dental benefits.

Following implementation of the Affordable Care Act (ACA), the uninsured rate in Pennsylvania decreased from 14 percent in 2013 to 10 percent in 2015. The ACA specified that dental care for children is one of 10 "essential health benefits." Therefore, in the federal and state marketplaces, pediatric dental plans are available as part of a health care plan, as a bundled offer or as a stand-alone plan. In the federal marketplace, stand-alone dental plans cannot be purchased without health insurance, and oral health insurance plans are not covered by federal subsidies.

According to the Pennsylvania Department of Human Services (DHS), in October 2016, nearly 3 million individuals were enrolled in Medicaid. The state provides for a comprehensive dental benefit for children and a limited benefit for adults. With the expansion of Medicaid in 2015, adult Pennsylvanians with incomes at or below 138 percent of the federal poverty level guidelines became eligible for Medicaid insurance, and children in households with incomes up to 319 percent of the guidelines are eligible for Medicaid or CHIP. DHS reports more than 600,000 additional citizens became eligible under the expansion parameters.³⁷

In 2009, the state outsourced Medicaid benefit provision to various managed care organizations (MCOs) throughout five designated regions in the state. The MCOs were required to provide the same or an improved benefit when compared to the state plan. In 2011, a major change occurred in the dental coverage provided to Pennsylvania Medicaid adult recipients, eliminating certain services and greatly limiting others. In 2014, Pennsylvania's HealthChoices replaced Healthy PA plans. The projected plan for

³⁶ Bloom, Barbara, Cohen, Robin. *Dental Insurance for Persons under Age 65 Years with Private Health Insurance: United States, 2008*. NCHS Data Brief Number 40. June 2016.

³⁷ Pennsylvania Department of Human Services. www.dhs.pa.gov

Medicaid dental benefit administration is to have all Medicaid coverage be administered by MCOs throughout the state. Furthermore, the state will develop policy and oversee administration of the benefit by the MCOs. In January 2017, the governor's office announced it was negotiating contracts with six MCOs and rewarding high quality care based on established measures, including the management of chronic disease and access to preventive services.³⁸

RISK FACTORS OF ORAL DISEASE IN PENNSYLVANIA

Common risk factors for oral health are shared with those for many other chronic conditions. Addressing these risk factors not only improves oral health, but overall health when viewed within the context of the wider socio-environmental venue. Diet, hygiene, smoking, alcohol use, stress, immune status, early intervention and trauma all influence one's oral health. A collaborative approach to addressing each of these risks is more advantageous than addressing any one individually.

Measuring the influence or status of each of the above risk factors for the population of Pennsylvania alone has not been accomplished, nor is it within the scope of this limited plan. National and international trends have been studied, but developing a measure within an individual state has yet to be developed. Individual practitioners can track risk factors within their practice or area, but, currently, there is no central reporting system to analyze this information or to measure the impact of improving one risk factor or another. Positive results in one aspect of health can be extrapolated to be the result of influencing a risk factor, but quality measures that quantify such results have yet to be developed.³⁹

³⁸ Pennsylvania Department of Health and Human Services. 2014 Monthly Data Report: <http://www.dhs.pa.gov/>

³⁹ Community Dent Oral Epidemiology. 2000 Dec; 28(6):399-406.

ACCESS TO ORAL HEALTH CARE AND PREVENTION

PREVENTION AND CARE DELIVERY LOCATIONS AND SERVICES

The Pennsylvania Association of Community Health Centers (PACHC) and the Free Clinic Association of Pennsylvania (FCAP) report that, while many of the safety net clinics in Pennsylvania provide some type of oral health prevention or delivery of oral care programming, the exact number and breadth of services is unknown. The ADA Health Policy Institute estimates that 25 percent of insured children did not have a dental visit in 2013. Care utilization rates during a one-year period are considered a benchmark for defining oral health.⁴⁰

SEALANT PROGRAMS

While DOH supports a limited number of school-based dental sealant programs, the total number of programs is unknown. Dental sealants on permanent molars are considered one of the benchmarks of dental caries prevention.⁴¹

ORAL HEALTH EDUCATION

School-based oral health education programs are available in some parts of the state. Other oral health education programs that are available are not assessed due to the lack of centralized reporting of these programs. Education of the public continues to be a challenge for populations that do not seek dental care regularly.⁴²

FLUORIDATION OF COMMUNITY WATER SYSTEMS

The CDC Chronic Disease and Health Promotion Data and Indicators for 2014 report that 54.7 percent of public water systems in Pennsylvania adjust the content of the fluoride in the water to the optimal level known to prevent dental caries (decay). The 2016 estimate is less than one-half. Community water fluoridation has been proven to be safe and effective in preventing dental decay for people of all ages.⁴³

⁴⁰ The State of Children's Dental Health: Making Coverage Matter. A Report by the PEW Center on the States. May 2011.

⁴¹ The State of Children's Dental Health: Making Coverage Matter. A Report by the PEW Center on the States. May 2011

⁴² Surgeon General Report on Oral Health. NIDCR > Data & Statistics > Surgeon General > sgr > Chapter 10: Factors Affecting Oral Health over the Life Span.

⁴³ CDC. https://nccd.cdc.gov/PADOH_MWF/Reports/default.

ORAL HEALTH WORKFORCE DEVELOPMENT

For the purposes of this plan, dental health professionals include all licensed professionals, paraprofessionals and auxiliaries recognized by state licensing boards, as well as unlicensed health care professionals. The plan will explore the options of adding plans to include emerging workforce models.

DENTAL HEALTH PROVIDER SHORTAGE AREAS

Pennsylvania has 164 designated DHPsAs. The Pennsylvania Office of Health Equity reported in 2006 that rural residents in Pennsylvania had fewer health care providers, with only 15 percent of dentists and 17 percent of dental hygienists in the state practicing in rural areas, even though 33 percent of Pennsylvanians lived in rural areas. Evaluating and addressing these shortage areas requires both accurate data and non-traditional models of care delivery in clinic and other community settings.⁴⁴

DISTRIBUTION AND EDUCATION OF ORAL HEALTH PROFESSIONALS

In November 2016, PCOH convened an oral health workforce summit, a working forum to co-create the future of a sufficient and effective oral health workforce for Pennsylvania. The purpose was to connect oral health leaders in the state to investigate and collaborate on prototypes to advance oral health in Pennsylvania. Of the 17 prototypes that were developed for advancement in Pennsylvania, the majority were dedicated to education and training of providers, legislators and residents (46 percent). The rest were equally distributed between communication and technology (12 percent), financial barriers (12 percent), logistics (12 percent) and actual workforce concerns (18 percent). Stakeholders and various organizations from the summit are advancing the work necessary to evaluate and implement these prototypes for the commonwealth over the next several years.⁴⁵

PROMOTION OF ORAL HEALTH PROFESSIONS

With a comfortable salary, low unemployment rate and agreeable work-life balance, dentistry secured a top position on the list of Best Jobs for the Future in a 2017 U.S. News Report.⁴⁶ The U.S. Bureau of Labor Statistics predicts employment growth of 18 percent between 2014 and 2024 and 23,300 new openings. Training opportunities exist in many programs throughout the state, yet many graduates from these programs do not stay in Pennsylvania. In a survey done by PCOH in 2016, dentists in rural areas reported they chose to practice there because it was their hometown, or they had grown up in a small community and wanted to return to that lifestyle. Educating students during the pre-college years about the numerous opportunities in dentistry increases the likelihood that they will follow this career

⁴⁴ Keiser Family Foundation: ff.org/other/state-indicator/dental-care-health-professional-shortage.

⁴⁵ Pennsylvania Coalition for Oral Health (PCOH): <http://paoralhealth.org/>.

⁴⁶ U.S. News. *US News & World Report Announces the 2017 Best Jobs*. January 2017.

path.⁴⁷ Communities in DHPSAs need to find ways to encourage and support future professionals to increase the likelihood they will return to these communities upon completion of their programs.

ORAL HEALTH INFRASTRUCTURE

PENNSYLVANIA'S ORAL HEALTH PROGRAM

According to the Association of State and Territorial Dental Directors, a strong state oral health program requires dedicated resources and staff to perform critical public health functions. Currently, DOH Oral Health Program staff includes one full-time oral health public health administrator, one part-time dental consultant, support from a DOH epidemiologist, administrative and fiscal staff. While the ASTDD and CDC do not recommend a one-size-fits-all approach for staffing a state oral health program, realignment of staff and other resources within the DOH and other agencies is needed if Pennsylvania hopes to move initiatives forward.

SURVEILLANCE SYSTEM

Currently, DOH does not have an ongoing oral health population-based surveillance system. Required school encounter forms are not utilized for data collection. Access to insurance data regarding dental encounters is limited in the private sector, and state data only reflects Medicaid benefit use.

CENTRALIZED COMMUNICATION HUB

Pennsylvania does not have a centralized database of oral health resources in the state. Several organizations within the state, such as the Pennsylvania Dental Association and the Pennsylvania Head Start Association, have resources available, but these resources are not linked to a centralized repository.

⁴⁷ *Access to Oral Health Care Services: Workforce Development*. Best Practice Approaches for State and Community Oral Health Programs. ASTDD. December 2006.

ORAL HEALTH GOALS AND PRIORITIES

VARIOUS APPROACHES TO ONE GOAL

Planning for outcomes in public health is an ever-changing process. Health care priorities change as population needs, behaviors and environment change. The definition of health and methods used to measure health can change, making planning a fluid activity. Implementing, evaluating and updating plans is necessary to address changing priorities and efforts within the state and health care in general. The OHP is designed to be easily updated to adapt to the changing needs of population and the provision of health care in Pennsylvania

Many individuals and organizations are working in oral health fields of interest with the shared goal of reducing the overall burden of oral disease.

The goal of the OHP is to reduce the burden of dental disease. With multiple agencies working to address oral health disparities and barriers to care, this single goal encompasses multiple priorities and aligns easily with other plans. This alignment fosters a focus among the oral health community to make meaningful progress on a few priorities in the short term that catalyzes larger-scale efforts and impacts in future years.



HIP in Pennsylvania reports: health care expenditures in Pennsylvania are raising due to 1) fragmented, uncoordinated care; 2) increasing rates of chronic disease; 3) a large population that is aging in place; 4) overuse and underuse of care and 5) a lack of incentives for quality care vs. quantity of care. Forty-eight of Pennsylvania’s 67 counties are rural, and residents of rural counties are more likely to have unmet health needs and poor access to care. Medicaid spending accounts for 30 percent of total budget. Total health care spending in Pennsylvania regardless of payer was 13.4 percent higher than the national average. Goals and priorities across the SHIP, HIP and this plan agree on current needs in Pennsylvania: access to care and preventive strategies, particularly for children and youth and for the uninsured, underinsured and underserved; and workforce challenges, namely an impending wave of retirement and

an inequitable distribution of providers. The broadest of health plans, the SHIP, emphasizes that stronger health literacy would improve the use of health care and preventive strategies in all health disciplines, and the most specific plan, the OHP, calls for a more robust oral health infrastructure.

PENNSYLVANIA 2017-2020 ORAL HEALTH PLAN PRIORITIES

To focus implementation efforts and achievements, the DOH, PCOH and other stakeholders have selected three priorities for this plan:

**Access to oral health care and prevention;
Oral health workforce development; and
Oral health infrastructure.**

These priorities were selected as the foundation for oral health – a foundation that can be expanded. These priorities address key areas of community and practice-level interventions in traditional oral health care delivery and, thus, represent opportunities to transfer successful practices to other practices and communities. They may also be advanced through new or revised policies at the state government level.

PRIORITIES	GOALS
Access to oral health care and prevention	<ul style="list-style-type: none"> ● Increase oral health prevention or care delivery programs ● Increase sealant programs ● Increase oral health education programs ● Encourage access to community water fluoridation
Oral health workforce development	<ul style="list-style-type: none"> ● Increase the ratio of oral health professionals to population ● Promote policy that expands the use of dental paraprofessionals and auxiliaries ● Develop programs that promote and support oral health careers
Oral health infrastructure	<ul style="list-style-type: none"> ● Increase statewide leadership of Pennsylvania’s Department of Health’s Oral Health Program ● Create a plan to develop an oral health surveillance system for Pennsylvania ● Utilize LiveHealthyPA.com as an online information hub

Limited funding for implementation of oral health priorities continues to be an issue for Pennsylvania. With potential changes in the Affordable Care Act, the importance of investing in oral health efforts is critical. Identifying avenues where funding can be dedicated to oral health education, project implementation and plan development will need to be a part of the conversation as the implementation of the HIP, SHIP and OHP moves forward. Changes in dental care and services that can be provided in the dental office are emerging. Many of these reflect the larger acknowledgement that oral health and overall health are directly related. Palliative care of a chronic disease process ultimately drains the system and creates avenues for abuse. Addressing the underlying oral health disparities and educating the public and allied health professionals about these relationships can save money by preventing expenditures at a more advanced level of disease.

IMPROVED ORAL HEALTH AND HEALTH CARE MONITORING CAN LEAD TO HEALTH CARE RESOURCE SAVINGS AND HIGHER QUALITY OF CARE

- Screening for and monitoring chronic diseases in the dental office could reduce U.S. health care costs up to \$32.72 per person screened per year.¹⁸
- In 2012, emergency department visits for dental conditions cost the U.S. health care system \$1.6 billion.⁸
- A study published in the journal *Cancer* reported that tooth mobility, which is an indicator for periodontal disease, increased the risk of a type of oral cancer.¹⁵ Patients with medical complications who are hospitalized for oral cancer have higher mortality rates, longer hospital stays and higher hospital charges.¹⁶
- In 2010, 13.5 percent of most hospital readmissions within 30 days were for the same condition, costing \$139 million in health care spending. Diabetes and heart failure were among the top conditions studied.¹⁷

ACCESS TO ORAL HEALTH CARE AND PREVENTION

Achieving a desired level of prevention requires both periodic professional dental visits and patient and community education of techniques and behaviors that can prevent oral disease. Families need knowledge about how and when to use the dental health delivery system, motivation, incentives and access to do so. Education in the form of anticipatory guidance needs to be offered early and often, to be performed in a culturally effective manner and available in various settings. The successful implementation of the preventive strategies mentioned in OHP has an overwhelming potential to bring the benefits of a lifetime of good oral health to far more people in a more straightforward and cost-effective manner than a strictly curative treatment system would likely ever achieve.⁴⁸

Development of inter-professional referrals and care models provide opportunities to prevent disease advancement. The ADA reports that approximately 27 million people who visit a dentist each year do not see a physician.⁴⁹ On a similar note, Pennsylvania Chapter of the American Academy of Pediatrics (PAAAP) has a specific well-child visit schedule that includes several visits prior to age 1, the recommended age for a child's first dental visit. In most health settings, individuals with the highest

⁴⁸ PA Oral Health Plan 2002. Pg. 30.

⁴⁹ *The Oral Health Care System: A State by State Analysis*. Health Policy Institute of the American Dental Association. 2015.

Bright Futures. American Academy of Pediatrics. <https://brightfutures.aap.org/Pages/default.aspx>.

disease burden tend to require the most visits to primary care providers when compared to individuals who do not suffer with chronic disease issues. Each of these encounters with health care professionals provides a unique opportunity for health professionals to recognize chronic disease associated with poor oral health.⁵⁰ States participating in the Center for Medicare and Medicaid State Innovation Model grants are identifying ways to incorporate dental services into primary care models.⁵¹ The ADA has recently approved new prevention and monitoring of Code on Dental Procedures and Nomenclature (CDT Codes) to encourage providers to investigate chronic disease concerns and educate patients about the relationship between oral health and overall health. Understanding the relationship between oral health and other health problems, as well as acknowledging the value of early intervention in treating dental disease, is paramount to improving health outcomes.⁵²

Most oral disease conditions are preventable. Some oral disease risk factors are also risk factors for medical conditions, and an association between good oral health and favorable population health outcomes is well documented in the literature. DOH 2014 State Health Assessment reported that among Pennsylvania adult residents, 29 percent are obese, 22.4 percent smoke, and there is an abundance of hypertension and diabetes. These comorbidities are all associated with poor oral health and nutrition. Screening for and monitoring of chronic diseases in the dental office could reduce U.S. health care costs up to \$32.72 per person screened per year.⁵³ Twenty percent of the U.S. population will be 65 or older by 2030. Health problems, life events, apprehension and disabilities are common sources of stress for older adults that can affect their oral health.⁵⁴ Dental office screenings and laboratory services can improve utilization, quality and timeliness by utilizing interdisciplinary collaborative care for patients and eliminating treatment delays.

In October 2016, CDC reported that almost one million cavities have been prevented by the application of dental sealants in low income children over the past 10 years. Unfortunately, this represents only a third of the potential savings, since 6.5 million children reportedly do not have sealants on their

⁵⁰ *State Oral Health Coalitions and Collaborative Partnerships*. Best Practice Approaches for State and Community Oral Health Programs. ASTDD. August 2008.

⁵¹ State Innovation Models Initiative: General Information. Centers for Medicare and Medicaid Services. CMS.gov. <https://innovation.cms.gov/initiatives/state-innovations>.

⁵² *Code on Dental Procedure and Nomenclature*. American Dental Association. 2017. <http://www.ada.org/en/publications/cdt>.

⁵³ Nasseh K, Greenberg B, Vujicic M, Glick M. The effect of chairside chronic disease screenings by oral health professionals on health care dollars. *Am J Public Health*. 2014 Feb 13. AND PA Health Innovation Plan.

⁵⁴ *Oral Health for Older Americans*. Centers for Disease Control and Prevention. https://www.cdc.gov/oralhealth/publications/factsheets/adult_oral_health/adult_older.htm.

permanent molars. School-based sealant programs are evidence-based approaches to decrease dental caries experience over a lifetime. ADA Council on Scientific Affairs reports that dental sealants are safe and effective in preventing and arresting the progression of cavities in deep pits and fissures (grooves) of teeth. The PEW Charitable Trusts reported in 2016 that the Task Force on Community Preventive Services, an independent panel of public health and prevention experts, found that students who received sealants in school typically had half as much dental disease after four years as those who did not. CDC, along with the Task Force on Community Preventive Services, in 2001 recognized school sealant preventive programs to be effective community-based programs for preventing tooth decay.^{55,56,57}

PEW Charitable Trusts estimated in 2016 that one million cavities have been prevented by the application of dental sealants in low income children over the past 10 years.

Community water fluoridation has long been recognized as a safe and effective way to reduce dental disease in populations of all socioeconomic backgrounds and ages. Fluoride is a combination of fluorine and other minerals that occurs naturally in ground and surface waters.⁵⁸ It has beneficial effects on oral health, mainly the reduction in dental decay. Adjusting fluoride levels to obtain the oral health benefits of optimal fluoride in water was accepted into the official policy of the U.S. Public Health Service (now known as the United States Department of Health and Human Services) in the 1950s.⁵⁹ More than 100 international organizations recognize the value of adjusting naturally occurring levels of fluoride in community water systems to promote dental decay reduction.⁶⁰ Efforts to discontinue enhancing fluoride levels are occurring in some areas of the state, even though the safety of fluoridation has been scientifically studied and proven to have no negative effects on overall health at the levels suggested for community water fluoridation. Unfortunately, misleading information is blocking some communities from adding this cost-saving intervention to their community, and this is, in some cases, leading to the removal of fluoride in some water systems that have been adding fluoride for years. CDC's Water Fluoridation Reporting System (WFRS), a data management tool for state water fluoridation program officials, collects and reports on fluoride levels in public water systems for use by state programs and serves as the basis for national reports and analysis. Most CWS are listed on "My Water's Fluoride" and can be searched to determine

⁵⁵ *Dental Sealants Prevent Cavities*. Vital Signs. Centers for Disease Control and Prevention. October 2016. <https://www.cdc.gov/vitalsigns/pdf/2016-10-vitalsigns.pdf>.

⁵⁶ MMWR, November 30, 2001.

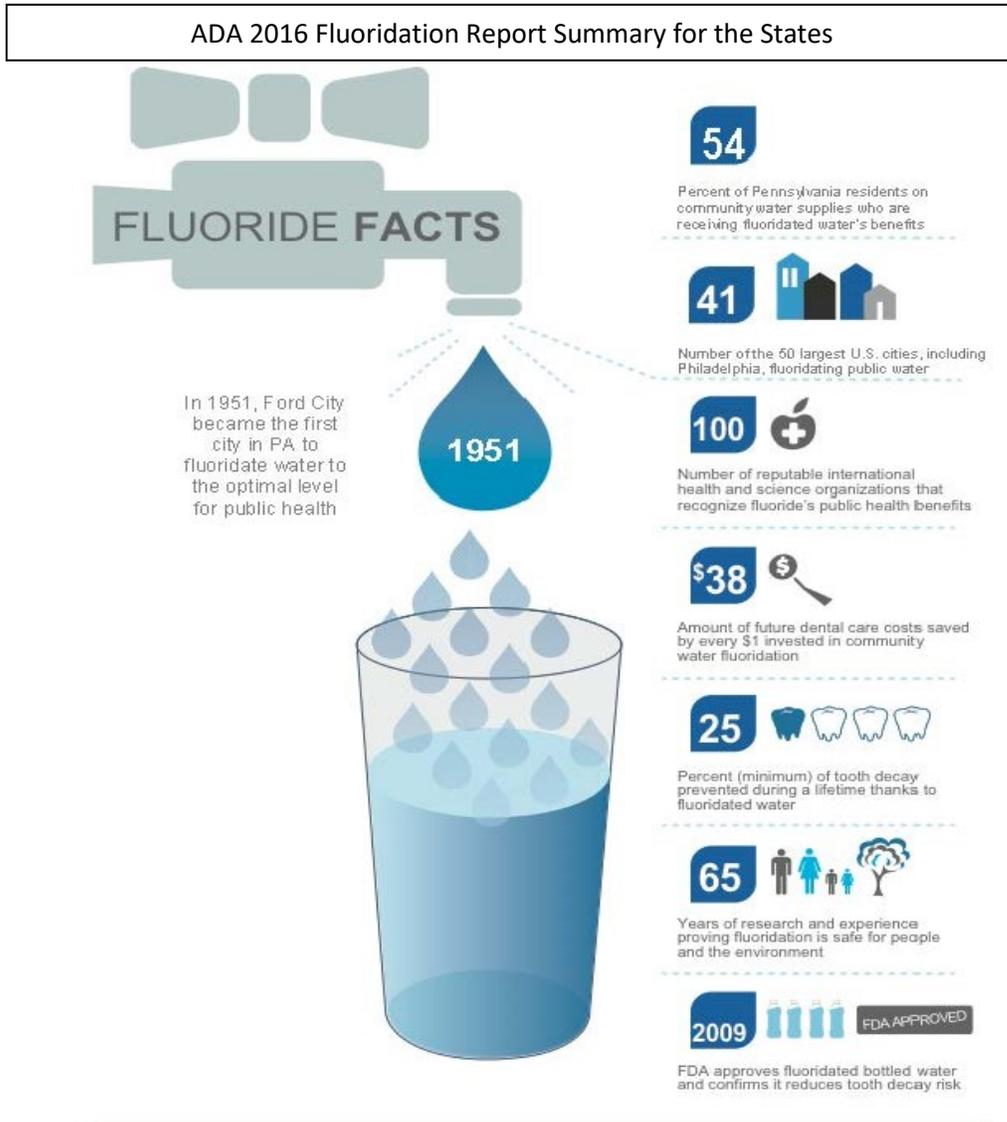
⁵⁷ School Based Dental Sealant Programs. Best Practices Approaches for State and Community Oral Health Programs. ASTDD. March 2015.

⁵⁸ Environmental Protection Agency. 40CFR Chapter 1. [EPA-HQ-OPPT-2016-0763; FRL9959-74]. Fluoride Chemicals in Drinking Water: TSCA Section 21 Petition; Reasons for Agency Response. 2017.

⁵⁹ http://www.publichealthreports.org/documents/PHS_2015_Fluoride_Guidelines.pdf.

⁶⁰ Fluoride Facts. American Dental Association. 2015.

the fluoridation status of a system.^{61,62,63} The DOH, PCOH and stakeholders involved in developing the OHP believe that it is imperative that efforts continue to assure all community water delivery systems adjust fluoride to the optimal level that is recommended by CDC and has been proven to prevent dental decay.



⁶¹ <http://www.cdc.gov/fluoridation/statistics/index.htm>.

⁶² http://www.cdc.gov/oralhealthdata/overview/fluoridation_indicators.html.

⁶³ <https://chronicdata.cdc.gov/Oral-Health/Water-Fluoridation-2014-Percentage-of-PWS-populati/767a-qhkg>.

GOALS: ACCESS TO ORAL HEALTH CARE AND PREVENTION

1.1. Increase oral health prevention or care delivery programs

1.2. Increase sealant programs

1.3. Increase oral health education programs

1.4. Encourage access to community water fluoridation

GOALS

1.1. INCREASE ORAL HEALTH PREVENTION OR CARE DELIVERY PROGRAMS

BASELINE AND TRENDS

Currently, the number of Pennsylvania’s rural health clinics, free and charitable clinics, and local health departments that have an oral health prevention or care delivery program is unknown. Many oral health providers provide free services within their communities, but the number of providers and services provided are not reported to a central database, thus skewing the data regarding provider participation in charitable services and dollars spent toward these services.

Several programs in Pennsylvania are designed to educate professionals and the general population about oral health conditions and the need for oral health interventions. While preventive measures utilized in some of these programs provide limited access to care, they do not provide the follow-up necessary for the overall improvement of the oral health condition of the patient. By educating non-dental professionals and patients about the needs for good oral health, an increased demand for service locations and providers is being created. Assessing the numbers of people trained and the locations where these classes are provided will help to better understand where future shortage areas could develop or currently exist if referrals are unable to be met. These oral health programs serve as a gateway to care that is instrumental in the state for increasing access to oral health services and is fully supported by the DOH.

OBJECTIVE

By Jan. 1, 2020, oral health stakeholders will increase the proportion of rural health clinics, free and charitable clinics, or local health departments that have an oral health prevention or care delivery program by 2 percent.

**Two percent increase in
oral health prevention or
care delivery programs by
2020**

CALL TO ACTION

Increasing the number/percentage of oral health delivery locations will require working with the Pennsylvania State Board of Dentistry, professionals and professional organizations, and other regulatory, licensing agencies and funding sources in the state. DHPSA data shows larger state trends, but community surveillance is needed to evaluate the shortage area landscape in the state. An accurate accounting of existing locations will be necessary to determine the 2 percent increase by January 2020.

ACTION AREAS FOR INCREASE ORAL HEALTH PREVENTION OR CARE DELIVERY PROGRAMS

1.1.1. Assess oral health service availability at a sub-county level

1.1.2. Promote and assess education of health care professionals

1.1.3. Add and expand oral health services to locations that do not traditionally provide health care

PROOF OF IMPACT

As a foundational plan, performance measurement will help to determine the success of OHP and appropriate revisions in the next update. The impact of actions taken to increase access to care programs and services can be measured by:

- Assessment tool in place to determine number and location of services already present in the state;
- Reduction in DHPSAs;
- Increased utilization of services statewide;
- Collection of information regarding programs for professional education in the state;
- Increased number of providers participating in oral health continuing education courses and activities; and
- Data that shows an increase of adults visiting a dentist in the last year.

POLICY ALIGNMENT

1. **PA SHIP, Goal 2.3:** For youth ages 1 to 20 years old who are enrolled in Medicaid, with at least 90 days of continuous eligibility; increase the percentage that have had a preventive dental service in the past year from 42.5 percent in FFY 2014 to 47 percent by December 2020.
2. **PA HIP Smart Objective:** Reduce the proportion of children who have dental caries experience in their primary or permanent teeth from 33.3 percent to 30 percent by July 2019⁺.
3. **Healthy People 2020 Oral Health 7:** Increase the proportion of children, adolescents and adults who used the oral health care system in the past year.
4. **Healthy People 2020 Oral Health 11:** Increase the proportion of patients who receive oral health services at federally qualified health centers (FQHCs) each year.

ACTION AREAS

1.1.1. ASSESS ORAL HEALTH SERVICE AVAILABILITY AT SUB-COUNTY LEVEL

Proposed Actions	Implementation
<p>Develop or identify a tool(s) to collect oral health outreach program data</p> <p>Tracking and documentation: Adoption of a tool identified to collect outreach data</p>	<p>Implementers: State government agencies; professionals and health professionals and professional organizations; professional schools; state and local coalitions</p> <p>Extent: Statewide</p> <p>Timing: By JANUARY 2019</p>
<p>Analyze data by zip code regarding the number of persons enrolled in Medical Assistance (MA) geographically</p> <p>Tracking and documentation: Summary of analysis of enrollees by zip code</p>	<p>Implementers: State government agencies; state and local coalitions</p> <p>Extent: Entire state</p> <p>Timing: By JANUARY 2019</p>
<p>Analyze data by zip code from the 2016 Medicaid provider enrollment information</p> <p>Tracking and documentation: Summary of participating providers by zip code</p>	<p>Implementers: State government agencies; state and local coalitions; professionals and professional organizations</p> <p>Extent: Entire state</p> <p>Timing: By JANUARY 2019</p>
<p>Identify locations of federally qualified health centers, free and charitable clinics, and other safety net service locations that have oral health providers on site</p> <p>Tracking and documentation: Database of existing locations that can be updated and linked to multiple websites</p>	<p>Implementers: Private and public health care delivery systems; state government agencies; health professionals and professional organizations</p> <p>Extent: Entire state</p> <p>Timing: Annually</p>
<p>Create a plan to assess public and private transportation availability and utilization rates</p> <p>Tracking and documentation: Plan outlined to assess transportation</p>	<p>Implementers: State government agencies; private and public health care delivery systems</p> <p>Extent: County and zip code statewide assessment</p> <p>Timing: 2018</p>

1.1.2. PROMOTE AND ASSESS EDUCATION OF HEALTH CARE PROFESSIONALS	
Proposed Actions	Implementation
Educate providers about treating pregnant women Tracking and documentation: Programs provided and dental insurance utilization trends	Implementers: State government agencies; private and public health care delivery systems; insurance companies and managed care organizations; health promotion organizations and community-based organizations Extent: Serve 50 Timing: Annually
Educate pediatricians on the importance of completing an oral exam at the eruption of first tooth and on how to apply fluoride varnish Tracking and documentation: Programs conducted, sites participating	Implementers: State government agencies; private and public health care delivery systems; insurance companies and managed care organizations; private and public health care delivery systems Extent: Educate 20 providers Timing: Annually
Educate dental providers on the importance of doing an exam at the eruption of first tooth and stress the application of fluoride varnish Tracking and documentation: Programs conducted, sites participating	Implementers: State government agencies; private and public health care delivery systems; insurance companies and managed care organizations Extent: Educate 20 providers Timing: Annually
1.1.3. ADD AND EXPAND ORAL HEALTH SERVICES TO LOCATIONS THAT DO NOT TRADITIONALLY PROVIDE ORAL HEALTH CARE	
Proposed Actions	Implementation
Support and develop programs that use dental students to provide oral health care services and education in underserved communities Tracking and documentation: Number of programs, location, number of administrators, number of attendees	Implementers: Local dentists; institutions of higher learning; local health departments; private and public health care delivery systems; insurance companies and managed care organizations; elementary and higher education settings Extent: 1 new program for each dental school Timing: 2020

<p>Share findings from service and research projects conducted in academic settings and best practices from other organizations</p> <p>Tracking and documentation: Scientific briefs, community reports shared with state and published through a centralized website of best practices, etc. on LiveHealthyPA.com</p>	<p>Implementers: Institutions of higher learning; health promotion organizations and community-based organizations; state and local coalitions, professionals and professional organizations</p> <p>Extent: Dental; hygiene; assisting; and community college programs</p> <p>Timing: Ongoing</p>
<p>Educate primary care professionals about the importance of screening for dental visit information including dental home and date of last exam</p> <p>Tracking and documentation: Proof of outreach</p>	<p>Implementers State government agencies; schools of dentistry; health professionals and professional organizations; governor advisory boards</p> <p>Extent: Statewide</p> <p>Timing: 2019</p>
<p>POTENTIAL POLICY DEVELOPMENT</p>	
<p>Proposed Actions</p>	<p>Implementations</p>
<p>Advocate allowing the use of Medicaid funds for dental services for adults and children when delivered by participating eligible providers in traditional and non-traditional settings</p> <p>Tracking and documentation: Proof of outreach</p>	<p>Implementers: Health professionals and professional organizations; state and local coalitions; managed care organizations</p> <p>Extent: Statewide</p> <p>Timing: 2020</p>

1.2. INCREASE SEALANT PROGRAMS

BASELINE AND TRENDS

Roughly 75 percent of states offer sealant programs to their constituents. The efficacy of dental sealants to prevent dental disease has been proven in the literature. The number of children with sealants on their permanent teeth is considered a benchmark of dental health. The ADA reports that, in 2013, the number of children in Pennsylvania receiving sealants on their permanent teeth was comparable to national rates.

OBJECTIVE

By Jan 1, 2020, Pa. oral health stakeholders will establish three best practice pilot sealant programs throughout the state.

**Establish
three
sealant
programs**

CALL TO ACTION

Increasing school-based and/or school-linked sealant programs will require advocacy and education to local school district leaders. Increased funding for PADOH-sponsored school sealant program and other programs could expand the use of this preventive service.

ACTION AREAS TO INCREASE SEALANT PROGRAMS

1.2.1. Increase school-based sealant programs

1.2.2. Increase community-based sealant programs

PROOF OF IMPACT

As a foundational plan, performance measurement will help to determine the success of THE PLAN and appropriate revisions in the next update. The impact of actions taken to increase school-based and/or school-linked sealant programs can be measured by:

1. The percentage of children who meet eligibility requirements (K-3 and 6-8 grades) and received dental sealants;
2. The number of sealant programs within schools;
3. The number of community sealant programs; and
4. Data from community and school-based programs showing the number of sealants placed over time by age group.

POLICY ALIGNMENT

1. **Healthy People 2020, Oral Health 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 molars.
2. **Healthy People 2020, Oral Health 12.3:** Increase the proportion of adolescents aged 13 to 15 years who have received dental sealants on one or more of their permanent molars.
3. **Oral Health Guide to Clinical Preventive Services (U.S. Preventive Services Task Force):** The Community Preventive Services Task Force recommends school-based sealant delivery programs based on strong evidence of effectiveness in preventing dental caries (tooth decay) among children.

ACTION AREAS	
1.2.1 INCREASE SCHOOL-BASED SEALANT PROGRAMS	
Proposed Actions	Implementation
Develop or identify a tool(s) to collect school-based sealant program data Tracking and documentation: Adoption of a tool identified to collect school-based sealant program data	Implementers: State government agencies; dental health professionals; health professionals; and professional schools; state and local coalitions Extent: Statewide by school district Timing: By JANUARY 2019
Investigate best practice approaches for school-sponsored dental sealant programs to develop a plan to expand and improve school sealant programs Tracking and documentation: Plan in place for program expansion	Implementers: School districts, state government agencies; local and state oral health coalitions; health professionals; local and state health care organizations; state and local school boards Extent: Statewide by school district Timing: By JANUARY 2020
1.2.2. INCREASE COMMUNITY SEALANT PROGRAMS	
Proposed Actions	Implementation
Develop or identify a tool(s) to collect community-based sealant program data Tracking and documentation: Adoption of a tool identified to collect community-based sealant program data	Implementers: State government agencies; professional organizations; health professionals; professional schools; state and local coalitions Extent: Statewide by zip code Timing: By JANUARY 2019

<p>Investigate best practice approaches for community sponsored dental sealant programs to develop a plan to expand and improve community-based sealant programs</p> <p>Tracking and documentation: Plan in place for program expansion</p>	<p>Implementers: State government agencies; local and state oral health coalitions, local and state health care organizations</p> <p>Extent: Statewide by zip code</p> <p>Timing: By JANUARY 2020</p>
<p>POTENTIAL POLICY DEVELOPMENT</p>	
<p>Proposed Actions</p>	<p>Implementation</p>
<p>Advocate to Department of Education to create school sealant initiative programs utilizing dental paraprofessionals and auxiliaries</p> <p>Tracking and documentation: Record of outreach efforts</p>	<p>Implementers: Health professionals and professional organizations; state and local coalitions</p> <p>Extent: All 67 counties</p> <p>Timing: Begin in 2017</p>
<p>Urge private and public health care delivery systems, insurance companies and managed care organizations to require dental sealants as a quality of care measure</p> <p>Tracking and documentation: Reports from implementers showing number of programs per county; claims data</p>	<p>Implementers: State government agencies; private and public health care delivery systems; insurance companies and managed care organizations; state and local coalitions; foundations and other funding sources; health professionals; professional organizations</p> <p>Extent: Statewide</p> <p>Timing: Annually -- part of Medicaid MCO's contract</p>

1.3. INCREASE ORAL HEALTH EDUCATION PROGRAMS

BASELINE AND TRENDS

Oral health literacy skills are empowering and lower disease burden. Understanding information and where and how to access services are common barriers to care for lower socioeconomic populations. Extending prevention, care and wellness education opportunities and policy and systems changes can increase the number of patients utilizing services in DHPSAs.

OBJECTIVES

Increase number of school-sponsored and community-sponsored educational programs by three (Number of school-sponsored and community-sponsored programs must be determined for baseline. Increase of three is based on CDC standard recommendation of average measurement increase.)

Increase
number of
educational
programs

CALL TO ACTION

Improving educational opportunities to increase the oral health literacy of the population will require an understanding of the programs available, their outreach and the impact on the community members.

ACTION AREAS TO INCREASE ORAL HEALTH EDUCATION PROGRAMS

1.3.1. Increase school-sponsored oral health programs

1.3.2. Increase community-sponsored oral health programs

PROOF OF IMPACT

As a foundational plan, performance measurement will help to determine success and appropriate revisions in the next update. The impact of actions taken to improve oral disease prevention through educational programs can be measured by:

1. Number of programs provided;
2. Number of people attending programs; and
3. Location of services relative to DHPSAs.

POLICY ALIGNMENT

1. **CDC Health Impact in five years, Social Determinants of Health:** Early childhood education
2. **U.S. Dept. of Health and Human Services: Public Health 3.0.:** Theme number 4; timely and locally relevant data, metrics and informatics
3. **National Conference of State Legislatures, 2016:** “State Options for Improving Children’s Oral Health; Raise Awareness about Healthy Behaviors.” People with poor health literacy are less likely to receive preventive services and risk having poor overall health.
4. **Pennsylvania State Health Improvement Plan, Primary Care and Preventive Services, Strategy Goal 2 and 3:** Increase access, utilization and education of preventive dental services through various modalities; improve health literacy of Pennsylvania residents

ACTION AREAS	
1.3.1. INCREASE SCHOOL-SPONSORED ORAL HEALTH PROGRAMS	
Proposed Actions	Implementation
Develop or identify a tool(s) to collect school-based oral health program data Tracking and documentation: Adoption of a tool identified to collect school-based sealant program data	Implementers: School districts; school nurses; state government agencies; local and state oral health coalitions; health professionals and professional organizations; professional schools; state and local coalitions Extent: Statewide by school district Timing: by JANUARY 2019
Investigate best practice approaches to school-based oral health programs to develop a plan to expand and improve programs in Pennsylvania Tracking and documentation: Plan in place for program expansion	Implementers: School districts; school nurses; state government agencies; local and state oral health coalitions; state and local boards of education Extent: Statewide by school districts Timing: By JANUARY 2020
1.3.2. INCREASE COMMUNITY-BASED ORAL HEALTH PROGRAMS	
Proposed Actions	Implementation
Develop or identify a tool(s) to collect community based oral health program data	Implementers: State government agencies; health professionals and professional organizations; professional schools; state and local coalitions Extent: Statewide by zip code

<p>Tracking and documentation: Adoption of a tool identified to collect community-based oral health program data</p>	<p>Timing: By JANUARY 2019</p>
<p>Investigate best practice approaches to community-based oral health programs to develop a plan to expand and improve programs in Pennsylvania</p> <p>Tracking and documentation: Plan in place for program expansion</p>	<p>Implementers: State and local government agencies; local and state oral health coalitions; health professionals and professional organizations; service organizations</p> <p>Extent: Statewide by zip code</p> <p>Timing: By JANUARY 2020</p>
<p>POTENTIAL POLICY DEVELOPMENT</p>	
<p>Proposed Actions</p>	<p>Implementation</p>
<p>Advocate to Department of Education to create oral health programs utilizing dental paraprofessionals and auxiliaries</p> <p>Tracking and Documentation: Record of outreach efforts</p>	<p>Implementers: Health professionals and professional organizations; state and local coalitions</p> <p>Extent: All 67 counties</p> <p>Timing: Begin in 2017</p>
<p>Urge private and public health care delivery systems, insurance companies and managed care organizations to require oral health education as a quality of care measure</p> <p>Tracking and Documentation: Reports from implementers showing number of programs per county, claims data</p>	<p>Implementers: State government agencies; private and public health care delivery systems; insurance companies and managed care organizations; state and local coalitions; foundations; and other funding sources; health professionals and professional organizations</p> <p>Extent: Statewide</p> <p>Timing: Annually - part of Medicaid MCO's contract</p>

1.4. ACCESS TO COMMUNITY WATER FLUORIDATION

BASELINE AND TRENDS

The ADA and CDC report that only about one-half of the community water systems in Pennsylvania are being fluoridated, although state data differs.* Pennsylvania has 14 of the nation's top 200 non-fluoridated water systems by population size in the country in Chester, Lehigh, Montgomery, Dauphin, Luzerne, York, Lackawanna, Westmoreland and Fayette counties. While some states mandate fluoridation, Pennsylvania allows communities to determine whether to adjust fluoride concentrations levels. In some communities, the water authorities regulate the policies regarding water fluoridation. The Pennsylvania Department of Environmental Protection participates in CDC's WFRS. *Of the 10,626,077 customers of community water systems in Pennsylvania in 2015, 5,508,393 or 52 percent were provided with fluoridated water, based on data reported to WFRS.⁶⁴

Table 1.2. Communities and population with access to fluoridated CWS

CDC: PENNSYLVANIA FLUORIDATION PERCENTAGE CALCULATIONS AND STATES RANKED BY FLUORIDATION PERCENTAGE				
Year	Percent	Persons receiving fluoridated water	Persons served by CWS	Rank among 50 states
2000	54.2	5,825,328	10,750,095	36
2006	54.0	5,610,873	10,390,234	40
2010	54.6	5,802,260	10,636,421	41
2014	54.6	5,882,330	10,780,146	41

Pennsylvania's population has increased steadily since 2000. Its population served by community water systems grew from 2000 to 2010 and then declined in 2015. The number of community water distribution systems has fallen from 2000 to 2015. This trend, in part, reflects the consolidation of smaller water systems into larger systems.

⁶⁴ http://www.cdc.gov/oralhealthdata/overview/fluoridation_indicators.html.

OBJECTIVE

By Jan 1, 2020, Pa. oral health stakeholders will support statewide and/or community-based efforts to sustain and increase the proportion of the Pennsylvania population served by community systems with optimally fluoridated water by 1 percent.

Increase in the population served by fluoridated water delivery systems by one percent

CALL TO ACTION

Increasing the percentage of Pennsylvanians served by optimally fluoridated water will require advocacy and education to local decision-makers and state policy-makers. Local advocacy and education could be targeted to those systems that serve large populations to accelerate the impact. High quality research that proves the benefits of fluoridation will make the case for fluoridation stronger and less debatable. Although it may not change people's opinion, at a minimum, evidence-based education is necessary. Funding for maintenance and modernization of existing fluoridation equipment and for the installation of new fluoridation equipment would also incentivize retention and expansion of fluoridated systems and increases in the population served.

ACTION AREAS IN ACCESS TO COMMUNITY WATER FLUORIDATION

- 1.4.1 Assess community water fluoridation usage
- 1.4.2 Compile evidence-based research on community water fluoridation benefits
- 1.4.3 Advocate for community water fluoridation
- 1.4.4 Identify funding for community water fluoridation

PROOF OF IMPACT

As a foundational plan, performance measurement will help to determine the success of the plan and appropriate revisions in the next update. The impact of actions taken to increase access to optimally fluoridated public drinking water can be measured by:

1. An increase in the number of community water systems that fluoridate compared to baseline;
2. An increase in the population served by fluoridated community water systems.

POLICY ALIGNMENT

1. **Healthy People 2020, Oral Health 13:** Increase the proportion of the U.S. population served by community water systems with optimally fluoridated water from a baseline of 72.4 percent with a 10 percent increase to 79.6 percent
2. **Guide to Clinical Preventive Services (U.S. Preventive Services Task Force).** The Community Preventive Services Task Force recommends community water fluoridation based on strong evidence of effectiveness in reducing dental caries (tooth decay) across populations. Evidence

shows the prevalence of caries is substantially lower in communities with community water fluoridation.

3. **National Conference of State Legislatures.** “State Options for Improving Oral Health of All Populations; Understand the State Role with Community Water Fluoridation.” The decision to fluoridate is regulated at the state level in some parts of the U.S., but is usually determined at a local level. CWF has proven to be a safe and effective way to prevent tooth decay.

ACTION AREAS:	
1.4.1. ASSESS COMMUNITY WATER FLUORIDATION USAGE	
Proposed Actions	Implementation
Map fluoridated water systems; update annually to maintain currency of data Tracking and documentation: Implementer reports	Implementers: Geographic information systems at universities and local health departments Extent: Statewide Timing: 2017
Educate community members about fluoridation in their water supply Tracking and documentation: Self-reporting from implementers	Implementers: Health promotion organizations and community-based organizations; health professionals and professional organizations; state government agencies Extent: Statewide Timing: 2017
Create and maintain a state water report in the CDC WFRS; Encourage water delivery systems in the state to keep their fluoridation status current in the CDC “My Water’s Fluoride” Tracking and documentation: Evidence of a statewide water report	Implementers: State government agencies; water delivery systems Extent: Statewide Timing: 2017
1.4.2. COMPILE EVIDENCE-BASED RESEARCH ON COMMUNITY WATER FLUORIDATION BENEFITS	
Proposed Actions	Implementation

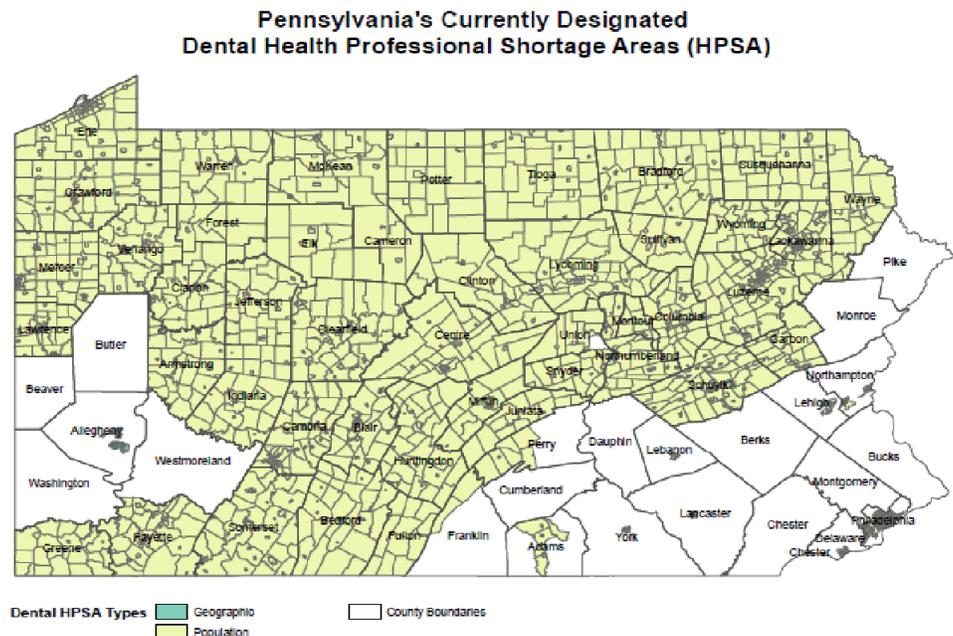
<p>Disseminate current research and outcomes data to communities with mass distribution water delivery systems</p> <p>Tracking and documentation: number of communities reached, assimilation of data</p>	<p>Implementers: State and local coalitions; health promotion organizations and community-based organizations; professional organizations</p> <p>Extent: Ongoing</p> <p>Timing: 2017-18 to gather resources</p>
<p>Recruit medical and dental providers to testify in support of water fluoridation</p> <p>Tracking and documentation: Association reports, list of trained speakers</p>	<p>Implementers: Health professionals and professional organizations</p> <p>Extent: Statewide</p> <p>Timing: 2017</p>
<p>Develop a plan to utilize statewide information portals such as LiveHealthyPA.com to include information and resources on scientifically validated fluoridation information;</p> <p>Link to evidence-based resources and organizations involved in supporting fluoridation of community water systems</p> <p>Tracking and documentation: Plan created and ready to implement to share information statewide</p>	<p>Implementers: Health professionals and professional organizations; PADOH; health promotion organizations and community-based organizations; organizations of higher learning</p> <p>Extent: Statewide</p> <p>Timing: By JANUARY 2019</p>
<p>Support the efforts of the PCOH Community Water Fluoridation Team in monitoring and responding to fluoridation efforts across the state</p> <p>Tracking and documentation: Reports, utilization of web-based information</p>	<p>Implementers: Health professionals and professional organizations; health promotion organizations and community-based organizations; state government agencies; state and local coalitions; foundations; other funding sources</p> <p>Extent: Statewide</p> <p>Timing: Ongoing</p>
<p>1.4.3. ADVOCATE FOR COMMUNITY WATER FLUORIDATION</p>	
<p>Proposed Actions</p>	<p>Implementation</p>

<p>Provide information on benefits of fluoridation to representatives from water authorities and CWS administrators</p> <p>Tracking and documentation: Number of representatives contacted</p>	<p>Implementers: State and local coalitions; health professionals and professional organizations and health care professionals; PADOH; state and local health care organizations</p> <p>Extent: Engage 2 representatives from every water authority/system; statewide</p> <p>Timing: Contact - spring 2017; convene informational workshops 2017-2018</p>
<p>Support continued efforts to educate about the health benefits of fluoridated community water systems to the public</p> <p>Tracking and documentation: News clippings</p>	<p>Implementers: Health professionals and professional organizations; state and local coalitions; national programs</p> <p>Extent: Statewide</p> <p>Timing: Campaign in place 2019</p>
<p>Present research to legislators</p> <p>Tracking and documentation: Reports of number of presentations</p>	<p>Implementers: Advocacy groups; health professionals and health professionals and professional organizations; state and local coalitions</p> <p>Extent: Statewide</p> <p>Timing: 2017-2018</p>
<p>Share monthly water fluoridation reports from national monitoring organizations with grassroots supporters in communities</p> <p>Tracking and documentation: Development of listserv, centralized information portal</p>	<p>Implementers: Individual stakeholders; professional organizations; national resource organization; health promotion organizations and community-based organizations</p> <p>Extent: Statewide</p> <p>Timing: 2017</p>
<p>1.4.4. IDENTIFY FUNDING FOR COMMUNITY WATER FLUORIDATION</p>	
<p>Proposed Actions</p>	<p>Implementation</p>

<p>Identify funding for infrastructure development and repair for community water systems to adjust fluoride levels</p> <p>Tracking and documentation: Number of funding sources identified; criteria for proposals; support in writing grant proposals</p>	<p>Implementers: State government agencies; communities; health professionals and professional organizations; state and local oral health coalitions; foundations; national associations</p> <p>Extent: Regionally</p> <p>Timing: 2017-2018</p>
<p>Identify funding to develop educational materials about the benefits of fluoridation to support informational campaigns to public, legislators and water system authorities</p> <p>Tracking and documentation: Number of funding sources identified; criteria for proposals; support in writing grant proposals</p>	<p>Implementers: Communities; health professionals and professional organizations; state and local oral health coalitions; foundations; national associations</p> <p>Extent: Statewide</p> <p>Timing: 2017-2018</p>
POTENTIAL POLICY DEVELOPMENT	
Proposed Actions	Implementation
<p>Support policy to update regulations regarding public notification of change in status of fluoridation in community water systems</p> <p>Tracking and documentation: Record of outreach efforts</p>	<p>Implementers: Professional organizations; legislators; governor’s advisory boards; local and state oral health coalitions; individual stakeholders</p> <p>Extent: Statewide</p> <p>Timing: 2020</p>

ORAL HEALTH WORKFORCE DEVELOPMENT

Untreated dental disease can lead to serious health effects, including pain, infection and tooth loss. Although lack of sufficient providers is only one barrier to accessing oral health care, much of the country suffers from shortages. According to the Health Resources and Services Administration (HRSA), as of December 2012, there were 4,585 dental health professional shortage areas in the U.S. with 45 million people living in them.⁶⁵ Currently, there are 164 DHPSAs in Pennsylvania.



Current as of March 31, 2015

Dental health professional shortage areas are measured as the ratio of the county population to full-time-equivalent dentists in the county. Dentists are classified by county, but dentists living on the edge of counties or who practice in multiple locations may see patient populations that reside in surrounding counties. This data comes from the National Provider Identification (NPI) data file, which has some limitations. An NPI number is required for insurance reimbursement, prescription writing and transmitting electronic health records. While providers have the option of deactivating their identification number, some dentists included in this list may no longer be practicing or accepting new patients.

According to the County Health Rankings prepared by the Robert Wood Johnson Foundation, the ratio of dentists to residents in Pennsylvania in 2014 was 1: 1,550. The ADA reported that, in 2013, this ratio was roughly 1: 1,666.⁶⁶ This change in providers per population may be related to the data collection of the two organizations or could reveal a dangerous trend for the state. Pennsylvania has six counties with a ratio of less than 1:5,000. All six are rural counties. Perry County is adjacent to Cumberland County, where the ratio is 1:1,468. Other counties lie squarely in rural regions where ratios are also low in adjacent counties. Based on the 2014 data used in the County Health Rankings, the addition of one to

⁶⁵ HRSA Data Warehouse. <https://datawarehouse.hrsa.gov/tools/analyzers/hpsafind.aspx>.

⁶⁶ The Oral Health Care System: A State by State Analysis. Health Policy Institute of the American Dental Association. 2015.

two full-time equivalent dentists would bring each of these six counties to the goal of 1: 5,000. While the reasons for the skewed distribution are varied, efforts are in progress within the state to identify and address these factors.

Pennsylvania had a much larger number of participating dentists in Medicaid insurance plans for children than for adults. Data surrounding participating Medicaid dentists for Pennsylvania is currently being reassessed by the Department of Human Services. A re-credentialing of providers occurred in 2016 that will provide actual enrollment numbers for the state. The DOH is updating the provider survey that is requested with re-licensing in 2017. Some of the information that will be collected includes participation in Medicaid and charitable dentistry efforts.⁶⁷ The number of dentists providing free or reduced-price services has not been able to be quantified in the past, so actual access for economically challenged families has been solely based on state plan utilization. By collecting real time information from those who respond, the department hopes to create a more accurate picture of access and workforce availability in the state.

Despite a positive trend in private insurance utilization, public assistance plans continue to lag in utilization, provider participation and provider reimbursement. Private insurance utilization for children and adults increased in Pennsylvania by 1.6 percent and 0.4 percent, respectively, while the numbers nationally were 1.2 percent and -0.6 percent. In Pennsylvania, utilization rates are more difficult to assess for Medicaid due to the outsourcing of plan administration to MCOs. Over the past decade, the number of children enrolled in public assistance plans who received a dental visit during the year increased by nearly 20 percent, while the gap in utilization for adults continued to be much greater with both public and private insurance.⁶⁸ Data presented at the November 2016 PCOH Oral Health Workforce Summit indicated that only 38 percent of the dollars allocated to dental spending were used by the MCOs administering dental benefits.⁶⁹

One of the policy benchmarks that were downgraded in the Pew 2011 report was the share of median retail fees reimbursed by Medicaid; in Pennsylvania that percentage was 48.8 percent. The ADA reported that this percentage had dropped to 43 percent in 2013 for children's services as part of an overall 19.3 percent decrease since 2003.⁷⁹ Reimbursement rates is one of the factors identified by dental providers for lack of participation in Medicaid when surveyed by the Pennsylvania Dental Association. Efforts are currently underway in the state to address the Medicaid Adult Benefit and plan administration. These efforts are being led by stakeholders from PCOH, PDA, ACHIEVA, PDHA and PHAN, and they align with the goals set forth in the state HIP.

The Pennsylvania State Board of Dentistry provides licenses and certificates for dentists, volunteer dentists, dental hygienists, public health dental hygiene practitioners and expanded function dental assistants (although many dental assistants are certified, a DANB certificate is not required to practice as

⁶⁷ PA Department of Health and Human Services. Monthly Data Report: <http://www.dhs.pa.gov/>.

⁶⁸ The Oral Health Care System: A State by State Analysis. Health Policy Institute of the American Dental Association. 2015.

⁶⁹ PCOH Workforce Summit, November 2017. Harrisburg, PA.

an assistant in Pennsylvania), as well as local and general anesthesia permits. PA Code 33.1 defines auxiliary personnel as “Persons who perform dental supportive procedures authorized by the act and this chapter under the general or direct supervision of a dentist.” The license/certification of the auxiliary, types of services provided and the location of care determine the type of supervision required by a dentist and is further defined in subsections of PA Code 33.1, 33.2 and 33.3. Working with the state board of dentistry to expand the scope of practice of auxiliary personnel and/or revise the supervisory requirements for some procedures in underserved areas has the potential to not only expand the number of people receiving services in DHPSAs but also to increase the referral of people to a dental home. The ADA HPI has shown that utilizing community care workers and dental auxiliaries to assess the needs of each area and provide education and preventive services 1) serves as a gateway to the larger oral health delivery system, 2) reduces the no-show rate in practices and 3) encourages treatment plan completion.⁷⁰ Educational institutions have varied training programs for auxiliaries. Working with training programs to provide curriculums that encourage outreach to DHPSAs has the potential to improve access to gateway programs.

U.S. News and World Reports named dentistry as the No. 1 career choice for 2017. The advantages to being involved in this aspect of health care can often be overshadowed by the debt incurred by dental students, debt that is four times that of graduating medical professionals. Paraprofessional careers are less expensive to pursue, but the pay rate can be coupled to insurance reimbursement, which remains low in underserved areas. Oftentimes, the stress of the profession is overlooked, with the suicide rate of dentists being among the top 15 professions listed in a CDC study in 2012, as reported by CBS News in 2016. Services available to providers through professional organizations can be less accessible to providers in remote locations, creating a sense of isolation. Overcoming the challenges faced by providers is imperative to the success of the professionals in DHPSAs.⁷¹

Oral health is recognized as imperative to overall health and wellness. Providing oral care requires numerous providers at various levels of training and education. Oftentimes career choices are determined by decisions made early in the education process. Surveys show that providers in underserved areas are often from those areas originally. Promoting the various careers in the oral health care field at an early point in the education process, especially in underserved areas, may encourage students to enter this field and return to these areas to practice. Professional, paraprofessional and auxiliary careers provide opportunities at all levels of education, with various curriculums available to accommodate training and educational needs of students interested in becoming part of the oral health profession.

In 2016, the PCOH convened a workforce summit to evaluate the state of the oral health workforce in Pennsylvania. Prior to the summit, data was gathered regarding workforce models, how to recruit and retain more oral health providers to the state, and stakeholder’s evaluation of the problem of workforce

⁷⁰ www.ada.org/public-programs/action-for-dental-health/community-dental-health-coordinators

⁷¹ Solomon, Eric. The Future of Dental Practice. Four-part series on the future of dental practice. Dental Economics. 2015.

in the state. Learning journeys that consisted of research and interviewing providers in the state were conducted over several months. The information was then analyzed by an independent research firm, Whillenebecher Group, which consolidated the information to report trends in the information gathered. Several actionable items were developed from this research that have promise to help in the recruitment and retention of dentists in Pennsylvania.

GOALS: ORAL HEALTH WORKFORCE DEVELOPMENT

- 2.1. Increase ratio of oral health care professionals to population
- 2.2. Promote policy that expands the use of dental paraprofessionals and auxiliaries and other non-dentist professionals

2.1. INCREASE RATIO OF ORAL HEALTH PROFESSIONALS TO POPULATION

BASELINE AND TRENDS

Pennsylvania has 164 dental health professional shortage areas as identified by the 2016 Kaiser Foundation report. Assessing the number of dentists available in the state has been challenging due to the population distribution in the state and the practicing patterns of providers. While the state is making efforts to better track distribution, the fact that there is a shortage is apparent by the data previously collected.

Table 2.1. Counties with less than one dentist per 5,000 residents, 2014

Counties	Dentists	Ratio of Dentists to Residents	2020 Population Projection	Additional Dentists Needed to Reach 1:5,000
Forest	0	-	7,531	2
Pike	10	1:5,619	56,192	1
Perry	8	1:5,704	48,597	2
Sullivan	1	1:6,339	6,608	1
Fulton	2	1:7,316	14,934	1
Juniata	3	1:8,265	24,681	2

Sources: Area Health Resource File/National Provider Identification file. RWJF County Health Rankings, from <http://www.countyhealthrankings.org/app/pennsylvania/2016/measure/factors/88/datasource>

In 2016, more than 100 stakeholders came together at the PCOH Oral Health Workforce Summit to collaborate and work to develop workforce prototypes for the state. Groups then convened to develop

plans to implement the various models and to forge a commitment to advance the plans. The PCOH, DOH and stakeholders will work together to support these efforts.

OBJECTIVE

By January 2020, decrease the number of oral health designated health professional shortage areas with a dentist to population ratio of less than 1:5000 by 1 percent

One percent decrease in rural health DHPSAs in Pa. by 2020

CALL TO ACTION

Increasing ratio of dentists to patients in counties that have not already attained the 1 to 5,000 ratios can be approached by multiple perspectives. Sub-county assessment could lead to revised ratios or more nuanced service levels indicating that populations in these rural counties are receiving care in adjacent counties. The need for additional dentists in these specific rural areas (and potentially others amid rural population trends) could be promoted by dental schools and even high school career guidance counselors and further incentivized by the state debt relief/loan repayment program. Expanding the scope of practice for auxiliary oral health professionals could also influence service levels. Volunteer and mobile services may ease needs in the short-term; however, sustainable oral health services will still be needed.

ACTION AREAS IN INCREASE RATIOS OF ORAL HEALTH CARE PROFESSIONALS TO POPULATION

- 2.1.1. Collect data on provider types by area at sub-county level
- 2.1.2. Promote efforts to reform dental insurance coverage and utilization in underserved areas, especially Medicaid
- 2.1.3. Educate oral health professionals and potential dentists about practice

PROOF OF IMPACT

As a foundational plan, performance measurement will help to determine the success of plan and appropriate revisions in the next update. The impact of actions taken to increase oral health service levels can be measured by:

1. The ratio of dentists to residents by county over time;
2. Increased retention of oral health professionals from Pennsylvania training programs;
3. Decreased drive time to access dentist; and
4. Improved dental insurance utilization rates.

POLICY ALIGNMENT

1. **Healthy People 2020 Goal Access to Health Services 6.1:** Reduce the proportion of persons who are unable to obtain or who delay in obtaining necessary medical care, dental care or prescription medicines
2. **Healthy People 2020 Goal Access to Health Services 6.2** Reduce the proportion of persons who are unable to obtain or who delay in obtaining necessary dental care

ACTION AREAS	
2.1.1. COLLECT DATA ON PROVIDER TYPES BY AREAS	
Proposed Actions	Implementation Areas
Use GIS to determine numbers of participating providers by zip code and provider type Tracking and documentation: Claims data, provider enrollment rolls	Implementers: Dental benefit companies; state government agencies Extent: All zip codes in commonwealth Timing: Every license renewal period
Survey auxiliary oral health providers to determine numbers of outreach programs Tracking and documentation: Survey data	Implementers: State government agencies; health professionals and professional organizations; professional schools Extent: Statewide Timing: Every license renewal period
Collect the number of persons on MA geographically and the number of MA providers by provider type available in these geographic areas Tracking and documentation: Participating provider rolls	Implementers: State government agencies Extent: Entire state Timing: Annually
2.1.2. PROMOTE EFFORTS TO REFORM DENTAL INSURANCE COVERAGE AND UTILIZATION IN UNDERSERVED AREAS, ESPECIALLY MEDICAID	
Proposed Actions	Implementation Areas
Encourage dentists to enroll as providers in MA programs by using incentives for dentists and educating providers about dental coverage and benefits	Implementers: State government agencies; professional organizations; legislators; governor’s advisory groups

<p>Tracking and documentation: Number of providers enrolled, locations of providers, travel time for patients to access locations</p>	<p>Extent: Entire state Timing: 1 new provider per DHPSA by 2020</p>
<p>Support development of a campaign to educate dentists and contact legislators about the need for more providers and the benefits of participating in Medicaid</p> <p>Tracking and documentation: Numbers of providers contacted, number of newly enrolled providers</p>	<p>Implementers: State government agencies; professional organizations; legislators; governor’s advisory groups Extent: Entire state Timing: 1 new provider per DHPSA by 2020</p>
<p>Provide opportunities to educate insurance participants about dental coverage</p> <p>Tracking and Documentation: Number of programs, number of encounters</p>	<p>Implementers: State government agencies; state and local coalitions; foundations and other funding sources; private and public health care delivery systems; insurance companies and managed care organizations; health promotion organizations and community-based organizations Extent: 50% of enrollees Timing: Annually</p>
<p>2.1.3. EDUCATE ORAL HEALTH PROFESSIONALS AND POTENTIAL DENTISTS ABOUT PRACTICE OPPORTUNITIES IN DHPSAs</p>	
<p>Proposed Actions:</p>	<p>Implementation</p>
<p>Support a plan to include DHPSA job opportunities on common listserv available to practicing and graduating providers</p> <p>Tracking and documentation: Plan for creation of community listserv</p>	<p>Implementers: State government agencies; state and local coalitions; foundations and other funding sources; private and public health care delivery systems; insurance companies and managed care organizations; health promotion organizations and community-based organizations Extent: Statewide Timing: By JANUARY 2019</p>
<p>Educate graduating professionals about practicing in DHPSAs</p>	<p>Implementers: State and local coalitions; community health centers and organizations; state and local health</p>

Tracking and documentation: Number of encounters, reports from presenters	care providers; health professionals and professional organizations Extent: Statewide Timing: Ongoing
POTENTIAL POLICY DEVELOPMENT	
Proposed Actions:	Implementation
Explain to policymakers the importance of reevaluating the adult Medicaid dental benefit for better processes and outcomes Tracking and documentation: Lists/database of contacts; checklist of actions	Implementers: Professional organizations; legislators; governor’s advisory groups Extent: All Medicaid dental benefit plans Timing: Revision of current coverage and administration drafted for approval by 2020

2.2. PROMOTE POLICY THAT EXPANDS THE USE OF DENTAL PARAPROFESSIONALS AND AUXILIARIES

BASELINE AND TRENDS

Many supplementary workforce members are available beyond the general dentist to provide oral health care, but most are underutilized. Many services provided by expanded professionals are not covered by most insurance plans. For underserved populations that access care by utilizing public assistance plans, many states have started to implement creative ways to incorporate paraprofessional care in the value-based payment system that Medicaid is initiating.

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

Deliver one policy outline by 2020

CALL TO ACTION

Utilizing professional personnel in non-traditional ways requires development of policy and education of the current provider system. Expanding non-dentist personnel to underserved areas has been shown to increase the number of people having a dental visit within a year by creating the necessary pipeline to

services available, as well as providing preventive interventions that help to achieve and maintain oral health.

PROOF OF IMPACT

As a foundational plan, performance measurement will help to determine the success of plan and appropriate revisions in the next update. The impact of actions to promote policy that supports the use of dental paraprofessionals and auxiliaries can be measured by:

1. Changes in the scope of practice for dental paraprofessionals and auxiliaries;
2. Fee schedule development for services rendered by paraprofessionals and auxiliaries; and
3. Educational program development.

POLICY ALIGNMENT

1. **Healthy People 2020 Oral Health 7:** Increase the proportion of children, adolescents and adults who used the oral health care system in the past year
2. **Healthy People 2020 Oral Health 11:** Increase the proportion of patients who receive oral health services at federally qualified health centers (FQHCs) each year

ACTION AREAS	
2.2.1. EVALUATE EXPANSION OF THE SCOPE OF PRACTICE OF DENTAL PARAPROFESSIONALS AND AUXILIARIES	
Proposed Actions	Implementation
<p>Create a plan to assess existing outreach programs in state and nationally that provide care in nontraditional settings</p> <p>Tracking and documentation: Plan made for assessment tools, summary of existing programs</p>	<p>Implementers: Professional organizations; state government agencies; state and national health professionals and professional organizations</p> <p>Extent: State and national</p> <p>Timing: By JULY 2018</p>
<p>Determine process for implementing changes in state board of dentistry regulations</p> <p>Tracking and documentation: Summary report of processes</p>	<p>Implementers: State Board of Dentistry; health professionals and professional organizations; local and state coalitions; state government advisory boards</p> <p>Extent: State Board of Dentistry Practice Regulations for Paraprofessionals and Auxiliaries</p>

	Timing: By JULY 2018
2.2.2. PROMOTE PAYMENT FOR SERVICES RENDERED BY PARAPROFESSIONALS AND AUXILIARIES	
Proposed Action	Implementation
<p>Work with public and private reimbursement programs to cover diagnostic and preventive services provided by dental paraprofessionals and auxiliaries</p> <p>Tracking and documentation: Inclusion of codes in dental formularies, number of services billed and paid, claims data</p>	<p>Implementers: Health professionals and professional organizations; state government agencies; private and public health care delivery systems; insurance companies and managed care organizations; state and local coalitions; foundations and other funding sources; state government agencies</p> <p>Extent: State supported plans</p> <p>Timing: 2020</p>
2.2.3. EDUCATE DENTISTS AND HEALTH CARE PROFESSIONALS ON THE UTILIZATION OF PARAPROFESSIONALS AND AUXILIARIES	
Proposed Action	Implementation
<p>Support programs to educate dental providers about the utilization of paraprofessional and auxiliary personnel in their practices</p> <p>Tracking and documentation: Documentation of program, number of encounters</p>	<p>Implementers: Collegiate and graduate schools/dental schools</p> <p>Extent: Statewide</p> <p>Timing: 2018</p>
<p>Find opportunities for community colleges and technical programs to implement oral health career programs into their curriculum</p> <p>Tracking and documentation: Evidence of curriculum inclusion in programs throughout state</p>	<p>Implementers: Collegiate and graduate schools/dental schools</p> <p>Extent: Statewide</p> <p>Timing: 2018</p>
<p>Educate trusted community partners on understanding and openness to tele-dentistry</p> <p>Tracking and documentation: Program in place to educate on tele-dentistry</p>	<p>Implementers: Health promotion organizations and community-based organizations; professionals and health professionals and</p>

	<p>professional organizations; national, state and local coalitions; insurance providers and MCOs</p> <p>Extent: Reach 10 groups of community partners</p> <p>Timing: 2018</p>
POTENTIAL POLICY DEVELOPMENT	
Proposed Action	Implementation
<p>Support efforts to create legislation that allows for the certification of school-based public health dental hygiene practitioners/educators</p> <p>Tracking and documentation: Policy creation, certification curriculum, numbers of providers certified</p>	<p>Implementers: Health professionals and professional organizations; state and local coalitions; State Board of Dentistry; legislators; school boards and board of education</p> <p>Extent: Statewide</p> <p>Timing: 2020</p>
<p>Encourage education that supports the revision of existing state code regulating dentist supervision of dental paraprofessionals and auxiliaries in underserved communities</p> <p>Tracking and documentation: Education materials, change in PA Code, number of certifications</p>	<p>Implementers: Health professionals and professional organizations; state government agencies; State Board of Dentistry</p> <p>Extent: Statewide</p> <p>Timing: 2020</p>

2.3. DEVELOP PROGRAMS THAT PROMOTE AND SUPPORT ORAL HEALTH CAREERS BASELINE AND TRENDS

The number of dentists in Pennsylvania in the 65+ age group increased from 12 percent in 2007 to 18 percent in 2013; the 35-49 age group decreased from 34 percent in 2007 to 28 percent in 2013. There are three dental schools and a dental school senior outreach program in Pennsylvania. Each year, approximately 300 to 350 graduates pass through their doors. Paraprofessional and auxiliary training programs exist in some fields, but not in others. There are dental hygiene and expanded function dental assisting programs in various areas throughout the state, but these graduates are finding it difficult to obtain full time positions upon graduation. While some community health worker training programs are available, most curriculums do not provide the necessary education for evaluating and educating about oral health. Community dental health coordinator programs are non-existent, although a pilot program through Temple Dental School showed promise. There is no accredited dental laboratory technician training program in the state.⁷²

OBJECTIVE

Create a comprehensive plan to improve the number of oral health professionals graduating and remaining in Pennsylvania

**Create a retention
plan**

CALL TO ACTION

Dental careers need to be promoted and supported to sustain the profession. Promoting, funding and supporting the profession is necessary to expand and sustain the workforce.

ACTION AREAS TO DEVELOP PROGRAMS THAT PROMOTE AND SUPPORT ORAL HEALTH CAREERS

2.3.1. Identify funding for dental education

**2.3.2. Provide information about dental careers in primary and
secondary schools**

**2.3.3. Encourage programs that teach non-clinical skills to oral health
professionals**

PROOF OF IMPACT

As a foundational plan, performance measurement will help to determine the success of plan and appropriate revisions in the next update. The impact of actions taken to promote and support dentistry as a career choice can be measured by:

⁷² Commission on Dental Accreditation (CODA): <http://www.ada.org/en/coda>

1. Number of participants in loan programs;
2. Number of students reached in primary and secondary education schools;
3. Number of programs for non-technical (dental) programs statewide; and
4. Number of graduates practicing in Pennsylvania five years post-graduation from Pennsylvania programs.

POLICY ALIGNMENT

1. **Healthy People 2020 Goal Access to Health Services 6.1:** Reduce the proportion of persons who are unable to obtain or who delay in obtaining necessary medical care, dental care or prescription medicines
2. **Healthy People 2020 Goal Access to Health Services 6.2** Reduce the proportion of persons who are unable to obtain or who delay in obtaining necessary dental care

ACTION AREAS	
2.3.1. IDENTIFY FUNDING FOR DENTAL EDUCATION	
Proposed Actions	Implementation
<p>Identify and share creative ways for underserved counties to establish funding for students interested in returning to their area to practice after graduating from an oral health program</p> <p>Tracking and documentation: Evidence of programs in place to support education and employment</p>	<p>Implementers: Health promotion organizations and community-based organizations; health professionals and professional organizations; state and local coalitions; foundations and other funding sources</p> <p>Extent: Regionally</p> <p>Timing: 2020</p>
<p>Provide information about loan repayment opportunities throughout the state in centralized database</p> <p>Tracking and implementation: Inclusion of information in centralized database</p>	<p>Implementers: PADOH; state and local agencies; state and local coalitions; foundations</p> <p>Extent: statewide</p> <p>Timing: By JULY 2019</p>

2.3.2. PROVIDE INFORMATION ABOUT DENTAL CAREERS AT PRIMARY AND SECONDARY SCHOOLS

Proposed Actions	Implementation
<p>Develop plan to include links to oral health career programs in statewide database for oral health</p> <p>Tracking and documentation: Programs included in database development efforts</p>	<p>Implementers: Professional training programs; state and local agencies; coalitions; health professionals and professional organizations</p> <p>Extent: Within data base</p> <p>Timing: By JANUARY 2019</p>
<p>Encourage guidance counselors to promote dentistry as a career, including paraprofessional and auxiliary careers</p> <p>Tracking and documentation: Records of outreach efforts</p>	<p>Implementers: Health promotion organizations and community-based organizations; health professionals and professional organizations; state and local coalitions; foundations and other funding sources</p> <p>Extent: Statewide</p> <p>Timing: 2020</p>

2.3.3. ENCOURAGE PROGRAMS THAT TEACH NON-CLINICAL SKILLS TO ORAL HEALTH PROFESSIONALS

Proposed Actions	Implementation
<p>Create dental provider support groups for providers serving in remote locations</p> <p>Tracking and documentation: Record of number of groups established</p>	<p>Implementers: Health promotion organizations and community-based organizations; health professionals and professional organizations; state and local coalitions; foundations; other funding sources</p> <p>Extent: Statewide</p> <p>Timing: 2020</p>
<p>Improve access to leadership and practice management programs for oral health professionals.</p> <p>Tracking and documentation: Number of encounters, tracking of programs available</p>	<p>Implementers: Professional schools; health professionals and professional organizations; state and local coalitions</p> <p>Extent: Live and webinars</p> <p>Timing: By 2019</p>

ORAL HEALTH INFRASTRUCTURE

According to the CDC, a state’s oral health infrastructure is an informal collection of multi-disciplinary organizations and individuals that serve as the foundation for public oral health services.⁷³ While an oral health infrastructure is comprised of many stakeholders with a variety of resources within any state, the key categorical components include government, academia, health professionals, insurance companies, community-based organizations, individual advocates and consumers. Oral health infrastructure consists of “people, systems, relationships, and resources that facilitate and support the provision of public health services includes state leadership, coalitions, individuals and organizations.”⁷⁴

The stakeholders within Pennsylvania’s Oral Health Infrastructure include, but are not limited to:

- Pennsylvania Department of Health, specifically the Oral Health Program, and departments of State, Insurance, Education, Aging, Environmental Protection and Human Services;
- Pennsylvania Legislature;
- Public and private elementary, secondary, collegiate and graduate schools;
- Private and public health care delivery systems;
- Insurance companies and managed care organizations;
- Health promotion organizations and community-based organizations;
- Health professionals and professional organizations;
- State and local coalitions; and
- Foundations and other funding sources.

According to CDC, ASTDD, etc., critical components of a state’s oral health infrastructure and capacity include an engaged state oral health program, active and well-equipped state and local oral health coalitions able to influence political will, a robust oral health surveillance system, and communication mechanisms and processes that allow public and private partners to share best practices and bring awareness of oral health issues to the public through literacy and awareness campaigns.

STRONG ORAL HEALTH PROGRAMS:

- Provide leadership and staff support;**
- Monitor oral disease and risk factors;**
- Develop a state oral health plan;**
- Collaborate with coalitions and partnerships; and**
- Develop and evaluate disease prevention programs.**

⁷³ Basic Strategies for Collective Impact. Centers for Disease Control and Prevention. https://www.cdc.gov/oralhealth/state_programs/infrastructure

⁷⁴ Vermont Oral Health Plan 2014. http://www.vtoralhealthcoalition.com/uploads/6/9/3/2/69321835/vt_oral_health_plan.pdf.

CDC Division of Oral Health says in its report, “Support for State Oral Health Programs,” that strong state-based public health programs are critical to the nation's oral health.⁷⁵ State health departments should have strong oral health programs with the staffing necessary to support and implement the goals of the state oral health plan. Building collaborative relationships throughout the state leads to better disease monitoring and prevention by pooling the resources of many groups with a unified goal. Oral health literacy and prevention projects at grassroots levels need support from the state oral health program to assist in expanding successful programs to larger population groups.

Coalitions have the mission to shape policy, promote prevention and educate the public. States need state government-led oral health programs and statewide oral health coalitions to collaborate to create and implement state oral health plans.⁷⁶ It is the role of the coalition to advocate for policies and legislation while serving as a source for sharing evidence-based interventions with private and public oral health stakeholders. The ability of Pennsylvania’s DOH Oral Health Program to coordinate oral health efforts in the state can be strengthened by building organizational capacity, improving leadership, and enhancing collaboration with other state agencies and stakeholders.

According to ASTDD’s “Best Practice Report on State Based Oral Health Surveillance Systems,” a state oral health surveillance system should accomplish several tasks. A state-based oral health surveillance system (SOHSS) should provide information necessary for public health decision-making by routinely collecting data on health outcomes, access to care, risk factors and intervention strategies for the whole population, representative samples of the population or priority subpopulations. In addition, a SOHSS should consider collecting information on the oral health workforce and infrastructure and policies impacting oral health outcomes. A SOHSS can access data from existing sources, supplemented by additional information to fill data gaps.⁷⁷ Surveillance systems should not only collect data but also 1) include mechanisms to communicate findings to those responsible for programmatic and policy decisions and to the public and 2) assure data are used to inform and evaluate public health measures to prevent and control oral diseases and conditions. The NOHSS indicators are one tool states can use when developing a surveillance system.

There is no value to a surveillance system unless the information is used for actions that prevent or control disease. A strong oral health infrastructure requires a way for stakeholders to share evidence-based interventions and best practices. Knowing which projects are succeeding in varied communities helps stakeholders to pool resources and expand oral health efforts. This type of open communication with the public, health professionals and providers, policy makers, and stakeholder organizations will set

⁷⁵ Oral Health Program Strategic Plan for 2011-2014. Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion. www.cdc.gov/oralhealth/pdfs/oral.

⁷⁶ American Network of Oral Health Coalitions 2016. www.anohc.org/.

⁷⁷ State Based Oral Health Surveillance System. Best Practice Approached for State and Community Oral Health Programs. ASTDD. MAY 2011.

the stage for better management of oral health disparities throughout the commonwealth.⁷⁸ Communication mechanisms may come from any stakeholder and vary in their processes, but health organizations and the DOH Oral Health Program will most likely develop statewide sharing through list services, public service announcements and awareness campaigns.⁷⁹ While general information is available on the site LiveHealthyPA.com, Healthy Living Practices Database was envisioned as the core component of the website. The searchable database allows users to find successful disease and injury preventive programs or practices occurring in Pennsylvania for replication in their local community, school, business or organization. The database is a continuum of interventions that range from “new” or emerging programs to those “best” practices for which outcomes have been formally evaluated. This database and web-based communication hub can provide the venue for supporters to unite their efforts to create and share best practices in the state.

For Pennsylvania to have a stronger oral health infrastructure, stakeholders must unite to strengthen state government agencies that focus on oral health, enhance and expand state and local oral health coalitions, empower decision makers by creating a robust surveillance system and communication hub, and bring awareness of oral health issues to the public through literacy and awareness campaigns.

GOALS: ORAL HEALTH INFRASTRUCTURE

- 3.1. Increase statewide leadership of Pennsylvania Department of Health’s Oral Health Program
- 3.2. Develop an oral health surveillance system for Pennsylvania
- 3.3. Utilize LiveHealthyPA.com as an online oral health information hub

⁷⁸ *State Oral Health Coalitions and Collaborative Partnerships*. Best Practice Approaches for State and Community Oral Health Programs. ASTDD. August 2008.

⁷⁹ State Oral Health Plans. CDC. https://www.cdc.gov/oralhealth/state_programs/oh_plans/index.htm.

3.1. INCREASE THE CAPACITY OF AND STATEWIDE LEADERSHIP OF PENNSYLVANIA DEPARTMENT OF HEALTH'S ORAL HEALTH PROGRAM

BASELINE AND TRENDS

Pennsylvania is a large rural state with pockets of urban populations. Pennsylvania is rich with both resources and needs and, like other state government health departments, Pennsylvania, with its size and diversity, depends on the work of private and public partners to move the state's oral health priorities forward. The role of public health and government hasn't always been clear and has evolved over generations. State and federal government agencies focused on public health no longer serve as the primary source for funding to develop and sustain local public health efforts and instead have become conveners of public and private partners and promoters of best and promising practices of public health. To serve in this role, state oral health programs need both staff and operational resources to best facilitate multi-stakeholder public health efforts.

As mentioned earlier in the report, according to ASTDD, a strong state oral health program requires dedicated resources and staff to perform critical public health functions. Currently, DOH Oral Health Program staff includes one FTE oral health public health administrator, one part-time dental consultant, and support from DOH epidemiology, administrative and fiscal staff. As the burden of oral health disease grows in Pennsylvania, the DOH Oral Health Program needs to expand its organizational capacity to serve its vital role. It is recommended that the state assess its state oral health program, using tools by ASTDD and other organizations, and create a key stakeholder-led search committee to help recruit a DOH state dental director. While recruiting and retaining a dental director for the DOH Oral Health Program has been a challenge, DOH leveraged funding in 2014 to support a full-time public health program administrator to work with the Health Risk Reduction (HRR) division director. This ensures effective leadership and ongoing integration of oral health within DOH grantees and partners to improve the capacity of the state oral health program to serve as an effective facilitator for oral health efforts. Still, PADOH recognizes the value of a dental director position and will target its recruitment efforts to fill that position and strengthen the capacity of the oral health program overall.

OBJECTIVE

By July 1, 2018, the DOH Oral Health Program will assess its staff and organizational needs and fill the position of the dental director.

Addition of one dental director with supporting program staff

CALL TO ACTION

The state's ability to lead and coordinate oral health efforts in collaboration with other state agencies and oral health stakeholders has been limited without a well-resourced oral health program. While a general assessment of the state oral health program is needed, the fact that many grant opportunities available to stakeholders' request for information about the state, specifically inquiring about whether the state has a dental director, makes filling the dental director position vital. A dental director should have knowledge of:

1. The practice of dentistry in Pennsylvania;
2. Oral health disease and prevention;
3. Current oral health efforts in the state; and
4. Public health principles.

This dental director should also have relationships with current stakeholders and the ability to develop further collaborative efforts throughout the commonwealth. Such leadership will be able to take the state's population to better overall oral health during the 2017-2020 OHP and help foster the leap to the larger plan in 2020.

ACTION AREAS IN STATEWIDE ORAL HEALTH LEADERSHIP

- 3.1.1. Fill the position of a dental director and assess organizational needs of DOH Oral Health Program

PROOF OF IMPACT

As a foundational plan, performance measurement will help to determine the success of OHP and appropriate revisions in the next update. The impact of actions taken to improve oral health leadership can be measured as follows:

1. DOH Oral Health Program will be assessed for organizational needs.
2. The dental director's role and responsibilities will be reviewed and a stakeholder search committee will be established.

POLICY ALIGNMENT

1. **Healthy People 2020, Oral Health-17:** Increase health agencies that have a dental public health program directed by a dental professional with public health training
2. **CDC Strategic Plan 2014 Goal 6:** Increase state oral health program infrastructure capacity and effectiveness
3. **ASTDD 2014 Publication:** "10 Reasons Why State Oral Health Programs Still are Important"
4. **ADA Action for Oral Health:** Council on Advocacy for Access and Prevention, 2016⁸⁰

⁸⁰ ADA Council on Advocacy for Access and Prevention. Referendum. JAN 2017.

ACTION AREAS	
3.1.1. FILL THE POSITION OF A DENTAL DIRECTOR AND ASSESS THE ORGANIZATIONAL CAPACITY OF THE STATE ORAL HEALTH PROGRAM TO RECOMMEND IMPROVEMENTS	
Proposed Actions	Implementation
Assess the DOH Oral Health Program using tools by ASTDD and other organizations Tracking and documentation: Assessment report	Implementers: DOH; state and local coalitions; health professionals and professional organizations Extent: Timing: By JULY 2019
Create a key stakeholder-led search committee to help recruit a DOH dental director Tracking and documentation: Dental director hired	Implementers: DOH; key stakeholders Extent: State and national Timing: By OCTOBER 2017
POTENTIAL POLICY DEVELOPMENT	
Proposed Action	Implementation
Review regulations defining dental director and share best practice models with policy makers to possibly redefine requirements and credentialing of director Tracking and documentation: Dental director title, requirements and credentialing redefined and approved	Implementers: State and local coalitions; health professionals and professional organizations Extent: Timing: By SEPTEMBER 2017

3.2. CREATE A PLAN TO DEVELOP AN ORAL HEALTH SURVEILLANCE SYSTEM

BASELINE AND TRENDS

Pennsylvania has several programs in place for oral health efforts to prevent and control disease. Many of these programs can generate valuable data about the state of oral health in the commonwealth. Action items throughout OHP include assessing the current landscape to improve the programs already in place and building upon successful programs in other areas of the state. Creating surveillance systems to collect and evaluate the information about these valuable programs is imperative to the success of the plan.

OBJECTIVE

By Jan. 1, 2020, the DOH Oral Health Program and oral health stakeholders will develop a plan to create an oral health population-based surveillance system that meets CDC recommendations.

Create an oral health surveillance system by 2020

CALL TO ACTION

Several oral health surveillance systems are in practice throughout the states. Many of these are specific to certain projects within the states, and others are part of their state's oral health plan. Determining which plans are in use and will best suit the needs of programs in Pennsylvania will require an overall analysis of measures and systems in use. Evaluating current data collection in the state and reporting of this data has been an ongoing challenge for the commonwealth. The accomplishment of action items cannot be properly determined without data collection, analysis and reporting.

ACTION AREAS IN CREATE A PLAN TO DEVELOP AN ORAL HEALTH SURVEILLANCE SYSTEM

3.2.1. Evaluate existing health surveillance systems for best practices

3.2.2. Plan the design and development of an oral health surveillance system

PROOF OF IMPACT

As a foundational plan, performance measurement will help to determine success and appropriate revisions in the next update. The impact of actions taken to establish an oral health surveillance system can be measured by:

1. Having a plan in place to develop the "blueprint" to create a statewide surveillance system;
2. Identifying stakeholders to develop the plan; and
3. Identifying resources to develop a plan to create an oral health surveillance system.

POLICY ALIGNMENT

1. **Healthy People 2020 Goal Oral Health-16:** Increase the number of states and the District of Columbia that have an oral and craniofacial health surveillance system
2. **CDC 2013 recommendation** that all states have an oral public health system led by a state government body that will build and/or maintain effective public health capacity for implementation, evaluation and dissemination of best practices associated with oral disease prevention and improvement of oral health
3. **State-based Oral Health Surveillance Systems Conceptual Framework and Operational Definition, October 2013.**

ACTION AREAS	
3.2.1. EVALUATE EXISTING ORAL HEALTH SURVEILLANCE SYSTEMS FOR BEST PRACTICES	
Proposed Actions	Implementation
<p>Research surveillance systems used by other large states</p> <p>Tracking and documentation: Summary of key components of programs available</p>	<p>Implementers: DOH; state and local coalitions; institutions of higher learning; insurance companies and MCOs</p> <p>Extent: National</p> <p>Timing: By JUNE 2018</p>
<p>Assess oral health surveillance tools already in use throughout the state</p> <p>Tracking and documentation: Report of existing tools throughout the state</p>	<p>Implementers: State board of education; local and community coalitions; health professionals and professional organizations; institutions of higher learning; state departments</p> <p>Extent: statewide</p> <p>Timing: By JUNE 2018</p>
<p>Review BRFSS data and survey process; assess to see what questions focus on oral health</p> <p>Tracking and documentation: Report</p>	<p>Implementers: DOH; institutions of higher learning; insurance companies and MCOs</p> <p>Extent: Statewide</p> <p>Timing: 2017</p>
3.2.2. PLAN THE DESIGN AND DEVELOPMENT OF AN ORAL HEALTH SURVEILLANCE SYSTEM	
Proposed Actions	Implementation
<p>Create a plan to ensure technology is in place to collect real time data and use results of surveillance research to create system</p> <p>Tracking and Documentation: Evidence of a plan for development of a surveillance system</p>	<p>Implementers: DOH; institutions of higher learning; insurance companies and MCOs</p> <p>Extent: Statewide</p> <p>Timing: 2020</p>

3.3. UTILIZE LiveHealthyPA.com AS AN ONLINE ORAL HEALTH INFORMATION HUB

BASELINE AND TRENDS

Updating LiveHealthyPA.com for assimilating and sharing oral health information will create an easily accessible and maintained centralized online resource. This will be an online communication hub to be used for sharing oral health information within the DOH and other stakeholders. The goal will be to have a centralized resource center for sharing data collection, analysis and best practices, creating oral health literacy information, and connecting the stakeholders to one another.

OBJECTIVE

Pennsylvania oral health stakeholders will adopt for use the LIVE HEALTHY PA online communication tool.

Stakeholders will
utilize
LiveHealthyPA.com
tool

CALL TO ACTION

Currently, there is neither a comprehensive online resource portal for oral health information for Pennsylvania nor a systematic way for oral health stakeholders to share evidence-based interventions.

ACTION AREAS IN UTILIZE LiveHealthyPA.com AS AN ONLINE HUB

3.3.1. Promote successful oral health information sharing

3.3.2. Organize database to meet the needs of stakeholders

PROOF OF IMPACT

As a foundational plan, performance measurement will help to determine the success of the OHP and appropriate revisions in the next update. The impact of actions taken to establish an oral health online hub can be measured by:

1. Addition of an oral health database on LiveHealthyPA.com;
2. Information sharing among stakeholders on LiveHealthyPA.com; and
3. Development of oral health resources to be distributed to other sites.

POLICY ALIGNMENT

1. **CDC 2013 recommendation** that all states have an oral public health system led by a state government body that will build and/or maintain effective public health capacity for implementation, evaluation and dissemination of best practices associated with oral disease prevention and improvement of oral health

ACTION AREAS

3.3.1. PROMOTE SUCCESSFUL ORAL HEALTH INFORMATION SHARING

Proposed Actions	Implementation
<p>Provide links to provider service locations, e.g., FQHCs, associations, insurers on LiveHealthyPA.com.</p> <p>Tracking and documentation: Number of links on LiveHealthyPA.com</p>	<p>Implementers: Health professionals and professional organizations, state government agencies; private and public health care delivery systems; insurance companies and managed care organizations; state and local coalitions; foundations and other funding sources; state government agencies</p> <p>Extent: Statewide</p> <p>Timing: 2018</p>

3.3.2. ORGANIZE DATA BASE TO MEET THE NEEDS OF STAKEHOLDERS

Proposed Actions	Implementation
<p>Encourage stakeholders to submit best practice models for group review to be listed on LiveHealthyPA.com</p> <p>Tracking and documentation: Number of oral health best practices listed on LiveHealthyPA.com</p>	<p>Implementers: Health professionals and professional organizations, state government agencies; private and public health care delivery systems; insurance companies and MCOs; state and local coalitions; foundations and other funding sources; state government agencies</p> <p>Extent: Statewide</p> <p>Timing: 2018</p>
<p>Provide secure access to portal for Stakeholders with secure information sharing on LiveHealthyPA.com</p> <p>Tracking and documentation: Evidence of procedures for stakeholders to share on LiveHealthyPA.com</p>	<p>Implementers: DOH, state agencies</p> <p>Extent: On website and available statewide</p> <p>Timing: By JULY 2019</p>
Proposed Actions	Implementation
<p>Create a permanent oral health location on LiveHealthyPA.com</p> <p>Tracking and documentation: Evidence of a permanent oral health location on LiveHealthyPA.com</p>	<p>Implementers: DOH</p> <p>Extent: On website and available statewide</p> <p>Timing: By JULY 2019</p>

3.3.3. PROMOTE USE OF THE DATABASE THROUGHOUT THE STATE	
Proposed Actions	Implementation
Develop a campaign to inform stakeholders and other health care professionals how to access the oral health section of the portal, how to join listserv and obtain categorical information available on the portal Tracking and documentation: Campaign in place, number of hits on oral health component of portal	Implementers: DOH; PCOH; health professionals and professional organizations; state and local health care coalitions; state and local health care providers Extent: National and state Timing: JANUARY 2020

PLAN IMPLEMENTATION AND EVALUATION

IMPLEMENTATION OBJECTIVE

DOH recognizes and emphasizes that the value of public health planning is largely in implementation. The state planning process had the benefit of fostering stakeholder interaction and dialogue around key issues and concerns. Collaborating to create the plan will translate its priorities and objectives into action, particularly in goals that are stakeholder driven and that have been identified and validated by our varied oral health stakeholders.

Implementation objectives include, but are not limited to:

1. Maximizing local initiative and strategic alliances that advance OHP’s priorities and objectives;
2. Gauging progress periodically and sharing promising practices across the state; and
3. Networking effective initiatives efficiently to maximize their replication.

ROLES AND RESPONSIBILITIES

The grassroots stakeholders who developed OHP will have the primary responsibility to implement the plan’s action areas. These stakeholders are committed to collaborative efforts to advance the actions necessary to achieve the joint goals established in the planning process.

DOH, working with PCOH, will be primarily responsible for providing the information for periodic statewide concise progress updates to stakeholders. DOH will engage stakeholders in ways that help identify any opportunities to adjust or improve the plan based on what is learned through implementation. Collaborating with various agencies and organizations at a statewide level to build further support for OHP is critical. DOH will also provide infrastructure that supports an effective and efficient plan implementation.

FUNDING FOR IMPLEMENTATION

Implementing OHP action items will require financial and other resources. Many of the actions attempt to leverage existing programs, materials and other resources to be good stewards. Some of the actions require new funding commitments.

It is recommended that DOH contact the Pennsylvania General Assembly's Legislative Budget and Finance Committee,⁸¹ to provide a useful estimate of costs for key actions contained in OHP and to identify any potential sources of public or private grant funding. Ideally, this cost study would be conducted as soon as possible and preferably be completed before July 1, 2017 — the start of the 2017-2018 state fiscal year.

TRACKING AND STATUS REPORTING

DOH will periodically provide templates for local stakeholders involved in implementation efforts to report on progress. This information will be used to produce well organized plan status reports to be shared across the state. DOH will report on the broader impacts and outcomes associated with implementation based on these reports and share best practices developed from the information. The tracking and status reporting process will also be used to create updates and plans.

RECOGNITION OF OHP CHAMPIONS

The DOH Oral Health Plan design does not follow a top down approach but, rather, relies on local and regional efforts and initiatives. DOH will assist in promoting efforts that stakeholders have evaluated and deemed to be successful and appropriate for the state. DOH will also lead an ongoing recognition effort to spotlight the successful actions of these grassroots organizations and individuals. This may include any combination of letters of appreciation, newsletters, email status updates, and non-financial awards and commendations.

⁸¹ Legislative Budget and Finance Committee (LB&FC): <http://lbfc.legis.state.pa.us>.

EVALUATION

GENERAL

The CDC Framework for Program Evaluation will be used to evaluate the creation and implementation of OHP. Meetings and idea-sharing sessions held before the writing of the plan will be evaluated by stakeholders to determine the success of these information gathering workshops. Continued collaboration with stakeholders will be the framework for determining the success of the plan, evaluating the advancement of each action item outlined to advance each goal set forth in the plan. Plan evaluation will occur at every level of hierarchy in the plan. This evaluation will lead to the development of the more comprehensive plan to be developed in 2020.

ACTION AREAS

DOH will provide well organized listings of the actions underway in each opportunity area at timely intervals via LiveHealthyPA.com. This will be basic progress reporting in terms of activities and outputs/efforts, addressing what activities are taking place to implement the OHP and by whom.

GOALS

Reporting generalized assessments of impact being made for each goal will occur at timely intervals to assess which disparities are being addressed and convey the results of each oral health effort.

PRIORITIES AND OBJECTIVES

At the highest level of evaluation is an assessment focused on OHPs priorities and objectives. At this level of evaluation, DOH and its partners will be striving to evaluate outcomes and answering the fundamental public health question as to how OHP is fundamentally improving oral health in Pennsylvania.

Table 3. OUTLINE OF PENNSYLVANIA STATE ORAL HEALTH PLAN

Access to Oral Health Care and Prevention

1.1. Increase Oral Health Prevention or Care Delivery Programs

- 1.1.1. Assess oral health service availability at a sub-county level
- 1.1.2. Promote and assess education of health care professionals
- 1.1.3. Add and expand oral health services to locations that do not traditionally provide health care

1.2. Increase Sealant Programs

- 1.2.1. Increase school-based sealant programs
- 1.2.2. Increase community-based sealant programs

1.3. Increase Oral Health Education Programs

- 1.3.1. Increase school-sponsored oral health programs
- 1.3.2. Increase community-sponsored oral health programs

1.4. Access to Community Water Fluoridation

- 1.4.1. Assess community water fluoridation usage
- 1.4.2. Compile evidence-based research on community water fluoridation benefits
- 1.4.3. Advocate for community water fluoridation
- 1.4.4. Identify funding for community water fluoridation

Oral Health Workforce Development

2.1. Increase ratio of oral health professionals to population

- 2.1.1. Collect data on provider types by area at sub-county level
- 2.1.2. Advocate for dental insurance coverage reform and utilization in underserved areas, especially Medicaid
- 2.1.3. Educate oral health professionals and potential dentists about practice opportunities in Dental Health Professional Shortage Areas (DHPSAs)

2.2. Promote policy that expands the use of dental paraprofessionals and auxiliaries

2.2.1. Evaluate expanding the scope of practice regulations of dental paraprofessionals and auxiliaries

2.2.2. Advocate for payment for services rendered by paraprofessionals and auxiliaries

2.2.3. Educate dentists and health care professionals on the utilization of paraprofessionals and auxiliaries

2.3 Develop programs that promote and support oral health careers

2.3.1. Identify funding for dental education

2.3.2. Provide information about dental careers in primary and secondary schools

2.3.3. Encourage programs that teach non-clinical skills to oral health professionals

Oral Health Infrastructure

3.1. Increase statewide leadership of Pennsylvania's Department of Health's Oral Health Program

3.1.1. Fill the position of an oral health director and maintain at least one oral health administrator in the Pennsylvania Department of Health Oral Health Program

3.2. Create a plan to develop an Oral Health Surveillance System for Pennsylvania

3.2.1. Evaluate existing oral health surveillance systems for best practices

3.2.2. Plan the design and development of an oral health surveillance system

3.3. Utilize LiveHealthyPA.com as an Online Oral Health Information Hub

3.3.1. Promote successful oral health information sharing

3.3.2. Organize data base to meet the needs of stakeholders

3.3.3. Promote use of the database throughout the state

ABBREVIATIONS

ACA: Affordable Care Act	HTHC: Healthy Teeth Healthy Children
ADA: American Dental Association	HRSA: Health Resources and Services Administration
ADHA: American Dental Hygienists' Association	MA: Medical Assistance
ASTDD: Association of State and Territorial Dental Directors	NPI: National Provider Identification
CDC: Centers for Disease Control Prevention	OHP: Oral Health Plan
CDHC: Community Dental Health Coordinator	PACHC: Pennsylvania Association of Community Health Centers
CHW: Community Health Workers	PAAAP: Pennsylvania Chapter of the American Academy of Pediatrics
CMS: Centers for Medicare & Medicaid Services	PCOH: Pennsylvania Coalition for Oral Health
CHIP: Children's Health Insurance Program	PDA: Pennsylvania Dental Association
CDT: Code on Dental Procedures and Nomenclature	PDHA: Pennsylvania Dental Hygienists' Association
CODA: Commission on Dental Accreditation	PDS: Pennsylvania Dental Society
CWF: Community Water Fluoridation	PADOE: Pennsylvania Department of Education
DANB: Dental Assisting National Board	PADHS: Pennsylvania Department of Human Services
DHPSA: Dental Health Professional Shortage Area	PHSA: Pennsylvania Head Start Association
DHS: Department of Human Services	PSE: Policy, Systems, and Environmental Approaches
DOH: Pennsylvania Department of Health	SCHIP: State Child Health Insurance Program
EFDA: Expanded Functions Dental Assistant	SHIP: State Health Improvement Plan
FQHC: Federally Qualified Health Center	WIC: The Special Supplemental Nutrition Program for Women, Infants, and Children
FCAP: Free Clinic Association of Pennsylvania	WFRS: Water Fluoridation Reporting System
HIP: Health Innovation in Pennsylvania Plan	
HPSA: Health Professional Shortage Area	