

Texas Oral Health Surveillance Plan

2019-2024

Oral Health Improvement Program

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Executive Summary

Poor oral health impacts a person's ability to eat, speak, work, communicate and learn. Although most oral diseases and conditions are preventable, virtually all adults—and many children—have experienced some oral disease. Serious oral health disparities exist by race, age, geography, and income. The costs of oral disease treatment are significant, and most of those costs are paid by individuals or through private insurance. Much of the population cannot afford dental care or do not take advantage of public insurance benefits.

The Texas Oral Health Surveillance System (TOHSS) is an initiative of the Texas Department of State Health Services (DSHS) Oral Health Improvement Program (OHIP). TOHSS monitors trends in oral disease, such as early childhood caries, tooth loss, and oral and pharyngeal cancer; the prevalence of preventive services, such as dental sealants, community water fluoridation, and fluoride varnish; and dental service utilization, through such programs as the Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) Program and the Children's Health Insurance Program (CHIP).

By collecting and analyzing trends, essential oral health information is available for stakeholders and policymakers to evaluate current systems and identify potential resources needed to improve the oral health of all Texans in the future.

The following report provides a detailed outline of OHIP's five-year plan for collecting and disseminating oral health data.

Introduction

The Purpose of Public Health Surveillance

The 1988 Institute of Medicine (IOM) report on the future of public health outlines three core functions for public health: assessment, policy development and assurance. In that report, updated in 2003, the IOM recommended that every public health agency regularly and systematically collect, assemble, analyze, and disseminate information on community health status to carry out the assessment function. Public health agencies accomplish this task through public health surveillance -- the ongoing, systematic collection, analysis and interpretation of health data (Teutsch & Churchill, 2000). Surveillance is essential for planning, implementing, and evaluating public health practice and, ideally, is closely integrated with data dissemination to public health decision makers and other stakeholders (Hall et al., 2012). The overarching purpose of public health surveillance is to provide **actionable health information to guide public health policy and programs** (Smith et al., 2013).

The Public Health Importance of Oral Health

The 2000 report, *Oral Health in America: A Report of the Surgeon General*, states that oral health is more than healthy teeth (Texas Department of Health and Human Services (HHS), 2000). Oral health means being free of chronic oral and facial pain, oral and pharyngeal (throat) cancers, oral soft tissue lesions, cleft lip or other birth defects, oral injuries due to sports-related trauma or physical abuse, and scores of other diseases and disorders that affect the oral, dental, and craniofacial tissues. The report notes that oral health is integral to general health and stresses the importance of good oral health at both the individual and population (public health) level.

In the United States, the two most common oral diseases are dental caries (tooth decay) and periodontal (gum) disease. Although less common, cancers of the oral cavity and pharynx, orofacial clefts (cleft lip and cleft palate), malocclusion, orofacial pain, and other oral health problems can severely affect general health and quality of life. For example, poor oral health impacts the ability to eat, communicate and learn. It affects how we look and how we interact with others because of low self-esteem. Missing or decayed teeth can also make it difficult to find jobs where public interaction is important.

Each oral disease or condition, also referred to as an oral health outcome, is influenced by a variety of factors including access to dental care, individual risk

factors and risk determinants, availability of interventions, workforce and financing issues, public health infrastructure and public policies (See Figure 1).

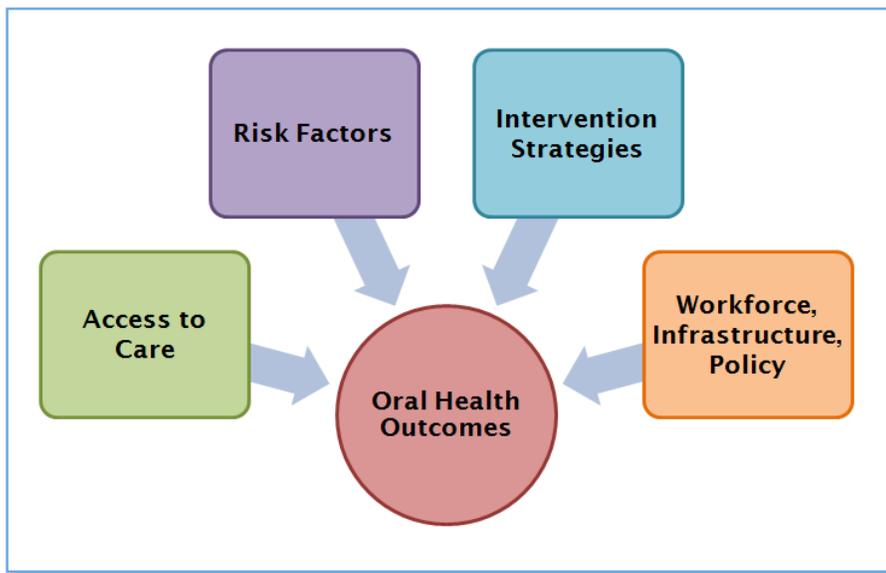


Figure 1: Factors Impacting Oral Health Outcomes

Following is a brief overview of the major oral health outcomes including common risk factors and intervention strategies.

Dental Caries

Dental caries, also known as tooth decay, has been described as the single most common chronic childhood disease (HHS, 2000). Healthy People 2020, managed by the U.S. Department of Health and Human Services (HHS), proposed a goal of 49 percent for the proportion of children aged six to nine with dental caries experience in any of their teeth (2010). During the 2017-2018 school year, 67.1 percent of Texas third graders were found to have dental caries experience (DSHS, 2018).

The impact of dental caries accumulates over time; of those 20-64 years of age in the U.S., 91 percent had caries experience (treated or untreated decay) (Dye et al., 2015b). Additionally, the prevalence of dental caries experience is generally higher in low-income and minority populations, representing a significant health disparity.

There are effective preventive intervention strategies for dental caries. Caries prevalence and severity can be reduced by appropriate use of fluorides through community water fluoridation, personal or professional topical fluoride applications and use of toothpaste with fluoride. Center for Disease Control and Prevention (CDC) has recognized community water fluoridation as one of ten great public health achievements of the 20th century, yet not everyone has access to fluoridated water (CDC, 1999).

Dental sealants are another effective intervention, preventing caries development in the pits and fissures of molar (back) teeth (Ahovuo-Saloranta et al., 2017). Dental sealants can be applied in dental offices or community settings (e.g., schools), yet far too few children are benefiting from this proven preventive service; in 2011-2012 in the U.S., only 31 percent of 6 to 8-year-olds, 49 percent of 9 to 11-year-olds and 43 percent of 12 to 19-year-olds had dental sealants on at least one permanent molar (Dye et al., 2015a). In Texas in 2017-2018, 41.4 percent of third graders had a dental sealant on at least one permanent molar (DSHS, 2018).

To reduce the prevalence of untreated dental decay, all individuals, regardless of income or dental insurance coverage, must have access to restorative dental care. Access to dental care, in turn, is influenced by infrastructure, workforce, financing and policy factors, including availability of low-cost clinics, dentist-to-population ratio, percent of dentists accepting government-funded dental insurance, reimbursement rates for government-funded programs, plus dental practice acts involving supervision, scope of practice and reimbursement.

Periodontal Disease

Periodontal disease is another common public health problem in the United States. More than 46 percent of adults 30 years and older have destructive periodontal disease (periodontitis), with 9 percent having severe periodontitis characterized by loss of the bony structure supporting the teeth and resulting in partial or total tooth loss (Eke et al., 2015). Among adults aged 65 years and older, 68 percent have some form of periodontitis with 11 percent classified as severe (Eke et al., 2015). As with dental caries, substantial oral health disparities exist. The prevalence of periodontitis is higher in men, Hispanics, adults with less than a high school education, adults below 100 percent of the Federal Poverty Level, and current smokers (Eke et al., 2015). The most common risk factor for periodontitis is smoking. Texas Behavioral Risk Factor Surveillance System (BRFSS) data from 2017 showed 35.7 percent of Texans have a history of tobacco use (DSHS). Smoked tobacco use prevention and cessation could be a potentially effective population-level intervention strategy.

Cancers of the Oral Cavity and Pharynx

Although substantially less common than dental caries and periodontitis, cancers of the oral cavity and pharynx have a significant impact on the health care system and should be included in public health surveillance. Cancers of the oral cavity and pharynx are more common in men than women, among those with a history of tobacco or heavy alcohol use, and individuals infected with human papillomavirus (HPV). From 2009-2013, the number of new cases of oral cavity and pharynx cancer was 11.1 per 100,000 men and women per year (SEER, n.d.). In 2016, there were 3,157 new cases and 660 reported deaths in Texas alone (Texas Cancer Registry (TCR), 2016). Currently, the primary public health

and personal prevention strategies for cancer of the oral cavity are tobacco cessation and no more than moderate alcohol consumption. The leading cause of oropharyngeal cancer is HPV infection (CDC, 2018).

Orofacial Clefts

For reporting purposes, orofacial clefts are generally classified as either (1) cleft palate without cleft lip or (2) cleft lip with and without cleft palate. Based on 2004-2006 data from 14 state birth defects tracking programs, the estimated incidence of cleft palate without cleft lip is 1 in 1,574 live U.S. births (2,651 cases annually), and the incidence of cleft lip with or without cleft palate is 1 in 940 live births (4,437 cases annually) (Parker et al., 2010). In Texas, the prevalence of cleft palates without cleft lip is 5.90 in 10,000 births and the prevalence of cleft lip with or without cleft palate is 10.75 in 10,000 births (DHHS, Birth Defects Registry, 2014). Orofacial clefts in the U.S. are most common among American Indian and Asian children. Orofacial clefts are often caused by a combination of genetic and environmental causes but in many children a cause cannot be determined. Risk factors include family history and maternal use of tobacco, alcohol and street drugs during pregnancy. Prevention strategies include folic acid supplementation plus tobacco, alcohol and drug use cessation during the prenatal period.

Disparities in Access to Dental Care

As previously mentioned, oral health disparities are profound in the United States. Children in lower-income families have higher dental caries rates than non-poor children; minority populations have worse oral health than the population in general; and rural residents have worse oral health than urban residents (DHHS, 2000). These disparities start in childhood and persist throughout the lifecycle.

Limited or infrequent access to dental care contributes to poor oral health. Unfortunately, in the U.S. about 46 percent of children aged 2-17 years did not visit a dentist in 2013, with black (53 percent) and Hispanic children (51 percent) more likely to have not visited a dentist compared with white children (41 percent) (Agency for Healthcare Research and Quality (AHRQ), 2016). For Texas adults 18 years and older, 40.6 percent report having no dental visit within the past year, with substantial disparities by education, income and race/ethnicity. For those with an annual income less than \$15,000, 58.8 percent had no dental visit compared with 28.3 percent of those with an income of \$50,000 or more (CDC, 2016).

Financial Implications

The cost of treating dental disease is significant. According to the Centers for Medicare & Medicaid Services (CMS), spending for dental services in 2014 was

\$113.5 billion, with out-of-pocket personal spending accounting for approximately 40 percent of all dental spending (2018).

Summary

In summary, the public health implications of poor oral health status are vast. Poor oral health impacts a person's ability to eat, speak, work, communicate and learn. Although most oral diseases and conditions are preventable, virtually all adults—and many children—have experienced some oral disease. Serious oral health disparities exist by race, age, geography, and income. The costs of oral disease treatment are significant, and most of those costs are paid by individuals or through private insurance. Much of the population cannot afford dental care or do not take advantage of public insurance benefits.

CDC guidelines for evaluating public health surveillance systems recommend that health-related events (in this case oral diseases and conditions) be considered for surveillance if they affect many people, require large expenditures of resources, are largely preventable, and are of public health importance (German et al., 2001). Based on these criteria, oral health outcomes, associated health behaviors, and other factors linked to oral health are included in TOHSS.

Texas Oral Health Surveillance System

The Texas Oral Health Surveillance System (TOHSS) is an initiative of the Texas Department of State Health Services (DSHS) Oral Health Improvement Program (OHIP). OHIP defines public health surveillance as the ongoing systematic collection, analysis, and interpretation of health data for purposes of improving health. An essential component of the system is the dissemination and use of surveillance data to improve evidenced-based decision making.

TOHSS monitors trends in oral disease, such as early childhood caries, tooth loss, and oral and pharyngeal cancer; the prevalence of preventive services, such as dental sealants, community water fluoridation, and fluoride varnish; and dental service utilization, through such programs as the Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) Program and the Children's Health Insurance Program (CHIP).

By collecting and analyzing trends, essential oral health information is available for stakeholders and policymakers to evaluate current systems and identify potential resources needed to improve the oral health of all Texans in the future.

Purpose

The purpose of the TOHSS plan is twofold:

1. to establish and maintain a system of continuous monitoring and timely communication of oral health findings and
2. to increase the amount of quality oral health data available for evidence-based decision-making.

Assessment is a key objective of Texas's public health efforts and includes collection, analysis, interpretation, and dissemination of data. TOHSS provides a mechanism to monitor oral disease trends over time.

A well-maintained surveillance system can be used to guide the allocation of resources for disease prevention and oral health promotion opportunities.

Assessment and evaluation of oral disease trends may also support the development of oral health policy.

Information contained in the surveillance system is provided as a resource to help oral health stakeholders in Texas find reputable sources of oral health data and information for decision making and planning. Interpretation and use of the data retrieved from this surveillance system are solely the responsibility of the user, and information and may not necessarily represent the official views of DSHS OHIP.

TOHSS Plan Objectives

The implementation and maintenance of a comprehensive oral health assessment and surveillance system is a critical requirement of any oral health planning effort.

Objectives for TOHSS are:

1. Increase the amount of quality oral health data available to oral health stakeholders for planning and decision-making by submitting questions for inclusion to three state surveys by 2024.
2. Increase the amount of quality oral health data available to oral health stakeholders for planning and decision-making by conducting Basic Screening Surveys (BSS) every five years.
3. Ensure useful and current data is available by reviewing and updating content quarterly.
4. Disseminate oral health data and findings in a usable, easy-to-understand format as evidenced by user satisfaction survey results of seventy percent satisfied. The survey will be conducted near the end of the plan period.
5. Identify data gaps by conducting a gap analysis report by 2024.
6. Monitor the oral disease burden of Texans by developing a burden document by 2024.
7. Compare Texas data to national and local indicators that assess overall oral health by completing a comparison report by 2024.

Data Dissemination and Evaluation of TOHSS

Dissemination of TOHSS Data and Information

DSHS OHIP will provide oral health information to the public through the program's website, program listservs, social media, reports, briefs, infographics, public presentations, and any other distribution methods OHIP finds appropriate. Available data will be shared with the public on the TOHSS webpage, which will contain a summary of the results from the various indicators incorporated in the TOHSS. The intent of the TOHSS webpage is to help disseminate timely oral health data so that responsible parties, policymakers, the professional community, and the public can readily understand the implications of the information. TOHSS will also provide information at the national level to NOHSS and the ASTDD State Synopses, as required and available. Evolution of TOHSS will allow further refinement of the indicators and continued improvement in the ability to communicate data, including trend analysis.

Confidentiality of TOHSS Data

Management of all health-related data, both primary and secondary, meets Health Insurance Portability and Accountability Act (HIPAA) standards for patient privacy, data confidentiality, and data integration. Access to protected health information (PHI) is limited to the surveillance staff for analysis purposes only. Program staff will view PHI only when necessary. No PHI is released to partners or to the public. Only aggregated results are reported.

Evaluation

TOHSS will be evaluated to ensure that issues and trends of oral health importance are being monitored efficiently and effectively. OHIP will engage stakeholders periodically in an evaluation of TOHSS, following the six tasks proposed in "Updated Guidelines for Evaluating Surveillance Systems" (Guidelines) published in Morbidity and Mortality Weekly Report, July 27, 2001/(50) RR13; 1-35.

OHIP adapted the six tasks proposed in "Updating Guidelines for Evaluating Surveillance Systems" to become program specific:

- Engage Texas stakeholders;
- Describe TOHSS and validate its purpose and objectives;
- Evaluate the surveillance plan;
- Gather credible evidence regarding the performance of TOHSS;
- Justify and state conclusions, make recommendations; and
- Ensure the use of evaluation findings, that lessons learned are shared, and that the TOHSS objectives are met.

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And finally, OHIP would like to thank all the other people, agencies, and organizations that help make oral health data available in Texas. It is important, and it is appreciated.

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Appendix A. Acronyms and Data Dictionary

List of Acronyms

ADA	American Dental Association
AHRQ	Agency for Healthcare Research and Quality
ASTDD	Association of State and Territorial Dental Directors
ATOHMIT	Advancing the Oral Health Movement in Texas
BRFSS	Behavioral Risk Factor Surveillance System
BSS	Basic Screening Survey
CARTS	CHIP Annual Reporting Template System
CDC	Centers for Disease Control and Prevention
CHI	Community Health Improvement
CHIP	Children’s Health Insurance Program
CHS	Center for Health Statistics
CMS	Centers for Medicare & Medicaid Services
CMS-416	Annual <i>Early and Periodic Screening, Diagnostic and Treatment (EPSDT) Report</i>
CSTE	Council of State and Territorial Epidemiologists
DSHS	Department of State Health Services (Texas)
EPA	Environmental Protection Agency
EPSDT	Early and Periodic Screening, Diagnosis, and Treatment
FFY	Federal Fiscal Year
FQHC	Federally Qualified Health Center
HHSC	Health and Human Services Commission (Texas)
HP2020	Healthy People 2020
HPSA	Health Professional Shortage Area
HRSA	Health Resources and Services Administration
HS	Head Start
MCD	Medicaid and CHIP Division
MEPS	<i>Medical Expenditure Panel Survey</i>
NBDPN	National Birth Defects Prevention Network
NCHS	National Center for Health Statistics
NCI	National Cancer Institute

NHANES	National Health and Nutrition Examination Survey
NOHSS	National Oral Health Surveillance System
NSCH	National Survey of Children's Health
NS-CSHCN	National Survey of Children with Special Health Care Needs
NSLP	National School Lunch Program
OHIP	Oral Health Improvement Program
PHI	Protected Health Information
PIR	Office of Head Start Program Information Report
PPS	Prevention and Preparedness Services
PRAMS	Pregnancy Risk Assessment Monitoring System
SBHA	School-Based Health Alliance
SBHC	School-Based Health Center
SDWIS	Safe Drinking Water Information System
SEER	National Cancer Institute's Surveillance, Epidemiology and End Results Program
SFY	State Fiscal Year
SOHSS	State-Based Oral Health Surveillance System
SPAN	School Physical Activity and Nutrition Survey
TBDR	Texas Birth Defects Registry
TCR	Texas Cancer Registry
THI	Texas Health Institute
TOHSS	Texas Oral Health Surveillance System
TPHA	Texas Public Health Association
TxOHC	Texas Oral Health Coalition
UDS	Uniform Data System
US	United States
WFRS	Water Fluoridation Reporting System
YRBS	Youth Risk Behavior Survey

Data Dictionary

Texas Oral Health Basic Screening Survey (BSS)

A survey developed by ASTDD in 1999 as a response to the need for community level oral health data. The BSS is a standard set of surveys designed to collect information about the observed oral health of participants; self-reported or observed information on age, gender, and race/ethnicity; and self-reported information on access to care for preschool, school-age, and adult populations. Measures used in the BSS are consistent with the NOHSS, which allows comparison with other states, as well as nationally. For additional general information about BSS, visit <https://www.astdd.org/basic-screening-survey-tool/>. OHIP conducts a BSS of third grade students every five years. OHIP previously conducted BSSs of Head Start students but changed to Kindergarten in the 2018-2019 school year. The selection process for these surveys results in a representative sample so statistical inferences can be made from the information collected. Contact OHIP for information regarding this data by email dental@dshs.texas.gov or visit <http://dshs.texas.gov/dental/>.

Behavior Risk Factor Surveillance System (BRFSS)

A state-based data collection program designed to measure behavioral risk factors in the non-institutionalized adult population, age 18 years or older. States select a random sample of adults for a telephone interview. This selection process results in a representative sample for each state so that statistical inferences can be made from the information collected. The BRFSS surveys the oral health of adults on a biennial basis. Questions include length of time since last dental visit, length of time since last dental cleaning, and the number of teeth removed due to decay. "Prevalence of emergency room visit for a dental problem" and "Prevalence of missed work days due to non-traumatic dental problems" are examples of state-added questions included in BRFSS. BRFSS data is self-reported by the interviewed adult. Tooth loss information on the BRFSS site is for adults 18+ years. Data limited to adults 18-64 years are available at CDC's Chronic Disease Indicators. More information may be available from the public use data sets than from the BRFSS web-based data query tools <http://www.cdc.gov/brfss/brfssprevalence/index.html>. Information on questions asked can be found at <http://www.cdc.gov/brfss/questionnaires/index.htm>. Additional data requests can be sent to brfss@dshs.state.tx.

Children's Health Insurance Program (CHIP)

A program designed specifically to assist children who lack insurance coverage and whose families earn too much to qualify for the Texas Medicaid Program. The Texas CHIP Dental Services Program became effective on April 1, 2006 and covers certain preventive and restorative dental services. CHIP data is collected from enrollment and submitted dental claims. For additional information, contact the Health and Human Services Medicaid and CHIP department at 1(800)-647-6558 or visit their website at <https://hhs.texas.gov/services/health/medicaid-chip>.

Early and Periodic Screening, Diagnosis, and Treatment (EPSDT)

The child-health component of Medicaid required in every state and designed to improve the health of low-income children. EPSDT finances appropriate and necessary health care services for eligible individuals, birth through 20 years of age. Data sources include the enrollment and claims systems and reports prepared by HHSC. The EPSDT program in Texas is called Texas Health Steps (THSteps). Form CMS-416 is used by CMS to collect basic information on State Medicaid and CHIP programs to assess the effectiveness of EPSDT. State-specific information from Form CMS-416 is available in their annual reports at <https://www.medicaid.gov/medicaid/benefits/epsdt/index.html>.

Medical Expenditure Panel Survey (MEPS)

Since 1996, MEPS has collected data on how and what medical care Americans receive, the cost and payment of these services, as well as what insurances are used and available. This data can be found at https://meps.ahrq.gov/mepsweb/data_stats/MEPSnetHC/startup.

National Birth Defects Prevention Network (NBDPN)

NBDPN maintains state birth defects profiles for states that contribute data. The NBDPN consists of volunteer-based members from various areas of study who are committed to understanding, identifying and preventing birth defects. HP2020 objective OH-15.1 is to increase the number of states having a state system for registering patients with craniofacial anomalies, and OH-15.2 is to increase the number of states with a system for referring patients with craniofacial anomalies. According to CDC in 2018, 43 states have birth defect tracking programs.

This information can be found at

http://www.nbdpn.org/state_profiles.php?navtitle=idxpubs?navtitle=idxpubs. State-specific information can be found within the Texas Birth Defects Registry at

www.dshs.texas.gov/birthdefects. Additional data requests can be sent to birthdefects@dshs.state.tx.us.

National Survey of Children's Health (NSCH)

NSCH collects multiple points of data on the lives of children including physical and mental health, access to quality health care, and as well as other social aspects. The NSCH was redesigned in 2016 and the survey will be offered annually thereafter. The questions on oral health problems were defined to include clarification for oral problems such as toothaches, bleeding gums and decayed teeth/cavities. The Data Resource Center for Child & Adolescent Health takes the results from the NSCH and makes them easily accessible. Data are available for the nation and for each state (2003, 2007, 2011/12, 2016). State and national data can be refined to assess differences by race/ethnicity, income, and a variety of other important characteristics. In 2016, the National Survey of Children with Special Health Care Needs (NS-CSHCN) was merged with NSCH. State and national data can be refined to assess differences by whether a child has special health care needs or not. More information is available at <http://www.childhealthdata.org/learn/NSCH>.

National Oral Health Surveillance System (NOHSS)

The NOHSS, created by the CDC Division of Oral Health and the Association of State and Territorial Dental Directors (ASTDD), tracks data submitted by each state and evaluates the burden of oral disease, use of the oral health care delivery system, and the status of community water fluoridation on both a national and state level. If a state has conducted a survey and submitted results to NOHSS, summary data is available at: <http://www.cdc.gov/oralhealthdata/index.html>.

Pregnancy Risk Assessment Monitoring System (PRAMS)

A CDC-sponsored initiative to reduce infant mortality and low birth weights. PRAMS is a state-specific, population-based surveillance system designed to identify and monitor selected maternal experiences before, during, and after pregnancy. This survey includes two questions about the need for oral health care during and after pregnancy. PRAMS data is self-reported by the women participating in the survey. Information about PRAMS is available at <https://www.cdc.gov/prams/prams-data/mch-indicators.html>. Additional information is also available through the DSHS website, <https://www.dshs.texas.gov/mch/PRAMS.aspx>. Specific data requests can be sent to dental@dshs.texas.gov.

School Physical Activity and Nutrition Survey (SPAN)

SPAN monitors the prevalence of overweight/obesity in school-aged children in Texas. This surveillance system allows researchers to identify and track trends in childhood obesity. SPAN also identifies factors in Texas students that may contribute to obesity, including dietary behaviors, nutrition knowledge and attitudes, and physical activity. Oral health questions were added to SPAN in its fourth edition in 2015-2016. Information can be found at <https://sph.uth.edu/research/centers/dell/project.htm?project=3037edaa-201e-492a-b42f-f0208ccf8b29>.

School-Based Health Center (SBHC)

All SBHCs who receive funding from the Title V Maternal and Child Health Block Grant to provide oral health services must track a specified number of students, as well as provide services using evidence-based practices and interventions and report clinical and educational process and outcome measures. Data provided to the DSHS School Health Program is used to report on the proportions of SBHCs with an oral health component, including provision of dental sealants, dental care, and topical fluoride treatments. The National Census of SBHC is available at www.sbh4all.org/school-health-care/national-census-of-school-based-health-centers/. Requests and inquiries can be sent to SchoolHealth@dshs.texas.gov.

Texas Birth Defects Registry (TBDR)

A statewide population-based birth defects registry and surveillance system that monitors all births in Texas through multiple sources of information. Children identified through TBDR are referred to appropriate medical and community services. With regards to oral health, the birth defects registry collects the number of babies born with cleft lip/cleft palate to calculate a rate of babies born with cleft lip/cleft palate per 10,000 live births. Data from TBDR is reported by the Environmental Epidemiology and Disease Registry Section within Texas DSHS. The State Birth Defects Registry can be found at www.dshs.texas.gov/birthdefects. Additional data requests can be sent to birthdefects@dshs.state.tx.us.

Texas Cancer Registry (TCR)

A statewide population-based registry and surveillance system that measures the Texas cancer burden; comprehensive cancer control efforts; health disparities; and progress in prevention, diagnosis, treatment, and survivorship. TCR collects oral health data on incidence and mortality rates associated with both oral and

pharyngeal cancers. These data can be tabulated by populations, allowing a look at health disparities in these cancers for Texas. TCR data is collected based on diagnosis through entities such as hospitals, physician's offices, and/or clinical labs, and is reported by the Environmental Epidemiology and Disease Registries Section within Texas DSHS. More information is available at CancerData@dshs.texas.gov.

The Office of Head Start Program Information Report (PIR)

The PIR provides comprehensive data on the services, staff, children, and families served by Head Start and Early Head Start programs including need for dental treatment. PIR data at the grantee and state level is publicly available through a password protected account. <https://eclkc.ohs.acf.hhs.gov/data-ongoing-monitoring/article/program-information-report-pir>.

Uniform Data System (UDS)

A core system of information appropriate for reviewing the operation and performance of healthcenters. UDS is a reporting requirement for Health Resources and Services Administration (HRSA) grantees, including community health centers, migrant health centers, health care for the homeless grantees, and public housing primary care grantees. Data provided by the UDS system is used to report on the proportion of patients who receive oral health services at FQHCs in Texas each year. Annual data is then available at the state and individual health center level. The HRSA Uniform Data System can be found at <http://bphc.hrsa.gov/datareporting/index.html>.

Water Fluoridation Reporting System (WFRS)

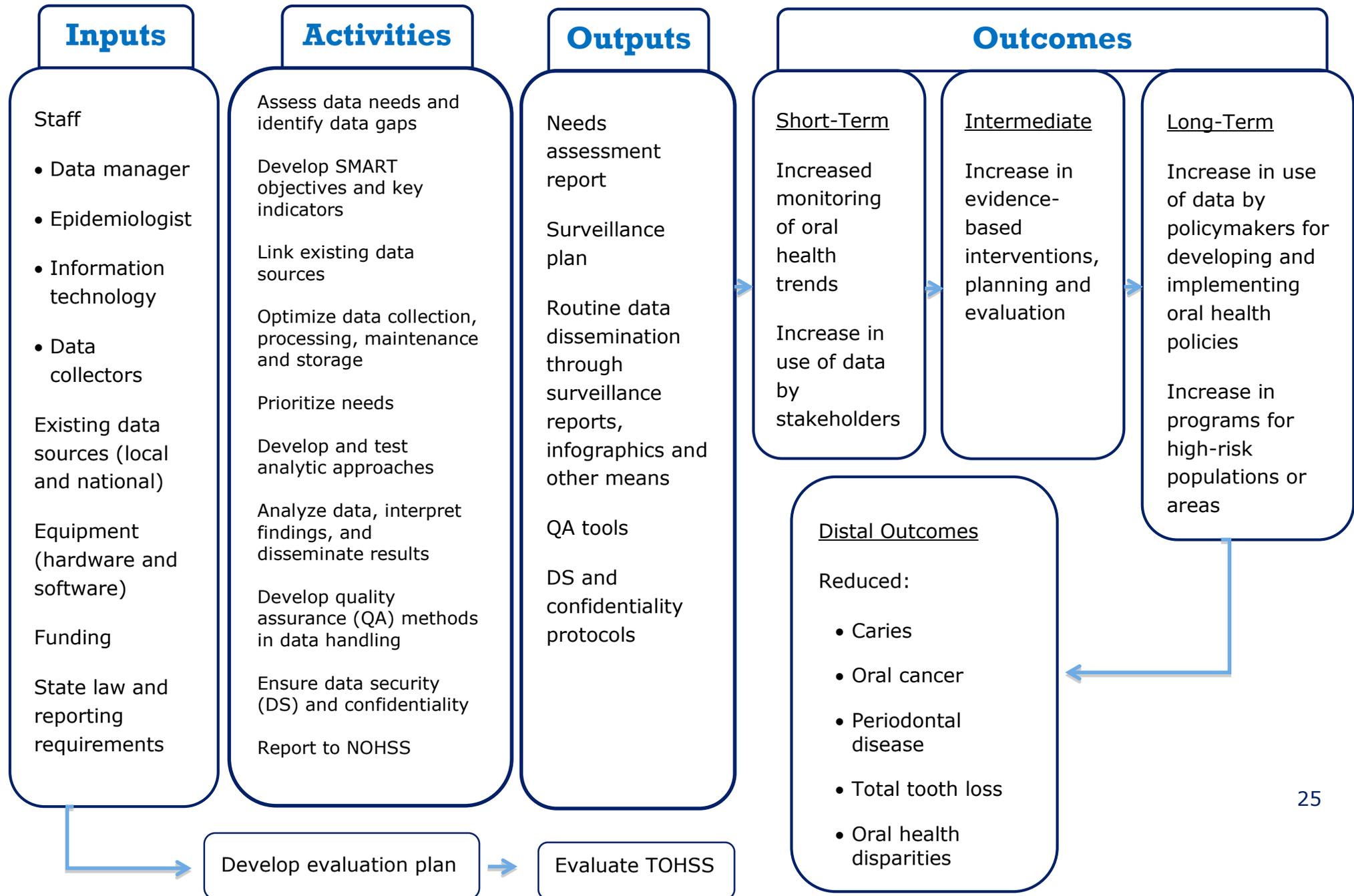
A tool for states to monitor the quality of their water fluoridation programs. WFRS contains information on water systems, including fluoridation status. WFRS can be found at <https://www.cdc.gov/fluoridation/data-tools/reporting-system.html>. Texas Fluoridation Program request and inquiries can be sent to fluoride@dshs.texas.gov.

Youth Risk Behavior Survey (YRBS)

The YRBS is a CDC-funded classroom-based paper survey conducted biennially in odd years. The YRBS monitors priority health-risk behaviors that contribute substantially to the leading causes of death, disability, and social problems among youth and adolescents in the US. YRBS is a primary source for comprehensive statewide data on preventive health practices and health-risk behaviors. YRBS data is self-reported. "Prevalence of sore mouth or teeth due to dental problems",

“Prevalence of missed school days due to dental problems”, and “Prevalence of emergency department visits due to non-traumatic dental problems” were state questions added to the 2015 Texas YRBS survey; however, due to insufficient sample size, the data was not provided to Texas. These state-added question were reintroduced to the 2017 survey. The “Prevalence of types of water teenagers drink” question was added to the 2019 state YRBS survey. The YRBS can be found at <https://nccd.cdc.gov/youthonline/App/Default.aspx>. For data requests, contact us at yrbss@dshs.texas.gov.

Appendix B. Texas Oral Health Surveillance Plan – LOGIC MODEL



Appendix C. HP 2020 Oral Health Indicators Currently Monitored by TOHSS

- C – 6 Reduce the oropharyngeal cancer death rate
- OH – 1.1 Reduce the proportion of children aged 3 to 5 years with dental caries experience in their primary teeth
- OH – 1.2 Reduce the proportion of children aged 6 to 9 years with dental caries experience in their primary or permanent teeth
- OH – 2.1 Reduce the proportion of children aged 3 to 5 years with untreated dental decay in their primary teeth
- OH – 2.2 Reduce the proportion of children aged 6 to 9 years with untreated dental decay in their primary or permanent teeth
- OH – 4.1 Reduce the proportion of adults aged 45 to 64 years who have ever had a permanent tooth extracted because of dental caries or periodontal disease
- OH – 6 Increase the proportion of oral and pharyngeal cancers detected at the earliest stage
- OH – 7 Increase the proportion of children, adolescents, and adults who used the oral health care system in the past year
- OH – 8 Increase the proportion of low-income children and adolescents who received any preventive dental service during the past year
- OH – 9.1 Increase the proportion of school-based health centers with an oral health component that includes dental sealants
- OH – 9.2 Increase the proportion of school-based health centers with an oral health component that includes dental care

- OH – 9.3 Increase the proportion of school-based health centers with an oral health component that includes topical fluoride
- OH – 11 Increase the proportion of patients who receive oral health services at Federally Qualified Health Centers (FQHCs) each year
- OH – 12.1 Increase the proportion of children aged 3 to 5 years who have received dental sealants on one or more of their primary molar teeth
- OH – 12.2 Increase the proportion of children aged 6 to 9 years who have received dental sealants on one or more of their permanent first molar teeth
- OH – 13 Increase the proportion of the U.S. population served by community water systems with optimally fluoridated water
- OH – 14.2 Increase the proportion of adults who received an oral and pharyngeal cancer screening from a dentist or dental hygienist in the past year
- OH – 15 Increase the number of States and the District of Columbia that have a system for recording and referring infants and children with cleft lips and cleft palates to craniofacial anomaly rehabilitative teams
- TU – 2.2 Reduce use of cigarettes by adolescents (past month)
- TU – 2.3 Reduce use of smokeless tobacco products by adolescents (past month)
- TU – 2.4 Reduce use of cigars by adolescents (past month)

HP 2020 Oral Health Indicators NOT Currently Monitored by TOHSS

- OH - 3 Untreated dental decay in adults
- OH - 5 Prevalence of periodontal disease
- OH – 14 Adults who receive preventive interventions in dental office

Appendix D. Oral Health Data Collection Frequencies

TOHSS utilizes data from multiple sources. Table 1 provides information about the data sources, the agency in which they are housed, and the data collection time frames.

Table 1: Oral Health Data Collection Sources and Time Frames

Data Source	Agency/Division	Time Frame
TSOHSC (BSS)	DSHS/CHI	Every 3-5 years
YRBS	DSHS/CHS	Every 2 years
SPAN	DSHS/CHI	Every 3-5 years
BRFSS	DSHS/CHS	Annual, oral health every 2 years
PRAMS	DSHS/CHI	Annual
TCR	DSHS/CHI	Annual
TBDR	DSHS/CHI	Annual
WFRS	DSHS/CHI	Annual
EPSDT	HHSC/MCD	Annual
CHIP	HHSC/MCD	Annual
SBHC	DSHS/CHI	Annual
UDS	US Department of Health and Human Services	Annual

*Definitions of the data sets are provided in the Acronyms and Data Dictionary section.

Appendix E. Oral Health Indicators and Data Sources

Oral health surveillance in Texas compares data against two US standards: NOHSS, a collaborative effort between the CDC Division of Oral Health and ASTDD; and HP2020, a compendium of indicators selected by the federal government to track the nation's progress towards year 2020 public health objectives.

The State Surveillance Data Reference Guide, below, contains the oral health indicators monitored by TOHSS. A breakdown of available data for each subcategory and source of data and the years the data is available has also been included in the Data Sources section. Although this list focuses on data available between 2013 and 2024, some categories may have additional data available. Please reference Appendix B, Table 1 for the frequency of each survey. To request more information, contact the OHIP at dental@dshs.texas.gov.

Oral Health Indicators

Infants & Children

- Prevalence or number of annual cases of cleft lip with or without cleft palate per live birth
- Related HP objective for increasing number of state registry and referral systems

Children with Special Health Care Needs

- Need for preventive dental care
- Need for other dental care
- Unmet need for preventive dental care
- Unmet need for other dental care

Adolescents

Adolescents in Grades 9-12

- Any dental visit
- Prevalence of tobacco product use
- Prevalence of cigarette, smokeless tobacco, or cigar use

Adolescents in Grades 9-12 (Texas-added YRBS questions)

- Prevalence of sore mouth or teeth due to dental problems
- Prevalence of missed school days due to dental problems
- Prevalence of emergency department visits due to non-traumatic dental problems
- Prevalence of types of water teenagers drink

Adolescents in 8th and 11th Grades

- Prevalence of last time child saw dentist for check-up
- Prevalence of sore mouth or teeth
- Prevalence of missed school days due to dental problems
- Prevalence of emergency room use for non-traumatic dental problems

Adolescents in 8th and 11th Grades

- Prevalence of sore mouth or teeth
- Prevalence of missed school days due to dental problems
- Prevalence of emergency room use for non-traumatic dental problems

Adults

Adults 18+ Years

- Any dental visit
- Prevalence of adults with diagnosed diabetes having a dental visit

Adults 18-64 years

- Prevalence of no tooth loss
- Prevalence of 6+ teeth lost

Adults 18-64 years (Texas-added BRFSS questions)

- Prevalence of emergency room for a dental problem
- Prevalence of missed work days due to non-traumatic dental problems

Adults 65+ years

- Any dental visit
- Sealants for 6-9-year-olds and for 10-14-year-olds

Adults 65+ years (Texas-added BRFSS question)

- Prevalence of missed work days due to non-traumatic dental problems

Adults

- Incidence of oral and pharyngeal cancer
- Oral and pharyngeal cancer deaths
- Stage of oral and pharyngeal cancer at the time of diagnosis
- Oral/pharyngeal cancer screening by dental provider in past year

Pregnant Women

- Prevalence of teeth cleaning before pregnancy
- Prevalence of teeth cleaning during pregnancy
- Prevalence of other care of teeth during pregnancy
- Prevalence of things that make it hard to go to the dentist during pregnancy

School-Based Dental Services

- Percent of school-based health centers with an oral health component that includes dental sealants
- Percent of school-based health centers with an oral health component that includes restorative services

- Percent of school-based health centers with an oral health component that includes topical fluoride

All Ages FQHC

- Prevalence of population receiving oral health services at FQHCs

Community Water Fluoridation

- Percent of population on public water supplies with optimally fluoridated water

Workforce

- Number of dentists
- Number of dental hygienists
- Number of dental therapists
- Dental Health Professional Shortage Areas
- Number of dental providers enrolled in Medicaid
- Number of active dental Medicaid providers
- Number of dentists that are significant Medicaid providers

Data Sources

Pre-School Age Children [Source: BSS]

The most recent data available for the following topics is from 2014.

- Decay Experience
- Untreated Decay
- Sealant Prevalence
- Urgent Need

Kindergarten Children [Source: BSS]

The most recent data available for the following topics is from 2019 and 2023.

- Decay Experience
- Untreated Decay

- Sealant Prevalence
- Urgent Need

Third Grade Children [Source: BSS]

The most recent data available for the following topics is from 2013, 2018 and 2023.

- Decay Experience
- Untreated Decay
- Sealant Prevalence
- Urgent Need

School Children in 2nd and 4th Grades [Source: SPAN]

The most recent data available for the following topics is from 2015, 2019 and 2023.

- Length of time since last dental
- Sore mouth or teeth due to dental problems
- Missed school days due to dental problems

Adolescents [Source: YRBS]

The most recent data available for the following topics is available from 2013, 2015, 2017, 2019, 2021, and 2023.

- Length of time since last dental visit
- Tobacco use

The most recent data available for the following topics is available from 2015, 2017, 2019, 2021, and 2023.

- Missed school days due to dental problems
- Emergency department visits due to non-traumatic dental from

The most recent data available for the following topics is available from 2019, 2021, and 2023.

- Type of water adolescents drink problems

Adolescents [Source: SPAN]

Currently, SPAN does not provide adolescent only data the following survey topics:

- Length of time since last dental visit
- Sore mouth or teeth due to dental problems
- Missed school days due to dental problems
- Emergency department visits due to non-traumatic dental problems

Adult [Source: BRFSS]

The most recent data available for the following topics is available from 2014, 2016, 2018, 2020, 2022, and 2024.

- Length of time since last dental visit for any reason
- Number of teeth removed due to tooth decay or gum disease

The most recent data available for the following topics is available from 2020, 2022, and 2024.

- Missed work days due to dental problems
- Emergency department visits due to non-traumatic dental from

Seniors [Source: BRFSS]

The most recent data available for the following topics is available from 2015, 2017, 2019, 2021, and 2023.

- Length of time since last dental visit for any reason
- Number of teeth removed due to tooth decay or gum disease

The most recent data available for the following topics is available from 2021 and 2023.

- Emergency department visits due to non-traumatic dental from

Pregnant Women [Source: PRAMS]

The most recent data available for the following topics is available from 2013-2024.

- Pre-pregnancy teeth cleaning
- Teeth cleaning during pregnancy

The most recent data available for the following topics is available from 2016-2024.

- Other care of teeth during pregnancy
- Barriers to going to the dentist during pregnancy

Fluoridation Status [Source: WFRS]

WFRS records annual data for the following topic(s):

- Percent of population on public water systems receiving fluoridated water.

Malignant Oral and Pharyngeal Cancer Diagnosed [Source: TCR]

The most recent data available for the following topics is available from 2013-2024.

- Age-adjusted mortality rate per 100,000 population caused by cancer of the oral cavity or pharynx
- Percent of oral and pharyngeal cancers detected at earliest stage
- Increase the proportion of oral and pharyngeal cancers detected at the earliest stage

Clefts and Craniofacial Anomalies [Source: TBDR]

The most recent data available for the following topics is available from 2013-2024.

- Number of babies born with cleft lip/cleft palate
- Rate of babies born with cleft lip/cleft palate per 10,000 live births

EPSDT (Medicaid) [Source: Texas Medicaid Dental Claims]

The most recent data available for the following topics is available from 2013-2024.

- Number of eligible children receiving any dental services
- Number of eligible children receiving preventive dental services
- Number of eligible children receiving dental treatment

CHIP [Source: Texas CHIP Dental Claims]

The most recent data available for the following topics is available from 2013-2024.

- Number of eligible children receiving any dental services
- Number of eligible children receiving preventive dental services
- Number of eligible children receiving dental treatment