**Utopia**

Insert state name

**Oral Health Surveillance Plan**

**2016-2020**

Years covered by plan. ASTDD recommends a 5 year period.

May 2016

Date approved by your state

**IMPORTANT**

**Please download and read the** [***Surveillance Plan Template Instructions***](http://www.astdd.org/docs/surveillance-plan-template-instructions-may-2016.pdf) **before using this template.**

**Table of Contents**

Once you have finalized your state surveillance plan you can adapt this table of contents or delete.

Introduction

The purpose of public health surveillance

The public health importance of oral health

Framework for a state oral health surveillance system

Operational definition for a state oral health surveillance system

Utopia’s Oral Health Surveillance System

Purpose

Objectives

Oral health indicators

Data sources and data collection timeline

Data dissemination and use

Advisory committee

Privacy and confidentiality

Evaluation

Acknowledgement

Appendices

Appendix 1: Logic model

Appendix 2: Data sources for the oral health indicators

References

**Introduction**

The purpose of this section is to give the reader background information on why oral health surveillance systems are important. The information is generic and can, for most states, be used as is.

**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 [IOM]. 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]. 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]. The overarching purpose of public health surveillance is to provide ***actionable*** ***health information to guide public health policy and programs*** [Smith].

**The Public Health Importance of Oral Health**

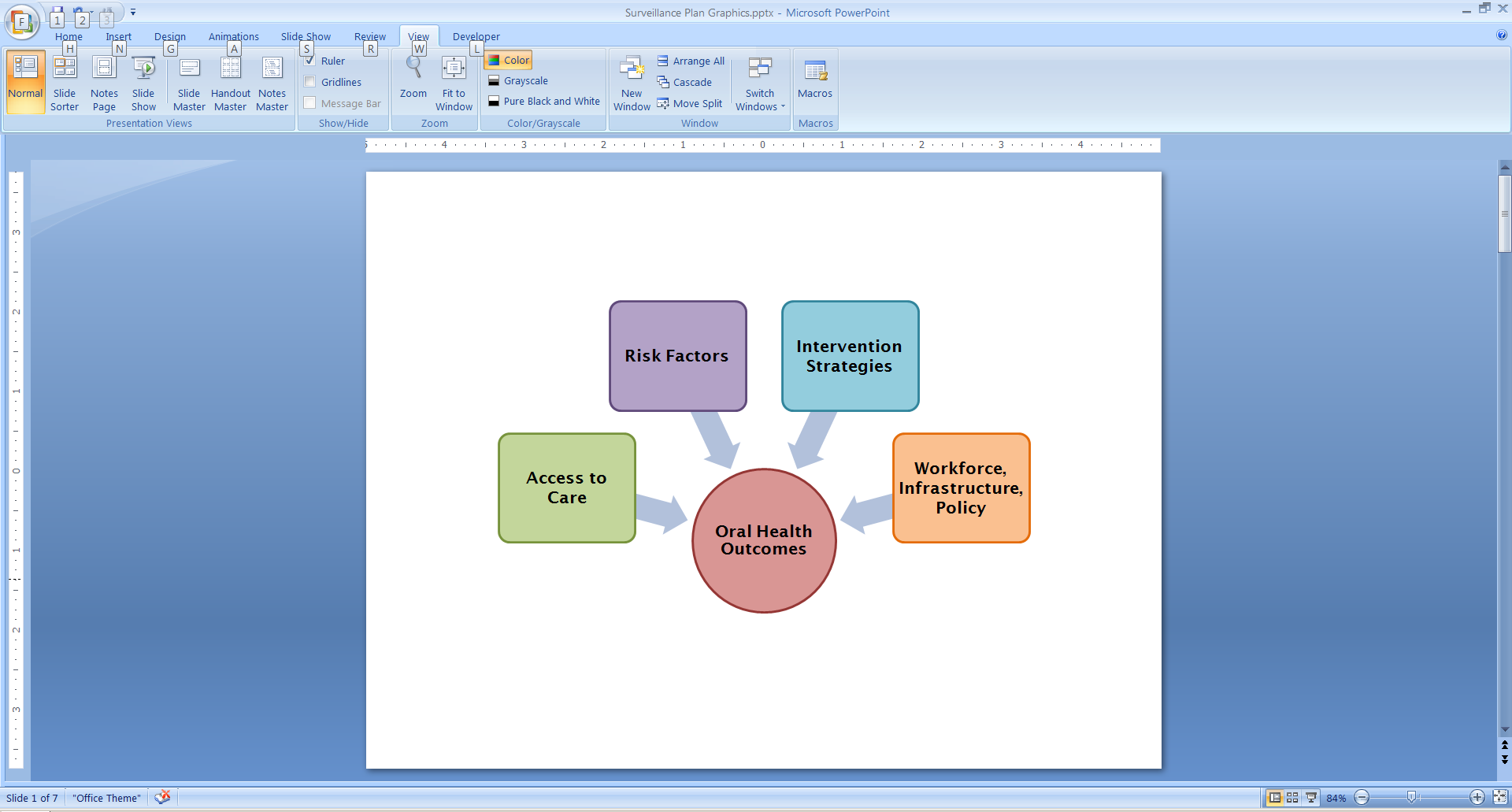
The 2000 report, *Oral Health in America: A Report of the Surgeon General*, states that oral health is more than healthy teeth [DHHS]. That means being free of chronic oral-facial pain, oral and pharyngeal (throat) cancers, oral soft tissue lesions, cleft lip or other birth defects, oral injuries due 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, oral-facial 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, and affects how we look and interact with others, sometimes creating low self-esteem or making 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). Following is a brief overview of the major oral health outcomes including common risk factors and intervention strategies.

**Dental Caries:** Dental caries has been described as the single most common chronic childhood disease [DHHS]. In 2011-2012, approximately 37% of U.S. children aged 2-8 years had experienced dental caries in primary teeth while 21% of children aged 6-11 and 58% of adolescents aged 12-19 had experienced dental caries in permanent teeth [Dye, NCHS brief 191]. The impact of dental caries accumulates over time; of those 20-64 years of age, 91% had caries experience (treated or untreated decay) [Dye, NCHS brief 197]. The prevalence of dental caries experience is generally higher in low-income and minority populations, representing a significant health disparity.

**Figure 1: Factors Impacting Oral Health Outcomes**



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. 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]. 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% of 6-8 year olds, 49% of 9-11 year olds and 43% of 12-19 year olds had dental sealants on at least one permanent molar [Dye, NCHS brief 191].

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% of adults 30 years and older have destructive periodontal disease (periodontitis) with 9% having severe periodontitis characterized by loss of the bony structure supporting the teeth and resulting in partial or total tooth loss [Eke]. Among adults aged 65 years and older, nearly two thirds (68%) have periodontitis with 11% classified as severe [Eke]. 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% of the Federal Poverty Level, and current smokers [Eke]. The most common risk factor for periodontitis is smoking; 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. The National Cancer Institute estimates that in 2016 there will be 48,330 new cases of and 9,570 deaths from cancers of the oral cavity and pharynx [SEER]. **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). Based on data 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]. Currently, the primary public health and personal prevention strategies are tobacco cessation and no more than moderate alcohol consumption. HPV vaccines might prevent oral cavity and pharynx cancers as the vaccines prevent an initial infection with HPV types that can cause these cancers, but studies have not yet been done to determine if HPV vaccines will prevent them.

**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]. Orofacial clefts in the U.S. are most common among American Indian and Asian children. 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]. 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% of children aged 2-17 years did not visit a dentist in 2013, with black (53%) and Hispanic children (51%) more likely to have not visited a dentist compared with white children (41%) [AHRQ]. For adults 18 years and older, 35% 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, 57% had no dental visit compared with 20% of those with an income of $50,000 or more [CDC, 2012 BRFSS].

**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% of all dental spending [CMS].

**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 the majority of those costs are paid by individuals or through private insurance. Much of the population can’t afford dental care or doesn’t 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]. ***Based on these criteria, oral health outcomes, associated health behaviors, and other factors linked to oral health are included in Utopia’s oral health surveillance system.***

**Framework for a State Oral Health Surveillance System**

According to the Council of State and Territorial Epidemiologists (CSTE), a state oral health surveillance system (OHSS) should provide information necessary for public health decision making by routinely collecting data on oral 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 state OHSS should consider collecting information on the oral health workforce, infrastructure, financing, and policies impacting oral health outcomes. A state OHSS can access data from existing sources, supplemented by additional information, such as data from a Basic Screening Survey, to fill data gaps [Phipps].

Surveillance systems are not just data collection systems. They must include mechanisms to 1) 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. According to the Association of State and Territorial Dental Directors’ *Best Practice Report on State Based Oral Health Surveillance Systems*, a state oral health surveillance system should (1) have an oral health surveillance plan, (2) define a clear purpose and objectives relating to the use of surveillance data for public health action, (3) include a core set of measures/indicators to serve as benchmarks for assessing progress in achieving good oral health, (4) analyze trends, (5) communicate surveillance data to decision makers and the public in a timely manner, and (6) strive to assure that surveillance data is used to improve the oral health of state residents [ASTDD].

**Operational Definition for a State Oral Health Surveillance System**

Healthy People 2020 (HP2020) Objective OH-16 – “increase the number of states and the District of Columbia that have an oral and craniofacial health surveillance system” – deserves special mention. In 2013, CSTE developed an operational definition for HP2020 OH-16. This operational definition is a core or foundational set of surveillance elements. A state is considered to have an oral health surveillance system if they have ***all of the following ten items*** [Phipps].

* A written oral health surveillance plan that was developed or updated within the previous five years.
* Oral health status data for a representative sample of third grade children, including prevalence of caries experience, untreated tooth decay, and dental sealants on permanent molars meeting criteria for inclusion in the National Oral Health Surveillance System (NOHSS). Data must have been collected within the previous five years.
* Permanent tooth loss data for adults obtained within the previous two years.
* Annual data on the incidence of and mortality from cancers of the oral cavity and pharynx.
* Annual data on the percent of Medicaid- and CHIP-enrolled children who had a dental visit within the past year.
* Data on the percent of children 1-17 years who had a dental visit within the past year, obtained every four years.
* Data on the percent of adults (≥18 years) and adults with diabetes who had a dental visit within the past year, obtained within the previous two years.
* Data on the fluoridation status of public water systems within the state, updated every two years.
* Annual data on state oral health programs and the environment in which they operate, including workforce and infrastructure indicators.
* Publicly available, actionable data to guide public health policy and programs disseminated in a timely manner. This may take the form of an oral disease burden document, publicly available reports, or a web-based interface providing information on the oral health of the state’s population developed or updated within the previous five years.

**Utopia’s Oral Health Surveillance System**

**Purpose**

The purpose of Utopia’s oral health surveillance system (OHSS) is to provide a consistent source of updated reliable and valid information for use in developing, implementing, and evaluating programs to improve the oral health of Utopia’s residents. Assessment is the key objective of Utopia’s public health efforts to address the nature and extent of oral diseases and their risk factors by collecting, analyzing, interpreting, and disseminating oral health data. These activities provide a mechanism to routinely monitor state-specific oral health data and the impact of interventions within specific priority populations over time. Continual assessment and evaluation support development of oral health programs and policies, hence a surveillance system is a critical requirement for the oral health program. The logic model for Utopia’s OHSS is located in Appendix 1.

Review these objectives to make sure they meet your state’s needs. Revise as needed.

**Objectives**

1. Estimate the extent and severity of oral disease and risk factors in Utopia.
2. Measure utilization of oral health services in Utopia.
3. Monitor utilization and effectiveness of community-based and school-based oral health prevention programs.
4. Identify populations at high risk of oral disease and the unmet needs of these populations.
5. Provide current, scientific and reliable data for the state.
6. Use oral health data to plan, implement, and evaluate the impact of Utopia’s oral health programs and policies.
7. Provide information for decision making and public health resource allocations.
8. Evaluate Utopia’s strengths and gaps in surveillance measurements and in surveillance of priority populations and identify opportunities to improve the OHSS.

**Oral Health Indicators**

The indicators that form the framework of Utopia’s OHSS include the full set of indicators outlined in the CSTE operational definition of an oral health surveillance system for HP2020 OH-16 [Phipps]. The OHSS also includes a subset of oral health indicators approved by CSTE for inclusion in NOHSS. The CSTE approved indicators are being used because CSTE is the organization responsible for defining and recommending which diseases and conditions should be reportable within states and which should be voluntarily reported to the Centers for Disease Control and Prevention.

For a public health surveillance system to be effective and responsive, it must adapt to new health challenges and data sources. Consequently, the indicators included in the OHSS may change during the 5-year time frame outlined by this plan. The indicators currently included in the OHSS are outlined in Table 1. Refer to Appendix 2 for a list of the indicators with their data sources.

**Table 1: Indicators Included in the Utopia Oral Health Surveillance System by Domain and Age Group**

Revise this table using the indicators selected for your state.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Domain | Preschool Children | School Children | Adults | Older Adults |
| **Oral Health Outcomes** | Head Start  Decay experience  Untreated tooth decay | 3rd Grade  Decay experience  Untreated tooth decay  Sealant prevalence | 18-64 Years  Any tooth loss | 65+ Years  6+ teeth lost  Complete tooth loss |
| All Ages  Incidence of and mortality from cancers of the oral cavity and pharynx | |
| 1-17 Years\*  Parent’s self report of child’s oral health, oral health problems | |
| **Access to Care** | Medicaid/CHIP 0-20 years  Dental visit | | 18+ Years  Dental visit | |
| 1-17 Years\*  Dental visit & preventive dental visit | | Adults 18+ Years with Diabetes  Dental visit | |
| **Intervention Strategies** |  | School-based or school-linked dental sealant programs |  | |
| Topical fluoride programs | |
| Community water fluoridation | | | |
| **Workforce and Infrastructure** | Number of dental professionals  Number of safety net dental clinics  Dental Health Professional Shortage Areas | | | |

Blue cells: The core set of indicators recommended by CSTE for inclusion in a state OHSS

Green cells: Additional indicators that can be added by the state oral health program

\* These indicators may be modified or deleted based on the redesign of the National Survey of Children’s Health

Revise this section based on the indicators your state has opted to collect.

**Data Sources and Data Collection Timeline**

The majority of the indicators in Utopia’s OHSS are available from existing ongoing data sources such as the Behavioral Risk Factor Surveillance System. The indicators that will require primary data collection are: (1) the prevalence of decay experience and untreated decay in Head Start and 3rd grade children, (2) the prevalence of dental sealants in 3rd grade children (3) the number of school-based dental sealant programs, (4) the number of community-based topical fluoride programs, and (5) the number of safety-net dental programs. Information on the oral health status of Head Start and 3rd grade children will be obtained using the ASTDD Basic Screening Survey (BSS) protocol. The remaining information will be obtained through Department of Health surveys of state, local and safety-net programs. Existing data sources that will be used for the other indicators include the following:

* Behavioral Risk Factor Surveillance System (BRFSS) – tooth loss and dental visit among adults, older adults and adults with diabetes
* CMS-416: Annual Early Periodic Screening, Diagnosis and Treatment (EPSDT) Program Participation Report – dental visit among children eligible for Medicaid/CHIP
* Utopia Board of Dentistry (BOD) – number of dental professionals
* Utopia Primary Care Office (Primary Care) – health professional shortage areas
* National Cancer Institute’s Surveillance, Epidemiology and End Results Program (NCI/SEER) – incidence of cancers of the oral cavity and pharynx
* CDC’s National Program of Cancer Registries (CDC/NPCR) – incidence of and mortality from cancers of the oral cavity and pharynx
* National Survey of Children’s Health (NSCH) – oral health, oral health problems, dental visit, and preventive dental visit among children 1-17 years (may be modified or deleted based on the redesign of NSCH)
* National Vital Statistics System (NVSS) – mortality from cancers of the oral cavity and pharynx
* Uniform Data System (UDS) – number of federally qualified health centers with dental clinics
* Water Fluoridation Reporting System (WFRS) – population served by fluoridated water systems

**Table 2: Timeline for Collecting Oral Health Indicator Data**

Revise based on the indicators you selected

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Data Source | 2016 | 2017 | 2018 | 2019 | 2020 |
| BSS – 3rd Grade | X  2016-17 |  |  |  | Begin planning for 2021-22 BSS |
| BSS – Head Start | X  2016-2017 |  |  |  | Begin planning for 2021-22 BSS |
| BRFSS | X |  | X |  | X |
| CMS-416 | X | X | X | X | X |
| BOD | X | X | X | X | X |
| Primary Care | X | X | X | X | X |
| NCI/SEER | X | X | X | X | X |
| CDC/NPCR | X | X | X | X | X |
| NSCH\* |  | X |  |  |  |
| NVSS | X | X | X | X | X |
| UDS | X | X | X | X | X |
| WFRS | X |  | X |  | X |

\* May be modified depending on the redesign of NSCH

Revise dates and types of presentations/reports based on the needs/resources of your state

**Data Dissemination and Use**

Surveillance results will be disseminated to interested programs and policy makers at the local, state and national level through presentations, published reports and briefs. Presentations, reports and briefs will be used to increase awareness about oral diseases and their risk factors, monitor trends and disparities, develop new interventions, and expand existing programs. Reports/briefs planned for distribution in the next 5 years include:

* 2016: The Burden of Oral Disease in Utopia – a full report highlighting the current oral health of Utopia’s residents
* 2017: Utopia Smile Survey – a report on the oral health of Utopia’s Head Start and 3rd grade children
* 2018: Utopia data briefs on the oral health of special population groups such as pregnant women and adults with diabetes

Reports will contain current oral health data and trend data as available. Reports will be distributed electronically to our partners within the health department and across the state and shared with other state oral health programs as well as CDC and ASTDD. Reports will be available electronically on the state website and, as funds will allow, a limited number will be printed for distribution at meetings.

Venues for presentation of surveillance results include but are not limited to the Utopia Oral Health Coalition, Utopia Dental Association annual meeting, Utopia Dental Hygienists’ Association annual meeting, the ASTDD/AAPHD co-sponsored National Oral Health Conference, the CSTE annual meeting, MCH annual meetings, and the Utopia Primary Care Association annual meeting.

**Advisory Committee**

Having an advisory committee is optional. If you choose not to have an advisory committee, delete this section.

To ensure that Utopia’s OHSS serves its purpose and addresses the needs of both internal and external stakeholders, a broad-based OHSS Advisory Committee has been formed. The Committee has been instrumental in the development of the surveillance plan and will continue to meet semi-annually (January and July) to review progress and assist in ongoing evaluation.

The OHSS Advisory Committee includes representatives from the followings programs, agencies and organizations:

If you opt to have an Advisory Committee, list the members here

* + - * Oral Health Program
      * Chronic Disease Program
      * Maternal and Child Health Program
      * Tobacco Program
      * Environmental Health Agency
      * Behavioral Risk Factor Surveillance System Program
      * Professional Regulation Department
* Department of Education
* Medicaid Agency
* Dental Hygiene Association
* Dental Association

This section is generic and probably does not need to be changed except for minimum counts for reporting (highlighted)

**Privacy and Confidentiality**

The Utopia OHSS follows Health Insurance Portability and Accountability Act (HIPAA) standards for patient privacy and protected health information. The system limits identifiers collected to only essential data elements, and the data are stored on a secure, private, electronic server at the Utopia Department of Health. Unique identifiers can only be seen by health department staff that have been trained on HIPAA, data security, and confidentiality. Unique identifiers will never be released to external partners and aggregate data will never be reported for counts less than five.

This section is generic and probably does not need to be changed except for the frequency of evaluation

**Evaluation**

The purpose of evaluating Utopia’s OHSS is to ensure that the oral health indicators are being monitored effectively and efficiently and to increase the utility and productivity of the system. An annual evaluation will be performed to determine the system’s usefulness in monitoring oral health trends over time, determining the effectiveness of interventions, and planning future programmatic and policy initiatives. The Utopia Department of Health will evaluate the OHSS based on CDC’s framework for program evaluation including how well the following six steps outlined in *Updated Guidelines for Evaluating Surveillance Systems* were implemented [German].

• Engage Utopia’s stakeholders;

• Describe the OHSS;

• Focus the evaluation design;

• Gather credible evidence regarding the performance of the OHSS;

• Justify and state conclusions, make recommendations; and

• Ensure use of evaluation findings and share lessons learned.

The evaluation of the OHSS will focus on providing recommendations for improving the quality, efficiency, and usefulness of the system. OHSS will also be evaluated to determine the system’s sustainability, the timeliness of analysis of surveillance data, dissemination and use of the reports by stakeholders, and the surveillance system’s impact on policy and legislative actions.

**Acknowledgements**

Although not required, ASTDD would like states to consider including the following acknowledgement.

Utopia’s oral health surveillance plan is based on the surveillance plan template developed by ASTDD with funding from the Centers for Disease Control and Prevention Cooperative Agreement 5NU58DP004919-03.

**Appendix 1: Logic Model for Utopia’s Oral Health Surveillance System**

Revise as needed changed

**Outputs**

**Activities**

**Inputs**

**Outcomes**

Intermediate

Increase in evidence based interventions, planning and evaluation

Long-Term

Increase in use of data by policymakers for developing and implementing oral health policies

Increase in programs for high-risk populations or areas

Short-Term

Increased monitoring of oral health trends

Increase in use of data by stakeholders

OHSAG

Needs assessment report

Surveillance plan

Routine surveillance reports and periodically update reports

QA tools

DS and confiden- tiality protocols

Surveillance reports

Staff

* Data manager
* Epidemiologist
* Information technology
* Data collectors

Existing data sources (local and national)

Equipment (hardware and software)

Funding

State law and reporting requirements

Form Oral Health Surveillance Advisory Group (OHSAG)

Assess data and information needs and identify data gaps

Develop a surveillance plan with SMART objectives and key oral health indicators

Link existing data sources

Optimize routine data collection, processing, maintenance and storage

Prioritize needs

Develop and test analytic approaches

Analyze data and interpret findings

Develop quality assurance (QA) methods in data handling

Ensure data security (DS) and confidentiality

Write surveillance reports and disseminate results

Report to NOHSS

Develop sustainability strategies

**Appendix 2: Data Sources for the Indicators Included in Utopia’s Oral Health Surveillance System**

Evaluate OHSS

Develop evaluation plan

Distal Outcomes

Reduced:

* Caries
* Oral cancer
* Periodontal disease
* Total tooth loss
* Oral health disparities

Revise as needed changed

|  |  |  |  |
| --- | --- | --- | --- |
| **Domain** | **Target Population** | **Indicator** | **Data Source** |
| **Oral Health Outcomes** | Head Start | Caries experience | Utopia BSS |
| Untreated tooth decay | Utopia BSS |
| 3rd Grade | Caries experience | Utopia BSS |
| Untreated tooth decay | Utopia BSS |
| Sealant prevalence | Utopia BSS |
| 1-17 Years | Parent’s self-report of child’s oral health\* | NSCH |
| Oral health problem in last year\* | NSCH |
| 18-64 Years | Any tooth loss | BRFSS |
| 65+ Years | 6+ teeth lost | BRFSS |
| Complete tooth loss | BRFSS |
| All Ages | Incidence of and mortality from cancers of the oral cavity and pharynx | NCI/SEER, NVSS, CDC/NPCR |
| **Access to Care** | Medicaid/CHIP | Dental visit | CMS-416 |
| 1-17 Years | Dental visit\* | NSCH |
| Preventive dental visit\* | NSCH |
| 18+ Years | Dental visit | BRFSS |
| Adults with Diabetes | Dental visit | BRFSS |
| **Intervention Strategies** | All Ages | Community water fluoridation | WFRS |
| School Children | School dental sealant programs | Utopia DOH |
| Children | Topical fluoride programs | Utopia DOH |
| **Workforce &**  **Infrastructure** | Dental Professionals | Number of dental professionals | Utopia BOD |
| Low-income Communities | Number of safety net dental clinic | Utopia DOH |
| Dental Health Professional Shortage Areas | Utopia Primary Care |

\* May be modified depending on the redesign of NSCH

**References**

Agency for Healthcare Research and Quality. Dental Care Visits by Age and Race/Ethnicity: United States, 2013. Medical Expenditure Panel Survey Household Component Data. Generated interactively April 24, 2016.

* Ahovuo-Saloranta A, Forss H, Walsh T, Hiiri A, Nordblad A, Mäkelä M, Worthington HV. Sealants for preventing dental decay in the permanent teeth. Cochrane Database Syst Rev 2013 28;3:CD001830.

Association of State and Territorial Dental Directors. Best Practice Approach: State-based Oral Health Surveillance System [Online]. Available at: [www.astdd.org](http://www.astdd.org) .

Centers for Disease Control and Prevention, Oral Health Data. 2012 BRFSS Prevalence & Trends Data. Available at: [www.cdc.gov/oralhealthdata/](http://www.cdc.gov/oralhealthdata/).

* Centers for Disease Control and Prevention. Ten great public health achievements--United States, 1900-1999. MMWR 1999;48:241-3.
* Centers for Medicare & Medicaid Services. National Health Expenditures 2014 Highlights. Available at: [www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/nationalhealthexpenddata/downloads/highlights.pdf](http://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/nationalhealthexpenddata/downloads/highlights.pdf).
* Department of Health and Human Services. Oral Health in America: A Report of the Surgeon General. Rockville, MD: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.
* Dye BA, Thornton-Evans G, Li X, Iafolla TJ. Dental caries and sealant prevalence in children and adolescents in the United States, 2011–2012. NCHS data brief, no 191. Hyattsville, MD: National Center for Health Statistics. 2015.
* Dye BA, Thornton-Evans G, Li X, Iafolla TJ. Dental caries and tooth loss in adults in the United States, 2011–2012. NCHS data brief, no 197. Hyattsville, MD: National Center for Health Statistics. 2015.
* Eke PI, Dye BA, Wei L, Slade GD, Thornton-Evans GO, Borgnakke WS, Taylor GW, Page RC, Beck JD, Genco RJ. Update on Prevalence of Periodontitis in Adults in the United States: NHANES 2009 to 2012. J Periodontol 2015;86:611-22.
* German RR, Lee LM, Horan JM, Milstein RL, Pertowski CA, Waller MN; Guidelines Working Group Centers for Disease Control and Prevention. [Updated guidelines for evaluating public health surveillance systems: recommendations from the Guidelines Working Group.](http://www.ncbi.nlm.nih.gov/pubmed/18634202) MMWR Recomm Rep 2001;50(RR-13):1-35.

Hall HI, Correa A, Yoon PW, Braden CR. Lexicon, definitions and conceptual framework for public health surveillance. MMWR Surveill Summ 2012;61 Suppl:10-4.

* Institute of Medicine. The Future of Public Health. Washington, DC: National Academy Press, 1988.
* Parker SE, Mai CT, Canfield MA, Rickard R, Wang Y, Meyer RE, et al. Updated national birth prevalence estimates for selected birth defects in the United States, 2004-2006. Birth Defects Res A Clin Mol Teratol 2010;88:1008-16.
* Phipps K, Kuthy R, Marianos D, Isman B. State-Based Oral Health Surveillance Systems: Conceptual Framework and Operational Definition. Council of State and Territorial Epidemiologists, 2013. Available at: c.ymcdn.com/sites/www.cste.org/resource/resmgr/Chronic/StateBasedOralHealthSurveill.pdf.
* SEER Cancer Statistics Factsheets: Oral Cavity and Pharynx Cancer. National Cancer Institute. Bethesda, MD, Available at: [seer.cancer.gov/statfacts/html/oralcav.html](http://seer.cancer.gov/statfacts/html/oralcav.html).
* Smith PF, Hadler JL, Stanbury M, Rolfs RT, Hopkins RS; CSTE Surveillance Strategy Group. “Blueprint version 2.0": updating public health surveillance for the 21st century. J Public Health Manag Pract 2013;19:231-9.

Teutsch SM, Churchill RE, Eds. Principles and Practice of Public Health Surveillance. New York: Oxford University Press, 2000.