

# Wisconsin Oral Health Surveillance Plan: 2025–2029



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## Introduction

Oral health is an essential component for good general health. Oral diseases have been linked to other chronic diseases like diabetes and heart disease and cause significant morbidity throughout the lifespan. Additionally, oral diseases place a considerable economic burden on society, as it has been estimated that untreated oral disease contributes to nearly \$46 billion in lost productivity in the United States each year.<sup>[1]</sup> The Wisconsin Oral Health Program (OHP) in the Division of Public Health (DPH) at the Wisconsin Department of Health Services (DHS) strives to improve the oral health status of all Wisconsin residents through oral health prevention programs. In Wisconsin, the prevalence of oral disease and access to dental care remain persistent issues.

Public health surveillance is the continuous systematic collection, analysis, and interpretation of health-related data needed for the planning, implementation, and evaluation of public health practice. Surveillance is a core tenet of public health, as it seeks to provide actionable data for the purposes of informing decision makers and public health programs. The



Wisconsin oral health surveillance system (OHSS) utilizes a variety of primary and secondary data sources to monitor oral health throughout Wisconsin. The surveillance system is an essential component of the OHP, because it provides the most current and accurate data on an array of topics crucial to monitoring oral health, including oral disease burden, risk and behavioral factors contributing to oral disease, access to dental care, and the oral health workforce.

The surveillance system monitors trends in disease prevalence, such as untreated decay among children, tooth loss among adults, and oral and pharyngeal cancer rates. Additionally, the surveillance system tracks access to preventive services like fluoride varnish, dental sealants, and community water fluoridation. Risk and behavioral factors (for example, smoking) are also monitored as part of the surveillance system. Another key component of the system is evaluating access to oral health services, such as the utilization of dental services by the Medicaid/BadgerCare+ (MA/BC+) population. Further, the surveillance system seeks to identify health disparities, which allow the Wisconsin OHP to appropriately allocate services to reduce the disparate burden of disease.

The surveillance system not only provides key data to the Wisconsin OHP but also to all its partners and the public. Data from the surveillance system are used to inform the development and implementation of programs, allocate resources, support grant applications, and inform policy decisions.

This surveillance plan contains an overview of the purpose and objectives of Wisconsin's OHSS, along with detailed tables of currently available surveillance indicators and data sources. Information on data collection timelines, data dissemination, and data gaps are addressed as well. Lastly, the plan includes current interest holders, the OHP's approach to data privacy, and the surveillance system's evaluation plans. Appendix A and Appendix B include a surveillance logic model, and a list of acronyms and abbreviations used throughout this document, respectively.

## Wisconsin's oral health surveillance system

### Purpose

The purpose of Wisconsin's OHSS is to provide a consistent source of updated reliable and valid information for use in developing, implementing, and evaluating programs dedicated to improving the oral health of Wisconsin's residents. Assessment is the key objective of Wisconsin's public health efforts to address oral disease and its 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 populations of focus over time. Continual assessment and evaluation support the development of oral health programs and policies; therefore, a surveillance system is a critical component of the OHP.

### Objectives

1. Estimate the extent and severity of oral disease and its risk factors in Wisconsin.
2. Measure utilization of oral health services in Wisconsin.



3. Monitor utilization and effectiveness of community-based and school-based oral health prevention programs.
4. Identify populations at a greater risk of experiencing oral disease and unmet dental needs.
5. Understand the non-clinical contributors that influence poor oral health outcomes.
6. Provide current, scientific, and reliable data for the state.
7. Use oral health data to plan, implement, and evaluate the impact of Wisconsin's oral health programs and policies.
8. Provide information for decision-making and public health resource allocations.
9. Evaluate the strengths and gaps of Wisconsin OHSS to identify opportunities to improve the system.



### **Oral health indicators**

The indicators that form the framework of Wisconsin's OHSS include all of the indicators outlined in the Council of State and Territorial Epidemiologist's (CSTE) operational definition of an OHSS, which is the Healthy People 2030 objective, HP2030 OH-D01.<sup>[2, 3]</sup> The surveillance system also contains indicators approved by CSTE for inclusion in the National Oral Health Surveillance System.<sup>[4]</sup>

Surveillance indicators can be categorized in five core areas: oral health outcomes, risk and behavioral factors, workforce, community interventions, and access to care. All indicators included in this plan were reviewed for available current state-level data sources. If current state-level estimates could not be ascertained through available data sources, the indicators were not included. These indicators will be further discussed in the data gaps section.

A total of 81 indicators captured through primary and secondary data sources are listed in Table 1. To remain flexible and effective, the surveillance system and plan may change over time to best meet the needs of the OHP and address emerging public health interests.

**Table 1: Wisconsin OHSS surveillance indicators**

| Indicator  | Populations        |        |        |        |                |            | Data source   |
|--|--------------------|--------|--------|--------|----------------|------------|---|
|  | Children and youth | Adults | CYSHCN | MA/BC+ | Pregnant women | Adults 65+ |   |
| <b>Access to care: any utilization</b>   |                    |        |        |        |                |            |   |
| Proportion of MA/BC+ members with a dental service in the past year                                |                    |        |        | X      |                |            | MA/BC+ Claims                                       |
| Proportion of adults with a dental visit in the past year  |                    | X      |        |        |                | X          | Behavioral Risk Factor Surveillance System (BRFSS)  |
| Proportion of adults aged 18 or older diagnosed with diabetes that had a dental visit              |                    | X      |        |        |                |            | BRFSS   |
| Proportion of adults aged 18 or older diagnosed with diabetes that had a medical and dental visit. |                    | X      |        |        |                |            | BRFSS   |
| Proportion of people aged 1 or older with a dental visit in the past year                          | X                  | X      |        |        |                |            | Wisconsin Family Health Survey (FHS)                |
| Proportion of women who had their teeth cleaned by a dentist or dental hygienist before pregnancy  |                    |        |        |        | X              |            | Pregnancy Risk Assessment Monitoring System (PRAMS) |
| Proportion of women who had their teeth cleaned by a dentist or dental hygienist during pregnancy  |                    |        |        |        | X              |            | PRAMS   |
| Proportion of youth who saw a dentist in the past year   | X                  |        |        |        |                |            | Youth Risk Behavior Survey (YRBS)                   |
| <b>Access to care: emergency department visits</b>   |                    |        |        |        |                |            |   |
| Rate of emergency department visits for non-traumatic dental conditions                            | X                  | X      |        |        |                |            | Wisconsin Hospital Emergency Department (ED) Data   |

| Indicator   | Populations        |        |        |        |                |            | Data source                                 |
|---|--------------------|--------|--------|--------|----------------|------------|---|
|   | Children and youth | Adults | CYSHCN | MA/BC+ | Pregnant women | Adults 65+ |   |
| Number of emergency department visits for non-traumatic dental conditions per year  | X                  | X      |        |        |                |            | ED Data                                     |
| <b>Access to care: preventive dental visits</b>   |                    |        |        |        |                |            |   |
| Proportion of children with a preventive dental visit in past year  | X                  |        | X      |        |                |            | National Survey of Children's Health (NSCH) |
| Proportion of Children and Youth with Special Health Care Needs (CYSHCN) needing preventive dental care in past year        |                    |        | X      |        |                |            | NSCH  |
| Proportion of women told by dental or other health care worker how to care for teeth and gums during most recent pregnancy  |                    |        |        |        | X              |            | PRAMS                                       |
| Number of children enrolled in the MA/BC+ program receiving at least one fluoride varnish application by a dental provider  |                    |        |        | X      |                |            | MA/BC+ Claims                               |
| Number of children enrolled in the MA/BC+ program receiving at least one fluoride varnish application by a medical provider |                    |        |        | X      |                |            | MA/BC+ Claims                               |
| <b>Community interventions: community water fluoridation</b>  |                    |        |        |        |                |            |   |
| Proportion of population on community water systems with access to fluoridated water  |                    |        |        |        |                |            | Water Fluoridation Reporting System (WFRS)  |
| Proportion of population on community water systems with access to optimally fluoridated water                              |                    |        |        |        |                |            | WFRS  |

| Indicator   | Populations        |        |        |        |                |            | Data source                              |
|---|--------------------|--------|--------|--------|----------------|------------|--|
|   | Children and youth | Adults | CYSHCN | MA/BC+ | Pregnant women | Adults 65+ |  |
| Proportion of community water systems that fluoridate                                 |                    |        |        |        |                |            | WFRS                                     |
| Proportion of community water systems that optimally fluoridate                       |                    |        |        |        |                |            | WFRS                                     |
| <b>Oral health outcomes: caries experience</b>  |                    |        |        |        |                |            |  |
| Proportion of Head Start children with caries experience                              | X                  |        |        |        |                |            | Healthy Smiles Survey (HSS) – Head Start |
| Proportion of kindergarten children with caries experience                            | X                  |        |        |        |                |            | HSS – Kindergarten and Third Grade       |
| Proportion of third grade children with caries experience                             | X                  |        |        |        |                |            | HSS – Kindergarten and Third Grade       |
| Proportion of ninth grade children with caries experience in their permanent teeth    | X                  |        |        |        |                |            | HSS – Ninth Grade                        |
| Proportion of children with a toothache in the past 6 months                          | X                  |        | X      |        |                |            | NSCH                                     |
| Proportion of children with decayed teeth or cavities in the past 6 months            | X                  |        | X      |        |                |            | NSCH                                     |
| <b>Oral health outcomes: dental sealants</b>  |                    |        |        |        |                |            |  |
| Proportion of kindergarten children with dental sealants                              | X                  |        |        |        |                |            | HSS – Kindergarten and Third Grade       |
| Proportion of third grade children with dental sealants                               | X                  |        |        |        |                |            | HSS – Kindergarten and Third Grade       |
| Proportion of ninth grade children with any permanent molar dental sealants           | X                  |        |        |        |                |            | HSS – Ninth Grade                        |
| Proportion of ninth grade children with at least five permanent molar dental sealants | X                  |        |        |        |                |            | HSS – Ninth Grade                        |

| Indicator  | Populations        |        |        |        |                |            | Data source   |
|--|--------------------|--------|--------|--------|----------------|------------|---|
|  | Children and youth | Adults | CYSHCN | MA/BC+ | Pregnant women | Adults 65+ |   |
| Number of children receiving dental sealants through the Wisconsin Seal-A-Smile Program  | X                  |        | X      |        |                |            | DentaSeal   |
| Percentage of children aged 6–9 years old enrolled in the MA/BC+ program that received a sealant on a permanent molar tooth                  |                    |        |        | X      |                |            | Center for Medicare and Medicaid Services 416 (CMS-416) |
| Percentage of children aged 10–14 years enrolled in the MA/BC+ program that received a sealant on a permanent molar tooth                    |                    |        |        | X      |                |            | CMS-416   |
| Percentage of children enrolled in the MA/BC+ program that had at least one permanent first molar sealed by their 10 <sup>th</sup> birthday  |                    |        |        | X      |                |            | MA/BC+ Claims   |
| Percentage of children enrolled in the MA/BC+ program that had all four permanent first molars sealed by their 10 <sup>th</sup> birthday     |                    |        |        | X      |                |            | MA/BC+ Claims   |
| Percentage of children enrolled in the MA/BC+ program that had at least one permanent second molar sealed by their 15 <sup>th</sup> birthday |                    |        |        | X      |                |            | MA/BC+ Claims   |
| Percentage of children enrolled in the MA/BC+ program that had all four permanent second molars sealed by their 15 <sup>th</sup> birthday    |                    |        |        | X      |                |            | MA/BC+ Claims   |
| <b>Oral health outcomes: needed dental care</b>  |                    |        |        |        |                |            |   |
| Proportion of Head Start children with early or urgent treatment needs   | X                  |        |        |        |                |            | HSS – Head Start  |

| Indicator   | Populations        |        |        |        |                |            | Data source                        |
|---|--------------------|--------|--------|--------|----------------|------------|------------------------------------|
|   | Children and youth | Adults | CYSHCN | MA/BC+ | Pregnant women | Adults 65+ |                                    |
| Proportion of kindergarten children with early or urgent treatment needs                          | X                  |        |        |        |                |            | HSS – Kindergarten and Third Grade |
| Proportion of third grade children with early or urgent treatment needs                           | X                  |        |        |        |                |            | HSS – Kindergarten and Third Grade |
| Proportion of ninth grade children with early or urgent treatment needs                           | X                  |        |        |        |                |            | HSS – Ninth Grade                  |
| Proportion of elderly needing early or urgent dental care   |                    |        |        |        |                | X          | HSS – Older Adults                 |
| Proportion of women who needed to see a dentist for a problem during most recent pregnancy        |                    |        |        |        | X              |            | PRAMS                              |
| <b>Oral health outcomes: tooth loss</b>   |                    |        |        |        |                |            |                                    |
| Proportion of adults aged 18–64 years with no tooth loss  |                    | X      |        |        |                |            | BRFSS                              |
| Proportion of older adults (≥ 65 years) with six or more teeth lost                               |                    | X      |        |        |                | X          | BRFSS                              |
| Proportion of older adults (≥ 65 years) who are edentulous  |                    | X      |        |        |                | X          | BRFSS                              |
| Proportion of adults in nursing homes (65–74) who are edentulous                                  |                    |        |        |        |                | X          | HSS – Older Adults                 |
| Proportion of adults with tooth loss due to decay or gum disease                                  |                    | X      |        |        |                | X          | BRFSS                              |
| Proportion of adults with diabetes who have lost teeth due to decay and gum disease               |                    | X      |        |        |                | X          | BRFSS                              |
| Proportion of adults with heart disease or stroke who have lost teeth due to decay or gum disease |                    | X      |        |        |                | X          | BRFSS                              |
| Proportion of adults who smoke who have lost teeth due to decay or gum disease                    |                    | X      |        |        |                | X          | BRFSS                              |

| Indicator   | Populations        |        |        |        |                |            | Data source                              |
|---|--------------------|--------|--------|--------|----------------|------------|--|
|   | Children and youth | Adults | CYSHCN | MA/BC+ | Pregnant women | Adults 65+ |  |
| Proportion of adults with fair or poor general health who have lost teeth due to decay or gum disease |                    | X      |        |        |                | X          | BRFSS                                    |
| <b>Oral health outcomes: untreated caries</b>   |                    |        |        |        |                |            |  |
| Proportion of Head Start children with untreated caries   | X                  |        |        |        |                |            | HSS – Head Start                         |
| Proportion of kindergarten children with untreated caries   | X                  |        |        |        |                |            | HSS – Kindergarten and Third Grade       |
| Proportion of third grade children with untreated caries  | X                  |        |        |        |                |            | HSS – Kindergarten and Third Grade       |
| Proportion of ninth grade children with untreated caries in their permanent teeth                     | X                  |        |        |        |                |            | HSS – Ninth Grade                        |
| Proportion of older adults (65–74) in nursing homes with untreated coronal decay                      |                    |        |        |        |                | X          | HSS – Older Adults                       |
| Proportion of older adults (75+) in nursing homes with untreated root surface decay                   |                    |        |        |        |                | X          | HSS – Older Adults                       |
| <b>Oral health outcomes: oral and pharyngeal cancer</b>   |                    |        |        |        |                |            |  |
| Age-adjusted oral and pharyngeal cancer mortality rate  |                    | X      |        |        |                |            | Wisconsin Cancer Reporting System (WCRS) |
| Age-adjusted oral and pharyngeal cancer incidence rate  |                    | X      |        |        |                |            | WCRS                                     |
| Proportion of oral and pharyngeal cancers detected at the earliest stages                             |                    | X      |        |        |                |            | WCRS                                     |
| <b>Risk and behavioral factors: cleft lip and/or palate</b>   |                    |        |        |        |                |            |  |
| Rate of babies born with cleft lip or palate  | X                  |        |        |        |                |            | Wisconsin Birth Defects Registry (WBDR)  |

| Indicator   | Populations        |        |        |        |                |            | Data source                                  |
|---|--------------------|--------|--------|--------|----------------|------------|--|
|   | Children and youth | Adults | CYSHCN | MA/BC+ | Pregnant women | Adults 65+ |  |
| Proportion of women aged 18–44 taking folic acid                                    |                    | X      |        |        |                |            | BRFSS  |
| <b>Risk and behavioral factors: tobacco use</b>                                     |                    |        |        |        |                |            |  |
| Proportion of adults who are current smokers  |                    | X      |        |        |                |            | BRFSS  |
| Proportion of adults who use chewing tobacco, snuff, or snus every day or some days |                    | X      |        |        |                |            | BRFSS  |
| Proportion of youth who currently use any tobacco products                          | X                  |        |        |        |                |            | YRBS   |
| Proportion of youth who currently smoke cigarettes                                  | X                  |        |        |        |                |            | YRBS   |
| Proportion of youth who currently use smokeless tobacco or chew                     | X                  |        |        |        |                |            | YRBS   |
| Proportion of youth who currently vape  | X                  |        |        |        |                |            | YRBS   |
| <b>Workforce</b>  |                    |        |        |        |                |            |  |
| Number and location of dental Health Professional Shortage Areas in Wisconsin       |                    |        |        |        |                |            | Health Resources and Services Administration |
| Number of licensed dentists in Wisconsin  |                    |        |        |        |                |            | Licensure Data                               |
| Number of licensed dental hygienists in Wisconsin                                   |                    |        |        |        |                |            | Licensure Data                               |
| Number of dentists who are enrolled MA/BC+ providers                                |                    |        |        | X      |                |            | MA/BC+ Claims                                |
| Number of enrolled dentists serving zero MA/BC+ members                             |                    |        |        | X      |                |            | MA/BC+ Claims                                |
| Number of enrolled dentists serving one–49 MA/BC+ members                           |                    |        |        | X      |                |            | MA/BC+ Claims                                |

| Indicator  | Populations        |        |        |        |                |            | Data source                                       |
|--|--------------------|--------|--------|--------|----------------|------------|---|
|  | Children and youth | Adults | CYSHCN | MA/BC+ | Pregnant women | Adults 65+ |   |
| Number of enrolled dentists serving 50-100 MA/BC+ members                    |                    |        |        | X      |                |            | MA/BC+ Claims                                     |
| Number of enrolled dentists serving 100+ MA/BC+ members                      |                    |        |        | X      |                |            | MA/BC+ Claims                                     |
| Number of Federally Qualified Health Centers providing dental care           |                    |        |        |        |                |            | Wisconsin Primary Health Care Association (WPHCA) |
| Number of dental visits to Federally Qualified Health Centers per year       |                    |        |        |        |                |            | WPHCA   |
| Number of dental graduates from Wisconsin dental school(s)                   |                    |        |        |        |                |            | Marquette University School of Dentistry          |
| Number of dental hygiene associate degree graduates                          |                    |        |        |        |                |            | Wisconsin Technical Colleges                      |
| <b>Miscellaneous: insurance status</b>                                       |                    |        |        |        |                |            |   |
| Proportion of people with dental insurance in the past year                  | X                  | X      |        |        |                |            | FHS   |
| Proportion of women that had insurance to cover dental care during pregnancy |                    |        |        |        | X              |            | PRAMS   |

## **Data sources and timeline**

The data indicators in the OHSS come from a variety of primary and secondary data sources. Primary data collection includes the Wisconsin Healthy Smiles Survey, which is based on the Association of State and Territorial Dental Director's (ASTDD) Basic Screening Survey protocol. Currently, the OHP captures oral health data on Head Start children, kindergarten children, third grade children, ninth grade adolescents, and older adults in nursing homes using these surveys. Secondary data sources include telephone surveys, MA/BC+ claims data, registries, written surveys, and other databases. All data sources are listed in Table 2 along with detailed information regarding the purpose and method of data collection, population covered, frequency of collection, and most recent data available as of March 2025.

Many of the data sources included as part of the Wisconsin OHSS are collected on an annual basis. However, primary data collected through surveys are not available on an annual basis. For example, data collection for the Wisconsin HSS is highly contingent upon available funding and is staggered by age group. As such, the Wisconsin HSS data are collected as frequently as every five years.

**Table 2: Data sources table**

| Name of source           | Purpose   | Population   | Collection methods  | Frequency                                  | Most recent year available |
|--------------------------|---|--|---|--|----------------------------|
| BRFSS*                   | Collects information on risk behaviors and health conditions  | Non-institutionalized adults aged 18 and older in Wisconsin              | Telephone survey, including a sample of cell phones                                 | Annual (oral health in even years)         | 2023                       |
| CMS-416                  | Collects basic information on State Medicaid and CHIP programs to assess the effectiveness of EPSDT services          | Children and youth ages 0 to 20 enrolled in Medicaid and CHIP programs   | Form submitted by State Medicaid and CHIP programs                                  | Annual                                     | Federal fiscal year 2023   |
| DentaSeal                | A tool for evaluation and benchmarking of school-based dental sealant programs  | Children participating in school-based dental sealant programs           | Program coordinators enter data chairside on each patient into the software program | Annual                                     | 2023–2024 school year      |
| FHS                      | Collects data on health status and health insurance coverage for all household members                                | Non-institutionalized Wisconsin residents                                | Telephone survey completed by household member                                      | Annual                                     | 2023                       |
| HSS – Head Start         | Collects basic screening data on Head Start children  | Representative sample of Head Start children ages 3 to 5                 | Open mouth survey   | Every five years (contingent upon funding) | 2013–2014 school year      |
| HSS – Kindergarten Grade | Collects basic screening data on third grade children   | Representative sample of Wisconsin public school students in third grade | Open mouth survey   | Every five years                           | 2022–2023 school year      |
| HSS – Third Grade        | Collects basic screening data on third grade children   | Representative sample of Wisconsin public school students in third grade | Open mouth survey   | Every five years                           | 2022–2023 school year      |
| HSS – Ninth Grade        | Collects basic screening data on ninth grade adolescents as well as risk factors and self-reported oral health status | Representative sample of Wisconsin public school students in ninth grade | Open mouth survey with a matched self-report survey                                 | Every five years (contingent upon funding) | 2014–2015 school year      |
| HSS – Older Adults       | Collects basic screening data on older adults in nursing homes  | Representative sample of nursing home residents                          | Open mouth survey   | Every five years (contingent upon funding) | 2016                       |

| Name of source     | Purpose   | Population  | Collection methods   | Frequency   | Most recent year available |
|--------------------|---|---|--|---|----------------------------|
| Hospital ED Data   | Collects patient-level data on hospital emergency room services and charges   | All Wisconsin residents   | Data are collected by the Wisconsin Hospital Association from Wisconsin hospitals  | Annual  | 2024                       |
| Licensure Data     | Collects provider-level data upon licensure and renewal of license  | All licensed dentists and dental hygienists                               | Data are collected by Wisconsin Department of Safety and Professional Services   | Renewal even years, but data available as requested | 2025                       |
| MA/BC+ Claims Data | Compiles member- and provider-level MA/BC+ claims data  | Wisconsin MA/BC+ members and providers                                    | Claims submitted by providers  | Annual  | Federal fiscal year 2023   |
| NSCH               | Collects data on physical, mental and emotional health of children and CYSHCN   | National sample (including every state) of children from birth through 17 | Telephone survey completed by parent or guardian   | Annual  | 2023                       |
| PRAMS              | Collects data on maternal experiences and attitudes before, during, and after pregnancy   | Sample of mothers with a recent live birth from birth certificates        | Mailed survey, with mail and telephone follow up   | Annual  | 2023                       |
| WBDR**             | Required by Wisconsin Statute 253.12 and includes all children from birth to age two diagnosed with a birth defect or treated in Wisconsin for a birth defect | Children from birth to age two  | Secure web-based reporting system for select reportable conditions   | Annual  | 2023                       |
| WCRS***            | A population-based registry guided by statutory mandate to collect, manage, and analyze cancer incidence and mortality data                                   | Wisconsin residents   | Reports received from Wisconsin hospitals and clinics on all cancers except basal and squamous cell carcinomas of the skin | Biennial  | 2022                       |
| WFRS               | Collects data on fluoridation levels of Wisconsin community water systems   | Community water systems   | Web based data collection  | Monthly   | 2024                       |
| YRBS               | Collects data on health risk behaviors  | High school students  | Paper survey   | Biennial (odd)                                      | 2023                       |

\*Oral health questions are part of the core in even years but are added by the OHP when resources allow in the odd years.

\*\*Change in statute from an opt-in registry to an opt-out registry. Data collection has encountered a series of delays as the registry transitioned data collection platforms.

\*\*\*Operates on a 24-month research freeze cycle, so while data are collected on an ongoing basis, they don't become available until two years after collection.

**Table 3: Data Source Timeline**

| Data sources                       | Years |      |                 |                   |                 |
|------------------------------------|-------|------|-----------------|-------------------|-----------------|
|                                    | 2025  | 2026 | 2027            | 2028              | 2029            |
| BRFSS                              |       | X    |                 | X                 |                 |
| CMS-416                            | X     | X    | X               | X                 | X               |
| DentaSeal                          | X     | X    | X               | X                 | X               |
| FHS                                | X     | X    | X               | X                 | X               |
| HSS – Ninth Grade                  |       |      |                 |                   | X<br>(Planning) |
| HSS – Kindergarten and Third Grade |       |      | X<br>(Planning) | X<br>(Collection) |                 |
| Hospital ED Data                   | X     | X    | X               | X                 | X               |
| Licensure Data                     | X     | X    | X               | X                 | X               |
| MA/BC+ Claims Data                 | X     | X    | X               | X                 | X               |
| NSCH                               | X     | X    | X               | X                 | X               |
| PRAMS                              | X     | X    | X               | X                 | X               |
| WBDR                               | X     | X    | X               | X                 | X               |
| WCRS                               | X     | X    | X               | X                 | X               |
| WFRS                               | X     | X    | X               | X                 | X               |
| YRBS                               | X     |      | X               |                   | X               |

### Surveillance gaps and limitations

The OHP has successfully maintained and expanded its surveillance since the creation of the Wisconsin OHSS. However, there are still persistent gaps in surveillance, as presented in Table 5. In addition to the indicators highlighted in Table 5, there is an increasing need for more granular community-level data to support oral health initiatives throughout Wisconsin. Much of the existing data available through the Wisconsin OHSS are available at the state-level, which limits the ability make county-level or within county inferences. Further, an emerging frontier in the oral health data ecosystem is the creation of interconnected (or interoperable) data systems. This area must be addressed through statewide initiatives, as dental and medical silos have created an environment of segmented care and data.

These data collection efforts all require significant resources and there is a concern that some of the OHP’s extended Wisconsin Healthy Smile Surveys (for example, head start and older adults) may not be feasible due to funding limitations. If these surveillance activities are to continue, the OHP will need to identify additional funding sources to support future data collection efforts.

**Table 4: Surveillance gaps table**

| Indicator  | Populations        |          |          |          |                |            |
|--|--------------------|----------|----------|----------|----------------|------------|
|  | Children and youth | Adults   | CYSHCN   | MA/BC+   | Pregnant women | Adults 65+ |
| <b>Access to care: any utilization</b>   |                    |          |          |          |                |            |
| Proportion of older adult nursing home residents with a dental visit in the past 12 months                                     |                    |          |          |          |                | <b>X</b>   |
| Proportion of MA/BC+ members with a regular and usual source of dental care (care from same provider in two consecutive years) |                    |          |          | <b>X</b> |                |            |
| Proportion of CYSHCN enrolled in MA/BC+ program receiving a dental visit   |                    |          | <b>X</b> | <b>X</b> |                |            |
| <b>Access to care: preventive dental visits</b>  |                    |          |          |          |                |            |
| Proportion of CYSHCN enrolled in MA/BC+ program receiving a preventive dental visit  |                    |          | <b>X</b> | <b>X</b> |                |            |
| <b>Oral health outcomes: oral and pharyngeal cancer</b>  |                    |          |          |          |                |            |
| Proportion of adults with an oral cancer exam with in the past 12 months   |                    | <b>X</b> |          |          |                |            |
| <b>Oral health outcomes: periodontal disease</b>   |                    |          |          |          |                |            |
| Proportion of adults ever diagnosed with periodontal (gum) disease   |                    | <b>X</b> |          |          |                |            |
| <b>Oral health outcomes: untreated caries</b>  |                    |          |          |          |                |            |
| Proportion of adults with untreated decay  |                    | <b>X</b> |          |          |                |            |

## Data dissemination and use

Dissemination of the data plays a key role in public health practice and must be a priority of any surveillance system. As outlined throughout this plan, the Wisconsin OHSS collects a robust set of valuable data on a variety of oral health topics. Providing actionable data can lead to changes in available funding, guide policy development, and inform public health programs. All of which are essential to the function and sustainability of public health programs. Further, data dissemination allows public health a mechanism for educating the public on the importance of oral health, which can lead to behavioral changes necessary for promoting good oral health. As such, it is important to routinely make data publicly available in a timely manner.

Data dissemination will follow best practice guidelines established by the ASTDD to help ensure that any data shared with the public or partners has defined key messages that are tailored for its intended audience.<sup>[6]</sup> Surveillance data will be disseminated to the public, interested partners, and policy makers through presentations, comprehensive surveillance reports, infographics, factsheets, and interactive data dashboards. These tools will be used to increase awareness about oral diseases and their risk factors, monitor trends and disparities in oral health status and access to care, and demonstrate the impact of public health programs.



## Interest holders

There are many oral health surveillance interest holders in Wisconsin, as the system provides actionable data that can be used to inform the development and implementation dedicated to promoting good oral health. These interest holders represent public health, professional organizations, educational institutions, and other government agencies. Table 6 provides a list of key surveillance interest holders.

**Table 5: Interest holders**

| State Agencies and Programs     |                                     |
|---------------------------------|-------------------------------------|
| Department of Natural Resources | Department of Workforce Development |

|   |  |
|---|--|
| Department of Safety and Professional Services                    | Department of Public Instruction                             |
| DPH—Children and Youth with Special Health Care Needs Program     | DPH—Chronic Disease Prevention Unit                          |
| DPH—Regional Offices  | DPH—Maternal and Child Health Program                        |
| DPH—Bureau of Environmental and Occupational Health               | DPH—Wisconsin Cancer Reporting System                        |
| DPH—Wisconsin Healthcare-Associated Infections Prevention Program | DPH—Primary Care Program                                     |
| <b>Community and professional organizations</b>                   |  |
| Wisconsin Dental Association                                      | Wisconsin Dental Hygienists' Association                     |
| Wisconsin Head Start Association                                  | Children's Health Alliance of Wisconsin                      |
| Wisconsin Primary Health Care Association                         | Delta Dental of Wisconsin                                    |
| Community Health Centers  | University of Wisconsin School of Medicine and Public Health |
| Wisconsin Office of Rural Health                                  | Marquette University School of Dentistry                     |
| Wisconsin Technical Colleges                                      | Wisconsin Oral Health Coalition                              |
| Local Public Health Departments                                   | Wisconsin Seal-A-Smile Program                               |
| Tribal Health Departments   | Great Lakes Inter-Tribal Epidemiology Center                 |
| Wisconsin Association of Free and Charitable Clinics              | Wisconsin Area Health Education Centers                      |

**Privacy and confidentiality**

The Wisconsin OHSS follows Health Insurance Portability and Accountability act (HIPAA) standards for patient privacy and protected health information. The system limits identifiers collected to essential data elements, and the data are stored on a secure server at DHS. Unique identifiers are only available to DHS staff that have been trained on HIPAA, data security, and confidentiality. Additional identifiable data will never be released to external partners and aggregate data will only be reported if counts are greater or equal to five. Further, DPH has an additional layer of protection through the Data Governance

Board, which reviews and approves external data requests. This added layer of review ensures that DPH data are used and shared appropriately.

## Evaluation

The Wisconsin OHSS will be evaluated to ensure that it is successfully monitoring the oral health status of Wisconsin residents. The evaluation will utilize the CDC's *Updated Guidelines for Evaluating Public Health Surveillance Systems*.<sup>[5]</sup> The guidelines provide a framework for assessing the effectiveness and efficiency of the OHSS. Key areas of the evaluation will include assessing the importance of the condition being monitored, the purpose and operation of the surveillance system, resources needed to operate the system, and other select system attributes. The oral health surveillance logic model will also be evaluated. The evaluation will include assessing whether the activities have been carried out, the products have been generated, and the intermediate outcomes have been met or progress has been made towards meeting them.

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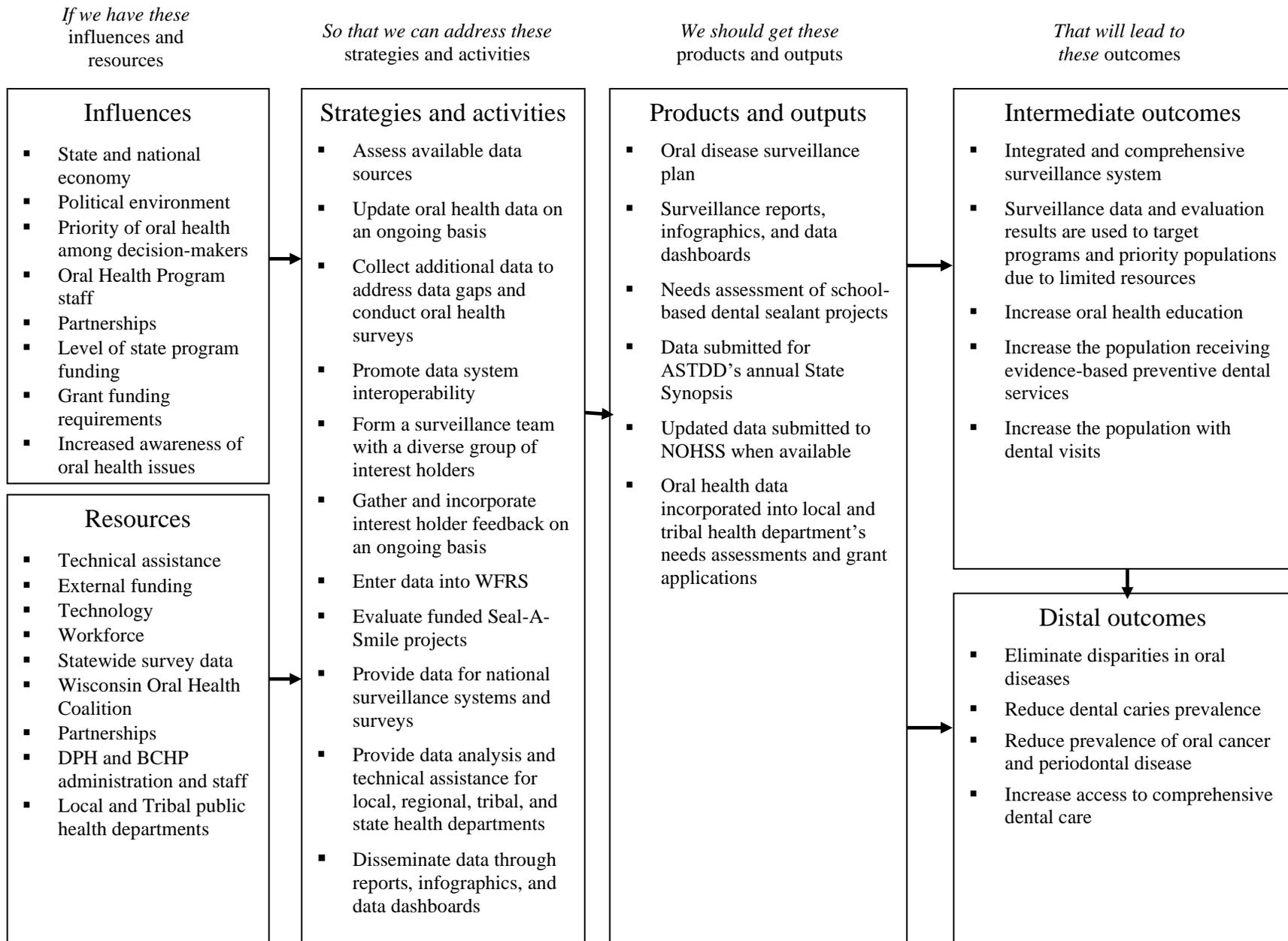
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## Appendix A: Logic model



## Appendix B: Acronyms and abbreviations

|        |   |
|--------|---|
| ASTDD  | Association of State and Territorial Dental Directors |
| BRFSS  | Behavioral Risk Factor Surveillance System            |
| CDC    | Centers for Disease Control and Prevention            |
| CMS    | Centers for Medicare and Medicaid Services            |
| CSTE   | Council of State and Territorial Epidemiologists      |
| CYSHCN | Children and Youth with Special Health Care Needs     |
| DHS    | Wisconsin Department of Health Services               |
| DPH    | Division of Public Health                             |
| ED     | Emergency Department                                  |
| FHS    | Family Health Survey                                  |
| HSS    | Healthy Smiles Survey                                 |
| MA/BC+ | Medicaid/BadgerCare+                                  |
| NSCH   | National Survey of Children's Health                  |
| OHP    | Oral Health Program                                   |
| OHSS   | Oral Health Surveillance System                       |
| PRAMS  | Pregnancy Risk Assessment Monitoring System           |
| WBDR   | Wisconsin Birth Defects Registry                      |
| WCRS   | Wisconsin Cancer Reporting System                     |
| WFRS   | Water Fluoridation Reporting System                   |
| WPHCA  | Wisconsin Primary Health Care Association             |
| YRBS   | Youth Risk Behavior Survey                            |