2023-2027

State Oral Health Plan

ORAL HEALTH OHIO

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Acknowledgments

Oral Health Ohio is a coalition of statewide partners who educate and advocate to improve the state's oral and overall health. Oral Health Ohio received funding from the CareQuest Institute for Oral Health to support the development of the 2023-2027 State Oral Health Plan. Oral Health Ohio contracted with the Health Policy Institute of Ohio (HPIO) to facilitate and create the State Plan.

Oral Health Ohio and HPIO are grateful to the members of the State Oral Health Plan advisory committee, focus group participants, and other partners who contributed their time and expertise to this plan.

The State Oral Health Plan advisory committee collectively selected the priorities and goals of the State Plan. However, the State Plan does not necessarily reflect positions taken by individual members. Also, while Oral Health Ohio commissioned this State Plan and HPIO drafted it, the State Oral Health Plan does not necessarily reflect positions taken by Oral Health Ohio or HPIO, which are governed by their own bylaws. Oral Health Ohio will honor its bylaws, including those pertaining to scope of practice issues, when prioritizing action.

HPIO

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Glossary of acronyms

Acronym	Meaning
CDHCs	Community dental health coordinators
CMS	Centers for Medicare and Medicaid Services
EFDA	Expanded Function Dental Auxiliary
FPL	Federal poverty level
FQHCs	Federally qualified health centers
NEMT	Non-emergency medical transportation
OHASP	Oral Health Access Supervision Program
SBHCs	School-based health centers
SMART objective	Specific, measurable, achievable, realistic, and time-bound
WIC	Women, Infants, and Children

Part 1.
Executive summary

What is the State Oral Health Plan?

The State Oral Health Plan is a prioritized, actionable roadmap to integrate oral health with overall health and elevate it to the same importance. The State Plan is designed to guide actions taken by policymakers, advocates, educators, providers, and funders. The vision of the State Plan is that all Ohioans will have optimal oral health across the lifespan. Public and private collaboration is needed to achieve this goal.

The State Plan:

- Elevates 12 priorities within five focus areas, identified in figure 2
- Highlights opportunities to advance equity
- Presents 14 goals and a menu of action steps so that state and local partners can take action on the State Plan
- Tracks progress on eight outcomes

Why is the State Oral Health Plan important?

Oral health is a critical, yet often overlooked part of overall health. From infancy to older adulthood, oral health affects a person's overall health and well-being. Figure 1 describes these connections, as well as factors that influence oral health. Community conditions like poverty, food security, toxic stress, and discrimination; health behaviors; and care access and affordability can affect oral health and overall health. Many Ohioans face obstacles to optimal oral health. Untreated oral health problems can lead to considerable pain and infection, which can negatively impact quality of life or even have life-threatening consequences.

Figure 1. **Connections between oral health and overall health**

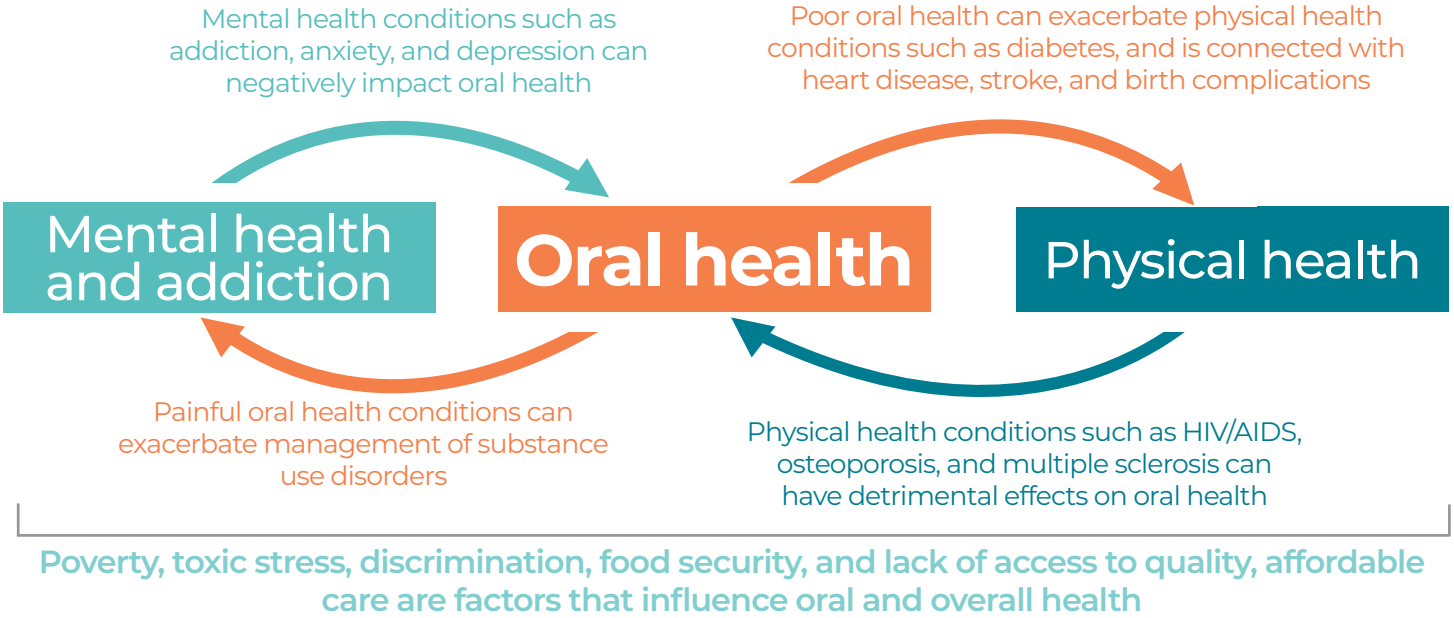


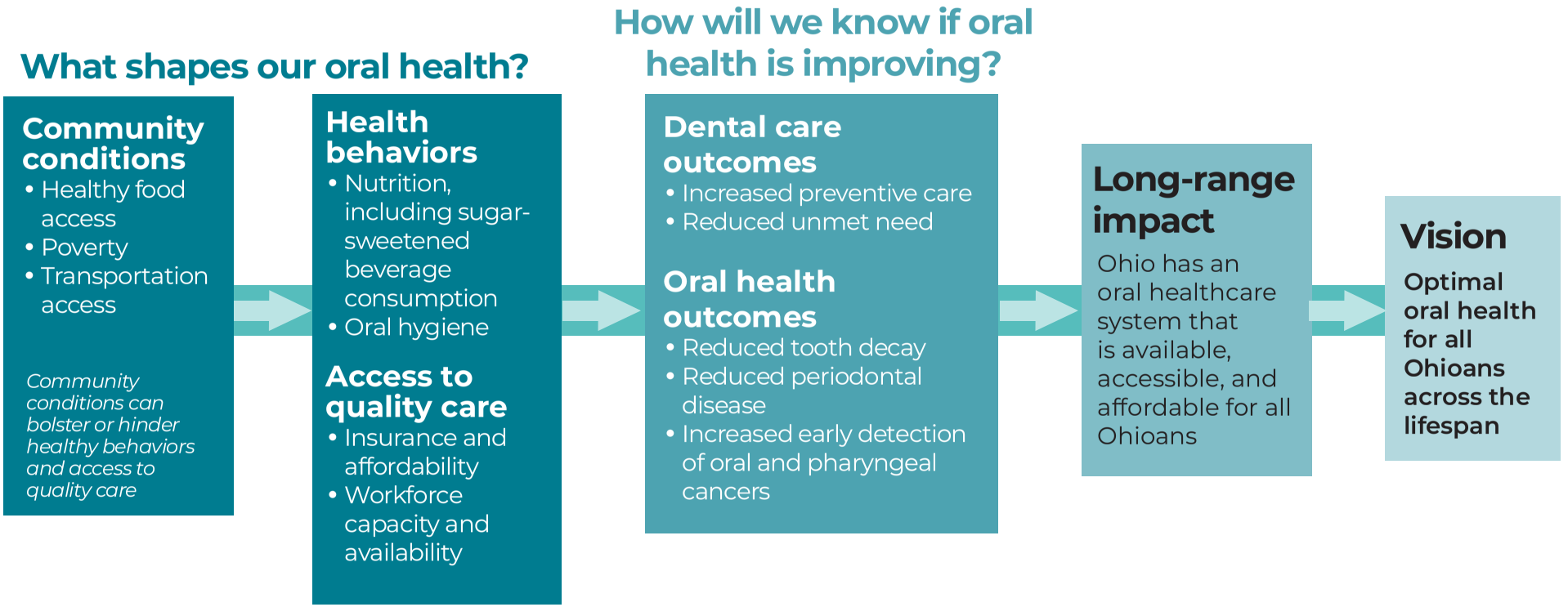
Figure 2. **State Oral Health Plan conceptual framework**

Equity

Health equity is the attainment of the highest level of health for all people. Achieving health equity requires valuing everyone equally, focusing on societal efforts to address avoidable inequalities, recognizing and rectifying historical injustices, addressing contemporary injustices, eliminating health and healthcare disparities, and assuring structural and personal conditions are in place to support optimal health.

Health impacts

Connections exist between oral health and overall health. For example, mental health conditions, such as anxiety and depression, and substance use disorders can negatively affect oral health, and poor oral health can exacerbate physical health conditions, such as diabetes, heart disease, stroke, and birth complications.



Strategies

Goals and action steps were developed through collaborative planning of the State Oral Health advisory committee and informed by consumer and provider experience, data, and evidence-based practice and policymaking.

How was the State Oral Health Plan developed?

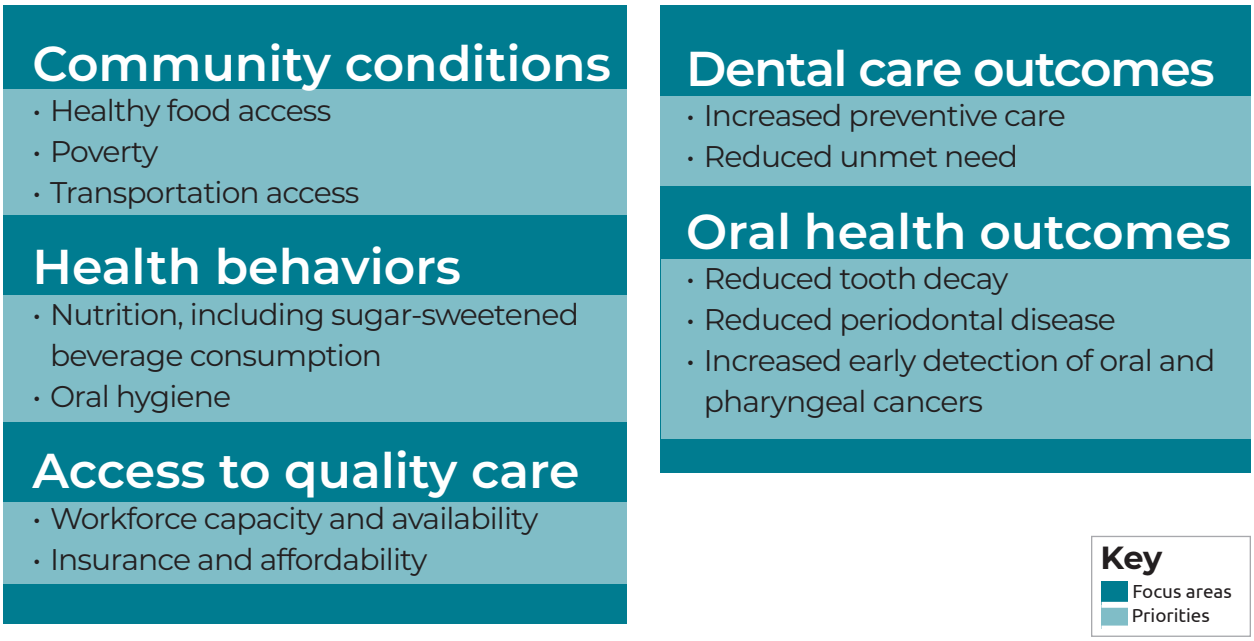
Facilitated by the Health Policy Institute of Ohio, under contract with Oral Health Ohio, the State Plan was developed with an analysis of secondary data and input from approximately 200 Ohioans through:

- **Healthcare provider focus groups** with 52 participants from a variety of dental and medical specialties and locations across the state
- **Consumer focus groups** with 114 community members in five cities (Columbus, Athens, Cleveland, Toledo, and Cincinnati) (see the **Assessment of Ohio's oral health strengths and challenges** for more information on healthcare provider and consumer focus groups)
- **Multi-sector advisory committee** with 28 members who provided guidance and feedback throughout development of the Plan. The advisory committee was responsible for reviewing, discussing, and selecting the priorities for this State Plan, as well as the goals and action steps to address each priority

What are the priorities addressed in the State Oral Health Plan?

The State Plan is organized into five focus areas. Within these focus areas, the State Plan identifies 12 priorities. Figure 3 lists the focus areas and priorities of the State Plan.

Figure 3. **Focus areas and priorities of the State Oral Health Plan**



What are the goals of the State Oral Health Plan?

The long-range impact of the State Plan is that Ohio has an oral healthcare system that is available, accessible, and affordable for all Ohioans. To achieve this, the Plan elevates 14 goals that partners can advance together (listed in figure 4). The Plan also includes specific action steps that can be taken to achieve each goal on pages 13-28.

Figure 4. **Goals of the State Oral Health Plan**

Action steps to address each goal can be found on the page numbers referenced in parentheses.

Priorities	Goals
Community conditions: **Transportation access**	1. **Improve and increase utilization of non-emergency medical transportation options** (p. 15)
Health behaviors: **Nutrition, including sugar-sweetened beverage consumption**	2. **Encourage healthy eating by increasing access to healthy foods and restricting access to unhealthy foods** (p. 16) 3. **Enhance nutrition education** (p. 17)
Health behaviors: **Oral hygiene**	4. **Improve Ohioans' access to oral hygiene preventive products** (p. 18) 5. **Improve Ohioans' knowledge of oral health and hygiene** (p. 19)
Access to quality care: **Workforce capacity and availability**	6. **Develop dental pipeline programs and recruitment strategies and offer financial incentives for health professionals serving underserved areas and/or populations** (p. 21) 7. **Enhance dental and medical education** (p. 21) 8. **Expand scope of practice for dental hygienists** (p. 22)
Access to quality care: **Insurance and affordability**	9. **Ensure reimbursement for oral health services by private and public insurers, including Medicare** (p. 23) 10. **Increase the number of oral health providers who provide services to Medicaid enrollees** (p. 23)
Dental care outcomes: **Increase preventive care and reduce unmet need for dental care**	11. **Acknowledge and expand medical-dental integration** (p. 25) 12. **Implement patient navigation services and culturally adapted care** (p. 25) 13. **Increase locations where people can access dental care** (p. 26) 14. **Increase preventive clinical interventions** (p. 27)

Note: No goals were selected for the poverty and healthy food access priorities. Addressing these priorities is critical to improving oral health for all Ohioans, and State Plan partners are encouraged to work alongside other Ohio organizations who are working to improve these community conditions.

Prioritizing equity

Ohio faces striking disparities across State Plan priorities. To eliminate these unjust differences, policies, programs, and services must be tailored to Ohioans with the greatest need, such as Ohioans of color, Ohioans with disabilities, Ohioans with low incomes, and Ohioans living in rural or Appalachian regions. These groups, among others, face bias, discrimination, and structural barriers to oral and overall health that can be eliminated through deliberate action. The State Plan provides partners with the tools needed to improve oral health outcomes and advance equity in Ohio.

How will the State Oral Health Plan be implemented?

Ensuring that all Ohioans have optimal oral health across the lifespan will require collaboration from partners across Ohio, as identified in figure 5. The State Plan is designed to be implemented by public and private partners at both the state and local levels. The priorities, objectives, and action steps in the State Plan provide flexible options for partners from many sectors to contribute to improved oral health outcomes for Ohioans across the state.

To advance State Plan implementation, State Plan partners can:

- **Embrace one or more State Plan priorities and/or priority populations** as a focus of their organization's work
- **Promote the State Plan** as a tool for assessing which policies, programs, and services should be advanced at the federal, state, and local levels
- **Allocate resources toward evidence-informed action steps** in the State Plan and tailor those resources to the Ohioans most at risk for poor outcomes
- **Collaborate with cross-sector partners** to advance State Plan priorities, including coordinating on the action steps described in the State Plan
- **Evaluate implementation of State Plan action steps** and track whether the intended outcomes, including improved oral health and eliminated disparities, have been achieved

Figure 5. **State Oral Health Plan implementation partners**

Part 2.

Key findings

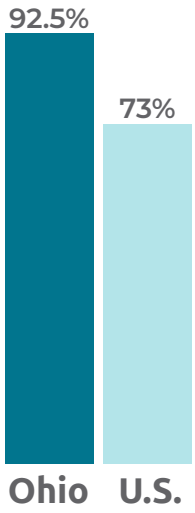
Assessment of Ohio's oral health strengths and challenges

The following key themes emerged from the **Assessment of Ohio's oral health strengths and challenges**, including findings from quantitative data and the healthcare provider and consumer focus groups:

Oral health strengths

1. **Most Ohioans are served by a fluoridated water source.** In 2018, 92.5% of Ohioans were served by a fluoridated water source, which is much higher than the overall U.S. rate (displayed in figure 6).[1] Water fluoridation can prevent tooth loss and decay and reduce cavities.
2. **Ohio has dental care access strengths to build upon.** School-based health care and Ohio's safety net infrastructure were among the top oral health strengths noted by both consumer and healthcare provider focus group participants, as they increase access to care for underserved populations. Providers also noted comprehensive dental benefits for adults within Medicaid as a strength for Ohio, and many consumer participants mentioned positive patient-provider interactions.
3. **Ohioans are recognizing the link between oral health and the health of the rest of the body.** Participants in both the provider and consumer focus groups talked about the connections between oral and overall health, indicating progress in knowledge and understanding.

Figure 6. **Percent of population served by a community water source receiving fluoridated water, U.S. and Ohio, 2018**

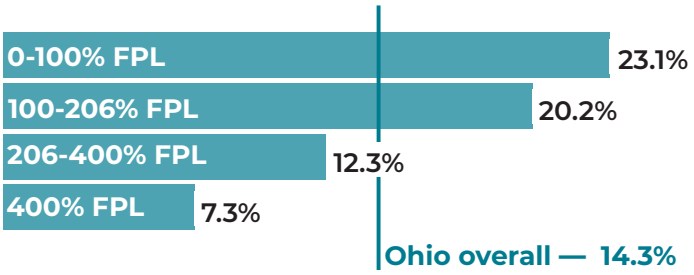


Source: CDC, 2018

Oral health challenges

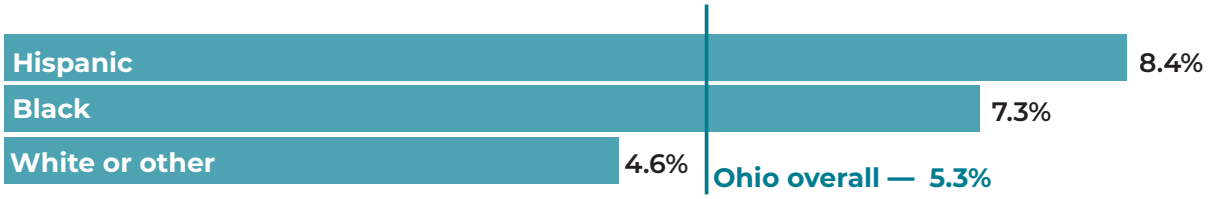
4. **Ohioans are more likely to have many permanent teeth removed than people in other states.** In 2020, over 9% of Ohio adults reported having six or more permanent teeth removed, which is slightly more than the U.S. overall. This was twice as likely among older adults, ages 65 and older.[2]
5. **Less than half of Ohio women receive preventive dental cleanings during pregnancy.** Despite increased risk for gum disease and cavities during pregnancy, only 40.7% of pregnant women reported having their teeth cleaned in 2020, with considerably lower rates among women of color, especially Hispanic mothers (27.5%), and those with incomes of $32,000 or less (27%).[3]
6. **Communities of color and people with low incomes experience barriers to oral health.** Ohioans of color and Ohioans with low incomes experience worse dental care and oral health outcomes on all Assessment metrics when compared to Ohioans overall. Figures 7 and 8 provide examples of these disparities. Poverty, limited access to healthy food, and barriers to accessing regular dental care are only a few reasons for these disparities.

Figure 7. **Percent of Ohio adults, ages 19 and older, with unmet dental care needs, by income, 2019**



Source: Ohio Medicaid Assessment Survey, 2019

Figure 8. **Percent of Ohio children, ages 0-17, with unmet dental care needs, by race, 2019**



Source: Ohio Medicaid Assessment Survey, 2019

7. **Ohioans with special healthcare needs, especially those with intellectual and developmental disabilities, have limited opportunities for good oral health.** This population was one of the most commonly underserved groups identified by providers. Because of complex medical issues, additional care-taking demands, and the fact that dental students receive little training to care for patients with special healthcare needs, few providers are comfortable caring for this population.

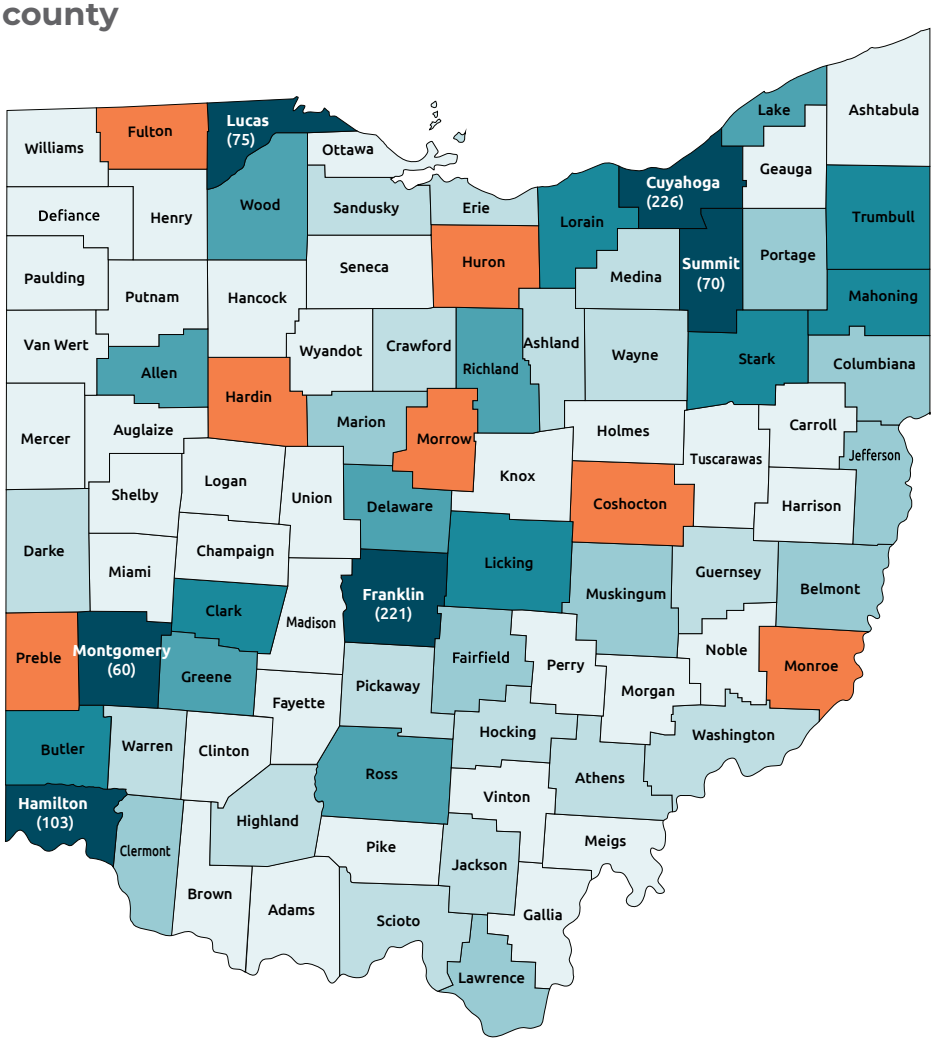
8. **Ohio has higher rates of child and adult poverty than the overall U.S.** Nearly one in five Ohio children (18.4%) and 12.4% of Ohio adults live in poverty.[4] Ohioans of color, especially Black Ohioans, are particularly likely to live in poverty. People living in poverty face many barriers to good oral health, such as transportation challenges that keep people from receiving regular dental care and limited access to healthy foods and oral hygiene products.

9. **Ohio continues to have one of the highest smoking rates in the nation.** Nearly one in five Ohio adults (19.3%) smokes cigarettes.[5] Smoking is more prevalent among people with low incomes and those who were exposed to adversity in childhood. Smoking is associated with a higher risk of oral cancer, gum disease, and tooth loss.

10. **There are considerable geographic gaps in dental care access across Ohio.** Rural and Appalachian counties are particularly underserved by dental professionals, especially in the southern and southeastern regions of Ohio.

11. **Low Medicaid reimbursement rates are a barrier to dental care access.** Ohio Medicaid reimbursement rates for child and adult dental services were 44% and 50.1%, respectively, of private insurance rates in 2020, both below the national averages.[6] Generally, Ohio Medicaid dental reimbursement rates have not changed in 20 years. Providers explained that even though many dentists would like to accept more Medicaid-covered patients, these reimbursement rates are not financially sustainable.

Figure 9. **Dentists who billed at least 100 services to Medicaid in 2021, by county**



Notes:

1. It is common for a patient to receive multiple services in one dental visit.
2. This data includes specialists, which may give a false impression of access to primary dental care.
3. Depending on how they bill Medicaid, some "providers" in this data represent groups of providers. Of the 1,396 dentists represented in this map, 11 are dental group practices; service counts for groups will likely be higher than that of an individual dentist. The dental group practices are in the following counties: Clark, Cuyahoga, Franklin (2), Hamilton, Lake, Lawrence, Lucas (2), Stark and Trumbull.
4. There were 26 out-of-state dentists with at least 100 dental services billed to Medicaid in 2021 that are not represented in this map.
5. Service numbers in 2021 may have been lower than usual due to COVID-19.

Source: Ohio Department of Medicaid

12. There are too few Ohio dentists accepting Medicaid to meet the need. In 2021, 22.2% of Ohio adults, ages 18-64, and 47.7% of Ohio children ages 0-17, had Medicaid coverage.[7] Yet, a 2017 analysis found that only 14% of Ohio dentists saw more than 100 Medicaid patients over a year.[8] This was a common barrier mentioned by consumer and provider focus group participants. Figure 9 shows the number of dentists practicing in each county who billed Ohio Medicaid for at least 100 oral health services in 2021.

13. Traditional Medicare does not include dental benefits, leaving many older Ohioans without dental insurance. In 2020, 20.4% of Ohioans had Medicare. Of these enrollees, 53.7% had traditional Medicare[9] (i.e., did not have a Medicare Advantage plan), meaning they had no dental coverage. Additionally, some older Ohioans' Medicare Advantage plans may not include dental benefits. Older adults in Ohio were the most common group identified in healthcare provider focus groups as having limited opportunities for good oral health.

14. **Ohio's current teledentistry laws and Oral Health Access Supervision Program (OHASP) can be better designed to improve access to care.** Providers noted that synchronous teledentistry is underutilized, is not an efficient use of a dentist's time, and is difficult to schedule. Additionally, only 38 out of 7,156 licensed Ohio dentists and 97 out of 8,401 licensed Ohio dental hygienists had OHASP permits in 2022[10], despite the program being created over a decade earlier.

15. **In addition to affordability challenges, prior traumatic events and experiences of discrimination in healthcare settings keep many consumers from accessing dental care.** Consumer focus group participants mentioned experiencing discrimination in their dental office based on their race, age, and/or insurance plan. Participants recommended additional cultural competency training among providers to improve interactions with patients from different backgrounds.

Part 3.

Taking action on the State Oral Health Plan

Community conditions

Community conditions, sometimes referred to as the social determinants of health or the social drivers of health, are foundational to improve oral health outcomes. The communities we live in affect our ability to make healthy choices, access quality healthcare and dental services, and experience optimal oral health. The State Oral Health Plan advisory committee selected healthy food access, poverty, and transportation as priority community conditions that are critical for improving oral health in Ohio.

How do community conditions shape oral health?

Community conditions can either bolster or hinder oral health outcomes. For example:

- **Access to healthy food** contributes to good oral and overall health; however, many Ohioans experience barriers to obtaining affordable and nutritious foods in their communities.
- **Reduced poverty** increases economic opportunity, which improves access to high-quality education, nutritious food, oral hygiene products, and preventive care, while financial insecurity is a barrier to oral and overall health.
- **Transportation** is essential for connecting Ohioans with employment, medical and dental care, and social supports, yet many Ohioans lack access to affordable and reliable transportation options.

Priority populations

The following groups of Ohioans were identified as being most at risk for having inadequate access to healthy food, experiencing poverty, and/or having inadequate access to transportation:

- Children
- Immigrants and refugees
- Ohioans living in rural or Appalachian regions
- Ohioans of color
- Ohioans with disabilities
- Ohioans with low educational attainment
- Ohioans with low incomes
- Older adults

Prioritizing equity

When engaging in collective action to improve community conditions among priority populations, consider the following:

- Policies, programs, and resources must be tailored and adapted to close gaps in outcomes for priority populations.
- Priority populations should be authentically engaged in planning, advocacy, and program and service delivery decisions.
- Collecting and reporting data on a timely and consistent basis, broken out by demographic characteristics, such as race/ethnicity, income, and disability status, is necessary for tailoring strategies and evaluating the impact of policies and programs.

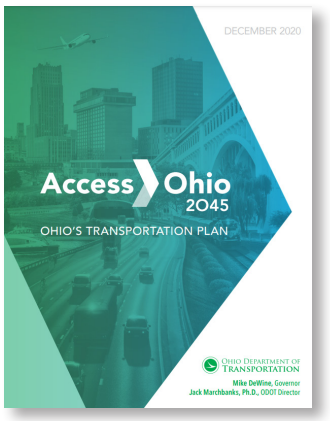
Strategies to improve community conditions

Food access, economic stability, and transportation are complex issues. State Plan partners may be less familiar with these systems, and no one organization or sector can tackle them alone. Yet, State Plan partners can participate in initiatives and amplify efforts led by others that address these critical needs. Intentional partnerships to improve community conditions, particularly for priority populations, are essential to improving oral health outcomes.

The following state planning documents outline priorities and action steps to improve healthy food access, poverty, and transportation in Ohio.

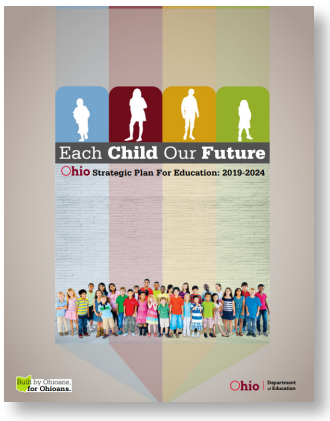
2023-2026 State Plan on Aging
Ohio Department of Aging

2020-2022 State Health Improvement Plan
Ohio Department of Health



Access Ohio 2045
Ohio Department of Transportation

2022-2026 Strategic Plan
Appalachian Regional Commission



Strategic Plan for Education 2019-2024
Ohio Department of Education

Good Food Here guides
Ohio Department of Health

Action steps to improve non-emergency medical transportation

This State Plan will track progress on the following action steps to improve non-emergency medical transportation:

Goal 1

Improve and increase utilization of non-emergency medical transportation options

Action steps for State Oral Health Plan partners:

1. Medicaid managed care organizations can raise the cap on the number of **Non-Emergency Medical Transportation (NEMT) trips allotted to each Medicaid beneficiary and/or allocate some trips to dental care appointments**.
2. Medicaid managed care plans and/or community organizations can coordinate community transportation services for older adults, persons with disabilities, and veterans by utilizing **mobility managers** or regional transportation coordinators. (Additional transportation action steps for older adults can be found on p. 102 of the **State Plan on Aging**.)
3. Providers and/or Medicaid managed care plans can partner with faith communities to explore using church vans to get residents to dental appointments.
4. State policymakers can increase reimbursement rates for NEMT services.
5. The Ohio Department of Medicaid, Medicaid managed care organizations, and healthcare providers can take steps to increase awareness of NEMT among Medicaid enrollees.

Note: Links offer additional information on an evidence-based strategy

The State Oral Health Plan does not include action steps for the healthy food access and poverty priorities, or other transportation goals.. Instead, State Plan partners should reference the documents on the previous page for steps that can be taken to address these priorities.

Nutrition, including sugar-sweetened beverage consumption

How does improving nutrition shape oral health?

Healthy teeth, that can chew crunchy fresh fruits and vegetables, are key to sustained health across the lifespan. Sugar consumption, especially sugar-sweetened beverages like juice and soda, can erode enamel and cause tooth decay. By encouraging healthy food choices, reducing consumption of sugar-sweetened beverages, and enhancing nutrition knowledge, oral health outcomes can be improved in the communities that experience the greatest challenges.

Priority populations

The following groups of Ohioans were identified as being most at risk for experiencing poor nutrition:

- Children
- Medicaid recipients
- Ohioans living in rural or Appalachian regions
- Ohioans of color
- Ohioans with low incomes

Prioritizing equity

- Less nutritious food options tend to be less expensive/more affordable to Ohioans with low incomes, and priority populations are more likely to live in food deserts and experience decreased access to healthy foods.
- Written nutrition education materials can be offered in multiple languages and written in non-technical language that is understandable for most Ohioans. Educational materials should be community sensitive and culturally and linguistically adapted.
- Priority populations may experience oral health concerns or other physical limitations that impact their ability to chew. These populations may need access to soft, nutritious foods.
- Priority populations are at an increased risk for experiencing trauma, toxic stress, and discrimination. These experiences can result in unhealthy eating behaviors as a coping strategy and serve as barriers to maintaining a healthy diet.

Action steps to improve nutrition

Policymakers and State Plan partners at the state and local levels can take the following actions to improve nutrition across Ohio:

Goal 2

Encourage healthy eating by increasing access to healthy foods and restricting access to unhealthy foods

Action steps for State Oral Health Plan partners:

1. Nursing homes and other residential care facilities can serve fresh and healthy foods and foods that do not include high-fructose corn syrup.
2. The Ohio Department of Education can regulate the quality of food that can be sold to students in schools participating in the National School Lunch Program (NSLP) during the school day with **school nutrition standards** and competitive foods not provided through the NSLP and School Breakfast Program through **school food & beverage restrictions**.
3. Schools can encourage healthy eating through **healthy school lunch initiatives**, **healthy vending machine options, point-of-purchase prompts for healthy foods**, and **competitive pricing for healthy foods**.
4. State and local partners can expand access to **healthy food in convenience stores** (i.e., **Good Food Here**)
5. State and local policymakers can incentivize and expand **mobile produce markets** and **farmers markets**, including increasing investments in the **WIC and Senior Farmers' Market Nutrition Programs** and **Electronic Benefit Transfer (EBT) payment at farmers markets**

Goal 2 (cont.)

6. State legislators can levy **sugar-sweetened beverage taxes** to discourage consumption, while continually monitoring effectiveness. Tax revenues can be used to subsidize healthy foods programs.
7. State policymakers can apply advertising restrictions, including **child-focused advertising restrictions**, to minimize corporate appeals to consume unhealthy foods and beverages.
8. State policymakers can expand access to publicly-funded nutrition services programs, such as the **Commodity Supplemental Food Program**, the **Emergency Food Assistance Program**, the **Child and Adult Care Food Program**, **C.O.R.E.** and **HEAL**.

Goal 3

Enhance nutrition education

Action steps for State Oral Health Plan partners:

1. Healthcare providers, community organizations, and local agencies can expand licensed dietician counseling and nutrition education (including sugar-sweetened beverages' impact on oral and overall health), through:
   - Local community centers
   - School-based health centers (SBHCs)
   - Older adult and other residential care settings
   - Local area agency on aging (AAA)-facilitated events
   - Local hospital-coordinated initiatives.

   *(**Eat Smart Live Strong**, **Stepping Up Your Nutrition**, and **Eat Smart, Move More, Weigh Less** are evidence-based nutrition programs that can be utilized in older adult programming.)*
2. Long-term care facilities can provide nutrition education for staff to:
   - Use ice chips or sugar-free candies to stimulate saliva flow for residents experiencing xerostomia (dry mouth)
   - Use nutritional supplement drinks with low sugar and no high fructose corn syrup content
   - Encourage residents to drink water throughout the day.
3. State and local agencies can provide nutrition education programs as part of public assistance, such as **Supplemental Nutrition Education Program – Education (SNAP-Ed)**.
4. The Ohio Department of Education and local school districts can partner to implement **school-based nutrition education programs** where students, parents, and caregivers can learn together about healthy eating through nutrition education curricula and peer training, as well as environmental components such as healthy school menu offerings, classroom snacks and food rewards, and **fruit and vegetable taste tests**. School districts can also incorporate education on healthy food choices into **school breakfast programs**.

Note: Links offer additional information on an evidence-based strategy and indicates that an action step has evidence of decreasing disparities based on a review by **What Works for Health**

Oral hygiene

How does improving oral hygiene shape oral health?

Preventive oral hygiene practices like regular teeth brushing, flossing, and professional dental cleanings remove plaque, which accumulates on teeth and leads to dental decay over time. By ensuring that Ohioans can find, understand, and use information about preventive oral hygiene, and that they have access to the products required for good oral health, partners across Ohio can improve outcomes in the communities that experience the greatest challenges.

Priority populations

The following groups of Ohioans were identified as being most at risk for barriers to good oral hygiene:

- Children
- Ohioans of color
- Ohioans with disabilities
- Older Ohioans (especially those living in residential facilities)

Prioritizing equity

When taking action to improve oral hygiene among priority populations, consider the following:

- Community conditions, like access to healthy foods, financial security, and reliable transportation, can either bolster or hinder healthy behaviors. Priority populations who lack consistent access to these essential resources experience significant barriers to good oral hygiene.
- Written instructions that accompany oral hygiene kits should be available in the language(s) spoken by priority populations. Cultural competency training and/or translation services may be needed to ensure effective communication and oral hygiene education.
- Oral health educational programs can be held free of charge at convenient locations and times and led by a trusted messenger of the priority population community.
- Priority populations should be authentically engaged in planning and program delivery efforts related to oral hygiene, including asking community members what efforts are needed to improve oral health.

Action steps to improve oral hygiene

Policymakers and State Plan partners at the state and local levels can take the following actions to improve oral hygiene across Ohio:

Goal 4

Improve Ohioans' access to oral hygiene preventive products

Action steps for State Oral Health Plan partners:

1. Community action agencies and other advocates can support including oral hygiene products (e.g., manual and powered toothbrushes, toothpaste, floss) in Ohio's SNAP program.
2. Healthcare providers can offer oral hygiene kits and education in SBHCs and primary care and specialist offices.
3. Oral health and other healthcare providers can increase access to and encourage use of fluoridated toothpaste (**fluoride toothpaste concentration**), **fluoride mouthrinses**, **oral fluoride supplements** and **Xylitol products** to improve overall oral hygiene and prevent decay.

Goal 5

Improve Ohioans' knowledge of oral health and hygiene

Action steps for State Oral Health Plan partners:

1. Oral health and other healthcare providers can implement **text message-based health interventions** to improve patient knowledge and adherence to preventive oral hygiene and home care.
2. State and local agencies, providers, insurers, managed care organizations, and community-based organizations can partner and increase education and awareness of oral-systemic health connections and knowledge that most oral diseases can be prevented with simple and consistent oral hygiene care.
3. State policymakers can enact health education standards that include oral health. (Currently, Ohio has not adopted health education standards for grades K-12.)

Note: Links offer additional information on an evidence-based strategy

Access to quality care

Workforce capacity and availability

How does improving workforce capacity and availability shape oral health?

For various reasons, many Ohioans have difficulty accessing quality dental care. For example, there are shortages of dental providers in many rural areas, and there are too few providers that feel comfortable providing care to very young children or patients with intellectual or developmental disabilities. By enhancing medical and dental education, expanding dental hygienist scope of practice, and instituting recruitment strategies and financial incentives for providers, oral health outcomes can be improved among the communities that experience these challenges.

Priority populations

The following groups of Ohioans were identified as being most at risk for lacking access to oral health providers:

- Children
- Immigrants and refugees
- Medicaid recipients
- Ohioans living in rural or Appalachian regions
- Ohioans with disabilities (especially intellectual and developmental)
- Ohioans with low incomes
- Uninsured Ohioans

Prioritizing equity

When taking action to improve workforce capacity and availability among priority populations, consider the following:

- Telehealth increases opportunities for access to care, but internet connectivity and technology may be barriers for some priority populations.
- To improve provider-patient interactions, dentists, dental hygienists, and other oral health professionals, as well as dental and medical students, should have ongoing, effective, and evidence-based cultural competency and implicit bias training.
- Many priority populations currently have difficulty accessing dental care. This should be a central consideration when developing oral health policy.
- Members of priority populations often express comfort when their healthcare and dental providers are of a similar background. Action steps should be taken to increase the diversity of dental providers to reflect the communities that they serve, including efforts to increase diversity in healthcare profession student populations and hiring and recruitment practices.

Action steps to improve workforce capacity and availability

Policymakers and State Plan partners at the state and local levels can take action to improve workforce capacity and availability across Ohio.

An additional goal deemed important by the advisory committee was to enhance oral health leadership at the state level. This includes hiring a dental director at the Ohio Department of Health and Ohio Department of Medicaid.

Goal 6

Develop dental pipeline programs and recruitment strategies and offer financial incentives for health professionals serving underserved areas and/or populations

Action steps for State Oral Health Plan partners:

1. Dental and dental hygiene education programs can offer more scholarships for dental students from rural areas [e.g., Ohio State University's Commitment to Access Resources and Education (CARE) program].
2. Federal and/or state policymakers can expand loan repayment or forgiveness programs for dental providers serving underserved areas or populations.
3. State policymakers and/or dental and dental hygiene education programs can implement **recruitment efforts to increase diversity** in the dental field, including offering financial incentives for students with low incomes or students from underrepresented backgrounds.
4. State policymakers, colleges, and/or universities can evaluate the need for additional dental providers, and if evaluation shows a need for more providers, school districts, colleges, and universities can implement more dental pipeline programs.

Goal 7

Enhance dental and medical education

Action steps for State Oral Health Plan partners:

1. **Community health worker** training programs can train enrollees to provide basic oral hygiene instruction and perform simple oral health screenings, especially among older adults, people with chronic conditions, and pregnant individuals, such as through the Pathways Community HUB model. (This could include using the Smiles for Life for Front Line Workers curriculum.)
2. Dental and medical education, including programs for physician assistants and nurses, can expand oral-systemic health training.
3. Dental education programs can enhance training in preventive screenings, including social determinants of health, behavioral health, tobacco, and common chronic conditions, such as diabetes and high blood pressure.
4. Dental education programs can expand training of caring for infants and young children and individuals with a disability, including increasing and strengthening continuing education on caring for patients with special needs through annual meeting courses and video-based and on-demand courses. Funders can provide grants for this training.
5. Dental education programs can implement and fund **rural training** or rural programs.
6. Dental education programs can increase evidence-based **cultural-competence training**, and oral health providers can complete continuing education on cultural competence.
7. Professional education programs for community health workers, social workers, and pharmacists can include training on oral health and oral-systemic health connections.

Goal 8

Expand scope of practice for dental hygienists[11]

Action steps for State Oral Health Plan partners:

1. Dental education programs, the Ohio State Dental Board, oral health provider professional associations, and advocates can increase awareness of the Oral Health Access Supervision Program (OHASP) among dentists and dental hygienists and encourage more professionals to participate.
2. Due to poor utilization and barriers, state policymakers can modify the OHASP program or explore phasing it out and replacing it with a new license with fewer barriers to increase direct access to dental hygienists. Either way, evaluation can be conducted to determine effectiveness.
3. State policymakers can increase scope of practice for dental hygienists, especially to provide care for underserved populations.

Note: Links offer additional information on an evidence-based strategy and indicates that an action step has evidence of decreasing disparities based on a review by **What Works for Health**

Insurance and affordability

How does insurance coverage and affordability of care shape oral health?

Many Ohioans lack the financial means and/or sufficient dental insurance to help cover the costs of dental care. Some who cannot afford it choose to go without care, which can exacerbate existing oral health problems and result in considerable pain and harm to overall health. By ensuring reimbursement for oral health services by private and public insurers, including Medicare, and increasing the number of oral health providers who treat Medicaid enrollees, oral health outcomes can be improved among the communities that experience the greatest challenges.

Priority populations

The following groups of Ohioans were identified as being most at risk for lacking access to affordable oral healthcare coverage:

- Immigrants and refugees
- Ohioans with disabilities
- Ohioans with low incomes
- Older adults
- Uninsured Ohioans
- Veterans

Prioritizing equity

When taking action to increase access to affordable oral healthcare coverage among priority populations, consider the following:

- Medicaid enrollees and older adults enrolled in Medicare experience unique challenges and may need additional assistance finding a dental provider or accessing affordable care.
- Priority populations should be authentically engaged by insurers and other partners to learn what types of dental coverage are needed most.
- To receive quality care, some priority populations, including Ohioans with intellectual and developmental disabilities, may require additional time and support from providers.
- Priority populations with limited English proficiency and/or who are new to the U.S. may need additional assistance in navigating healthcare coverage options.

Action steps to improve insurance and affordability

Policymakers and State Plan partners at the state and local levels can take the following steps to improve insurance and affordability across Ohio:

Goal 9

Ensure reimbursement for oral health services by private and public insurers, including Medicare

Action steps for State Oral Health Plan partners:

1. Public and private dental insurers can provide reimbursement for a behavior management code for providers caring for individuals with special healthcare needs or increase reimbursement rates for services provided to these individuals.
2. Public and private insurers can provide reimbursement for case management to facilitate medical-dental integration and care coordination.
3. State and local policymakers and advocates can support advocacy efforts to include comprehensive dental benefits in the Medicare program and/or for Medicare to cover dental care needed for medically necessary procedures.
4. State and local policymakers and advocates can support efforts to offer comprehensive dental benefits for veterans.
5. State policymakers can require all insurance plans to reimburse oral health providers for preventive education.
6. The Ohio Department of Medicaid, managed care plans, Ohio's private insurers, and oral health provider professional associations can provide education and training to increase providers' understanding of community health worker roles, benefits, return on investment, and reimbursement methods and take steps to increase provider utilization of these professionals.

Goal 10

Increase the number of oral health providers who provide services to Medicaid enrollees

Action steps for State Oral Health Plan partners:

1. The Ohio Department of Medicaid and Medicaid managed care plans can establish advisory committees of providers and enrollees.
2. State policymakers and Medicaid managed care plans can explore ways to allow enrollees to seek care outside of the network using the Medicaid benefit in areas where there is an inadequate network (i.e., no Medicaid dental providers), or where an out-of-network dentist has the necessary expertise (e.g., children with special needs, adults with comorbidities) to treat the patient or condition.
3. State policymakers can continue identifying ways to reduce Medicaid provider administrative burden.
4. State policymakers can increase Ohio's Medicaid dental reimbursement rates, including for oral surgeons and other dental specialists.
5. State policymakers can preserve adult dental benefits under the Ohio Medicaid program.

Note: Links offer additional information on an evidence-based strategy and  indicates that an action step has evidence of decreasing disparities based on a review by **What Works for Health**

Dental care outcomes

Increase preventive care and reduce unmet need for dental care

How will we know if oral health is improving in Ohio?

The long-term goal of the State Oral Health Plan is that Ohio has an oral healthcare system that is available, accessible, and affordable for all Ohioans. We will know that oral health is improving when Ohioans from every community can access preventive dental care and treatment when issues arise. This can be accomplished by expanding medical-dental integration, increasing locations where people can access care, increasing preventive clinical interventions, and implementing patient navigation services and culturally-adapted care.

Priority populations

The following groups of Ohioans were identified as being most at risk for poor outcomes resulting from inadequate preventive care and unmet need for dental care:

- Children
- Immigrants and refugees
- Medicaid enrollees
- Ohioans living in rural or Appalachian regions
- Ohioans of color
- Ohioans with disabilities (especially intellectual and developmental)
- Ohioans with low incomes
- Older adults
- Pregnant women
- Uninsured Ohioans

Prioritizing equity

When taking action to improve dental care outcomes among priority populations, consider the following:

- Some Ohioans in priority populations may experience dental fear or be unwilling to seek dental care due to previous negative or traumatic experiences. Providers can create a more welcoming environment by implementing cultural competence and implicit bias training and a trauma-informed care approach.
- Accommodations should be made to help priority populations access dental care, such as making offices more accessible for patients with physical disabilities, developing language access plans, and providing translation services for patients with limited English proficiency.
- To remove transportation barriers and reduce fear of stigma or discrimination, services should be provided in locations that are close, convenient, and considered safe by the community, such as local parks, libraries, senior centers, places of worship, and schools.
- Dental offices can have toys, books, and other child-friendly features to assist young patients and parents who must bring their children to dental visits with them.

Action steps to improve dental care outcomes

Policymakers and State Plan partners at the state and local levels can take the following steps to improve preventive care access and reduce unmet need for dental care across Ohio:

Goal 11

Acknowledge and expand medical-dental integration

Medical-dental integration is an approach to care that integrates dental medicine into primary care and behavioral health. This model of care encourages providers to develop comprehensive care plans for the whole person.[12]

Action steps for State Oral Health Plan partners:

1. Advocates and providers can educate policymakers and philanthropy about the value and cost-savings of integrated care and engage them around medical-dental integration pilot projects, such as for chronic disease or behavioral health.
2. Healthcare and interdisciplinary education programs can promote medical-dental integration.
3. Healthcare providers can co-locate dental services with primary, prenatal, and/or chronic disease management care.
4. Healthcare providers can improve chronic disease management through **chronic disease management** and **self-management** programs that include oral health, to improve health outcomes and quality of life for those with chronic diseases, including behavioral health and people with insulin dependent (i.e., Type 1) diabetes
5. The Ohio Department of Medicaid and other insurers can include oral health indicators as part of value-based programs (payment models that prioritize prevention and healthy outcomes over volume of services), such as the Comprehensive Primary Care and Comprehensive Maternal Care programs, as part of quality strategies to improve health outcomes and lower cost of care.

Goal 12

Implement patient navigation services and culturally adapted care

Action steps for State Oral Health Plan partners:

1. Cultural competency training programs can engage Ohioans of color, Ohioans living in Appalachian counties, as well as migrant and immigrant populations, when developing content impacting these communities.
2. Dental insurers can pay for **patient navigation services**.
3. Dental providers can implement **culturally adapted care**.
4. Healthcare and dental providers can embed community health workers in medical and dental offices and SBHCs to ensure closed-loop referrals.
5. State policymakers and insurers can establish systems and programs that increase patient access to a dental home, especially among priority populations.
6. State policymakers and training programs can increase the number of **community health workers** trained in oral health.
7. State policymakers and/or dental providers can increase the number of community dental health coordinators (CDHCs).

Goal 13

Increase locations where people can access dental care

Action steps for State Oral Health Plan partners:

1. Advocates can support providers treating patients with disabilities by:
   - Educating grantmaking organizations that funding is needed to help dental offices and SBHCs purchase equipment or to build, renovate, and expand in order to see patients with disabilities (e.g., sensory rooms, quiet dimmable lights, wider doorways, and wheelchair and Hoyer lifts).
   - Encouraging the expansion of Section 741 of the Public Health Service Act to include more funding for dentists to make accommodations for patients with a disability and to increase the Disabled Access Credit that dental offices and other small businesses can use to make accommodations for people with disabilities. (The current maximum credit is $10,250.)
2. Healthcare and dental providers can expand hub-and-spoke models of care to reach communities with limited access to oral health care.
3. Policymakers and advocates can engage OB-GYNs to encourage oral hygiene visits during pregnancy and educate their pregnant patients with Medicaid that two oral hygiene visits are covered during pregnancy.
4. School districts and healthcare and dental providers can partner to increase the number of **SBHCs** with dental services and expand these SBHCs to serve school staff, students' families, and/or other children and adults in the community.
5. State and local policymakers and dental providers can increase the number of portable dental programs or mobile units that provide comprehensive care (especially in areas with no safety net dental clinic or too few Medicaid providers). Locations can include schools, nursing homes, adult day centers, older adult living centers, and other group homes.
6. State policymakers and funders can increase funding for safety net dental clinics and SBHCs that offer dental services.
7. State policymakers can modify the teledentistry law to expand access to teledentistry in Ohio, such as through allowing asynchronous teledentistry in addition to synchronous teledentisty. Policies can be evaluated to determine effectiveness.
8. WIC programs can include an oral health screening in initial appointments.

Goal 14

Increase preventive clinical interventions

Action steps for State Oral Health Plan partners:

1. Dental insurers and the Ohio Department of Medicaid can reimburse dental providers for caries risk assessments.
2. Dental providers can increase use of Silver Diamine Fluoride (SDF) and interim restorative treatment (when appropriate) in patients of all ages in populations with limited access to oral health services or that cannot tolerate traditional dental care.
3. Primary care providers, including family practice physicians and pediatricians, can increase use of **fluoride varnish**.
4. State policymakers and funders can increase funding to expand preventive dental services, including **school-based dental sealant programs** ⊖ in schools, preschools and childcare settings, especially in underserved areas. School districts, dental providers, and community-based programs serving children and families can make efforts to increase parent and caregiver engagement and education related to these services.

Note: Links offer additional information on an evidence-based strategy and ⊖ indicates that an action step has evidence of decreasing disparities based on a review by **What Works for Health**

Oral health outcomes

Reduced tooth decay, reduced periodontal disease, and increased early detection of oral and pharyngeal cancers

How will we know if oral health is improving in Ohio?

The State Oral Health Plan measures oral health improvement through reduced tooth decay, reduced periodontal disease, and increased early detection of oral and pharyngeal cancers. These outcomes are influenced by the other priorities in this Plan. By taking action to improve community conditions, health behaviors, access to quality care, and dental care outcomes, state and local partners can work together to achieve optimal oral health for every Ohioan across the lifespan.

Priority populations

The following groups of Ohioans were identified as being most at risk for poor oral health outcomes:

- Children
- Ohioans of color
- Ohioans with low incomes
- Older adults
- Uninsured Ohioans

Action steps to improve oral health outcomes

Policymakers and State Plan partners at the state and local levels can take action to reduce tooth decay and periodontal disease and increase early detection of oral and pharyngeal cancers. The action steps on pages 13-27 address these priority outcomes. Action steps should be tailored and adapted to address the needs of priority populations.

For additional action steps related to oral and pharyngeal cancers, see the **Ohio Comprehensive Cancer Control Plan 2021-2023**.

Part 4.

Tracking progress on the State Oral Health Plan

The State Oral Health Plan sets a clear strategy for tracking progress on its priorities. By establishing objectives and reporting progress over time, partners across the state will know whether we are advancing the vision of optimal oral health for all Ohioans across the lifespan.

This section includes 8 SMART (Specific, Measurable, Achievable, Realistic and Time-bound) objectives that will be used to measure improvement on the priorities outlined in the State Plan. (For more information on SMART objectives, see pages 41-42.) Each objective includes a short-term (2024), intermediate (2027), and long-term (2030) target, as well as priority populations. To improve on the objectives in this section, action must be focused on supporting priority populations who experience significantly worse outcomes than the state overall. By setting universal long-term targets, the State Plan sets a bold goal that disparities will be eliminated across these SMART objectives by 2030. Oral Health Ohio plans to track and report progress on the short-term and intermediate targets.

Health behaviors: Improved nutrition, reduced juice consumption

Indicator (source)	Baseline (2019)	Short-term target (2024)	Intermediate target (2027)	Long-term target (2030)
1. **Juice consumption.** Percent of Ohio children, ages 2-5, who had 1 or more 100% fruit juice drinks yesterday (Ohio Medicaid Assessment Survey)	64.5%	61.1%	59%	57%
Priority populations				
Black Ohioans	77.6%	68.2%	62.6%	57%
Ohio children living in households earning 100-206% of the FPL	72.7%	65.6%	61.3%	57%
Medicaid enrollees	73.1%	65.8%	61.4%	57%
Rural, non-Appalachian Ohioans	75.2%	66.9%	62%	57%

Access to quality care: Increased workforce capacity and availability

Indicator (source)	Baseline (2020)	Short-term target (2024)	Intermediate target (2027)	Long-term target (2030)
2. **Dentist workforce**: Average number of dentists per 100,000 population, by county (Area Health Resource File/National Provider Identification File, as compiled by County Heath Rankings)	44	46.3	48	49.7
Priority populations				
Appalachian type counties	37.6	42.4	46.1	49.7
Southeast Ohio	35.7	41.3	45.5	49.7

Dental outcomes: Increased preventive care

Indicator (source)	Baseline (2019-2020)	Short-term target (2024)	Intermediate target (2027)	Long-term target (2030)
3. **Preventive dental care, child.** Percent of children, ages 1-17, who have seen a dentist or other oral health care provider for preventive dental care, such as check-ups, dental cleanings, dental sealants, or fluoride treatments in the past year (National Survey of Children's Health)	74.1%	75.3%	76.3%	77.2%
Priority populations				
Hispanic Ohioans	66.5%	70.8%	74.0%	77.2%
Other, non-Hispanic Ohioans*	61.8%	68.0%	72.6%	77.2%
Ohioans earning 0-99% of the FPL	64.9%	69.8%	73.5%	77.2%
Ohioans earning 100-199% of the FPL	65.3%	70.1%	73.6%	77.2%
Ohioans who are 1-5 years old	52.3%	62.3%	69.7%	77.2%

* Non-Hispanic Ohioans who are not Black or white

Dental outcomes: Increased preventive care (cont.)

Indicator (source)	Baseline (2020)	Short-term target (2024)	Intermediate target (2027)	Long-term target (2030)
4. **Preventive dental care, new mothers.** Percent of Ohio women with a live birth during the past year who had their teeth cleaned during pregnancy (Ohio Pregnancy Assessment Survey)	40.7%	41.8%	42.6%	43.4%
Priority populations				
Hispanic Ohioans	27.5%	33.9%	38.6%	43.4%
Black, non-Hispanic Ohioans	31.6%	36.3%	39.9%	43.4%
Other, non-Hispanic Ohioans*	28.8%	34.6%	39%	43.4%
Ohioans earning $32,000 or less	27%	33.6%	38.5%	43.4%
Ohioans earning $32,001-$57,000	34%	37.8%	40.6%	43.4%

* Non-Hispanic Ohioans who are not Black or white

Dental outcomes: Reduced unmet need for dental care

Indicator (source)	Baseline (2019)	Short-term target (2024)	Intermediate target (2027)	Long-term target (2030)
5. **Unmet dental care need, adult.** Percent of Ohio adults, ages 19 and older, with unmet dental care needs (Ohio Medicaid Assessment Survey)	14.3%	12.8%	11.9%	11%
Priority populations				
Black Ohioans	19.1%	15.4%	13.2%	11%
Hispanic Ohioans	23.0%	17.5%	14.3%	11%
Ohioans earning 0-100% of the FPL	23.1%	17.6%	14.3%	11%
Ohioans earning 100-206% of the FPL	20.2%	16%	13.5%	11%
Adult Ohioans with any disability	23.4%	17.8%	14.4%	11%
Adult Ohioans with a cognitive or developmental disability	30.1%	21.4%	16.2%	11%
Ohioans enrolled in Medicaid	21.1%	16.5%	13.8%	11%
Uninsured Ohioans	37.9%	25.7%	18.3%	11%
Ohioans living in metropolitan areas	15.8%	13.6%	12.3%	11%
Ohioans who are 19-24 years old	18.4%	15%	13%	11%
Ohioans who are 25-44 years old	17.7%	14.7%	12.8%	11%

Oral health outcomes: Reduced tooth decay and reduced periodontal disease

Indicator (source)	Baseline (2019-2020)	Short-term target (2024)	Intermediate target (2027)	Long-term target (2030)
6. Oral health problem, child. Percent of children, ages 1-17 years old, who experienced oral health problems such as toothaches, bleeding gums, or decayed teeth or cavities within the past year (National Survey of Children's Health)	12.8%	11.9%	11.3%	10.6%
Priority populations				
Black, non-Hispanic Ohioans	18.1%	15.1%	12.9%	10.6%
Ohioans earning 0-99% of the FPL	19.3%	15.8%	13.2%	10.6%
Ohioans earning 100-199% of the FPL	14.8%	13.1%	11.9%	10.6%
Ohioans earning 200-399% of the FPL	14.2%	12.8%	11.7%	10.6%
Uninsured Ohioans	27.8%	20.9%	15.8%	10.6%
Ohioans who are 6-11 years old	19.5%	15.9%	13.3%	10.6%
Indicator (source)	**Baseline (2020)**	**Short-term target (2024)**	**Intermediate target (2027)**	**Long-term target (2030)**
7. Permanent teeth removed, adult. Percent of adults, ages 18 and older, who had 6 or more permanent teeth removed (Behavioral Risk Factor Surveillance Survey)	16.1%	14.7%	13.6%	12.5%
Priority populations				
Black, non-Hispanic Ohioans	18.4%	16%	14.3%	12.5%
Ohioans who earn <$15,000	33.0%	24.8%	18.7%	12.5%
Ohioans who earn $15,000 - $24,999	29.2%	22.5%	17.5%	12.5%
Ohioans who earn $25,000 - $34,999	19.8%	16.9%	14.7%	12.5%
Ohioans who are 45-64 years old	18.9%	16.3%	14.4%	12.5%
Ohioans who are 65+ years old	34.1%	25.5%	19%	12.5%

Oral health outcomes: Increased early detection of oral and pharyngeal cancers

Indicator (source)	Baseline (2015-2019)	Short-term target (2024)	Intermediate target (2027)	Long-term target (2030)
8. **Oral cavity and pharynx cancer stage diagnosis.** Percent of oral cavity and pharynx cancers with an early-stage diagnosis (Public Health Data Warehouse)	30.8%	32.5%	33.6%	34.6%
Priority populations				
Black, non-Hispanic Ohioans	26%	29.9%	32.3%	34.6%
Hispanic Ohioans	27%	30.5%	32.5%	34.6%

Tracking progress on community conditions

The State Oral Health Plan does not include SMART objectives related to community conditions priorities (healthy food access, poverty, and transportation). However, the Plan acknowledges that addressing these priorities is critical to achieving the long-term goal and vision of the State Plan. State Plan partners are encouraged to work alongside other Ohio organizations who are working to improve community conditions. Through a collective impact approach, public and private organizations across the state can work together to address challenges and measure progress on healthy food access, poverty, and transportation.

Refer to the state documents linked on page 14 for relevant plans and efforts on which to partner.

Oral health data limitations and recommendations

The SMART objectives above are based on data from a variety of publicly available sources. While care was taken to select metrics from credible sources, each of these sources has its own limitations. Several data gaps and limitations are outlined below.

Publicly available data: The State Oral Health Plan relied on the limited amount of oral health data that is publicly available and consistently updated to track progress over time. Publicly available data often comes from state or national surveys and relies on self-reported conditions and behaviors. Other administrative data, such as Medicaid claims data, is often unavailable at the state level and could not be used for this Plan. High-quality, granular, timely, and specific hospital and provider data is also not publicly available. Finally, data from the Ohio Medicaid Assessment Survey online dashboard reports race and income categories that are not mutually exclusive.

Data lag: Publicly available data sources, such as government surveys and vital statistics records, often lag by one to three years between the time of data collection and the time of release. This is important to acknowledge from a policy perspective, as data may predate important policy changes or other factors which could impact performance on a metric. For example, the impact of the COVID-19 pandemic may be better reflected in some measures than others.

Disaggregated data: Data is not consistently disaggregated by race and ethnicity, income level, educational attainment, county, disability status, and other important characteristics across national- and state-level data sources. As a result, few priority populations may be identified for some SMART objectives, while others have more.

There is also a lack of data to identify other groups that experience disparities and inequities, like recent immigrants or LGBTQ+ Ohioans. Small sample sizes for some groups may also lead to data suppression. Aggregation of data for groups with smaller populations, such as Asian Ohioans, can mask health disparities for subpopulations.

Recommendations

A strong, interoperable, and transparent data system is necessary for evidence-based policymaking and program evaluation. Lack of comprehensive and disaggregated state and local data on oral health hinders Ohio's ability to make targeted improvements and advance equity. Without oral health data, community leaders and State Plan partners cannot accurately identify and address inequities or measure progress.

Policymakers and other State Plan partners can improve oral health data collection, reporting, and transparency by:

1. Hiring a Dental Director at the Ohio Department of Health to oversee the establishment of a statewide coordinated process to work across systems to improve oral health data management and infrastructure. This includes establishing oral health coordinators at other organizations/state agencies.
2. Dedicating resources to data infrastructure, including software, hardware, and personnel needs.
3. Engaging epidemiologists to analyze data from the National Nutrition Examination Survey and report on oral hygiene and oral health clinical data for Ohio, disaggregated by race, ethnicity, age, and income, and to compare Ohio to national values.
4. Utilizing state-added Behavioral Risk Factor Surveillance Survey oral health questions related to Emergency Room visits, oral hygiene practices, cleanings, and dental pain to assess the state of oral health in Ohio, and publicly reporting the findings.
5. Incentivizing data sharing and collaboration among providers, local organizations, and across programs within state agencies.
6. Encouraging collection and public release of quality data from Medicaid claims, hospital systems, and other state-level data repositories, in a timely (quarterly, monthly, etc.) manner.
7. Requiring, via contract, that Medicaid managed care organizations publicly share program data.
8. Creating a state dashboard of indicators, validating them, and using them to annually assess the State Oral Health Plan.
9. Developing data standards on priority populations and consistently collecting information about race, ethnicity, language, disability status, zip code, sexual orientation, veteran or immigration status, and other characteristics in patient satisfaction surveys, program evaluation tools, and wherever else oral health data is collected.
10. Strategically over-sampling public surveys in minority communities so that reliable estimates can be reported, and the health of that population can be assessed.
11. Establishing community partnerships with local civic organizations, health departments, hospitals, behavioral health providers, and schools to host key informant interviews and focus groups and to help determine data-related needs, especially with organizations that represent priority populations.

Part 5. Background, purpose, and process

Part 5 includes relevant background information, additional details on the process for developing the State Oral Health Plan, and descriptions of State Plan components.

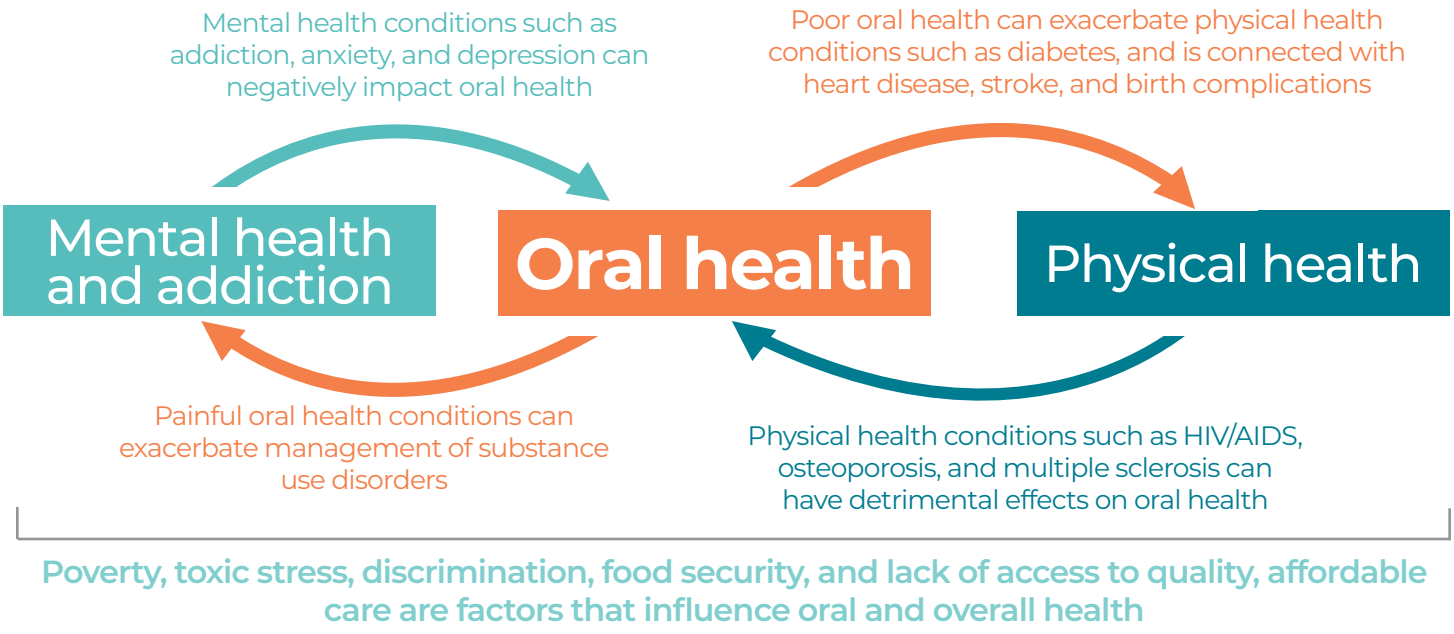
Connections between oral health and overall health

As displayed in figure 10, there are many factors that influence oral health. Community conditions like poverty, food security, toxic stress, and discrimination; health behaviors; and care access and affordability can impact oral health and overall health. Many Ohioans face obstacles to optimal oral health.

There are connections between oral health and mental health and addiction.[13] For example, anxiety is associated with teeth grinding and clenching. Anxiety and depression can also be associated with self-neglect and lack of preventive care, which may lead to poor oral health outcomes. On the other hand, drug use, such as tobacco or methamphetamine, can cause poor oral health conditions, and someone in recovery from substance use disorder may struggle with dental pain management and opioid prescriptions.[14]

Additionally, because the mouth is a prominent part of personal appearance, people with visible signs of poor oral health are often negatively judged and socially stigmatized. This affects mental health and can have other influences on well-being, such as employment outcomes and social relationships.

Figure 10. **Connections between oral health and overall health**



Oral health also has many connections to physical health. For instance, poor oral health and periodontal disease can exacerbate conditions like diabetes, and have been connected to heart disease, stroke, dementia, and birth complications.[15] Physical health conditions, including osteoporosis and HIV/AIDS, have also been connected to tooth loss and oral lesions.[16] Some medications cause dry mouth, which can also lead to oral health problems.[17]

History of medical/dental separation

Until the 1800s, dental treatment was performed, unregulated, in barber shops. The dental profession was officially established in 1840 when the first dental college in the world opened in Baltimore, Maryland. Prior to its opening, the two founders approached the University of Maryland College of Medicine about integrating dental instruction into medical school. However, the physicians rejected the proposal, as they believed dentistry was more akin to a craft, rather than a life-saving treatment.

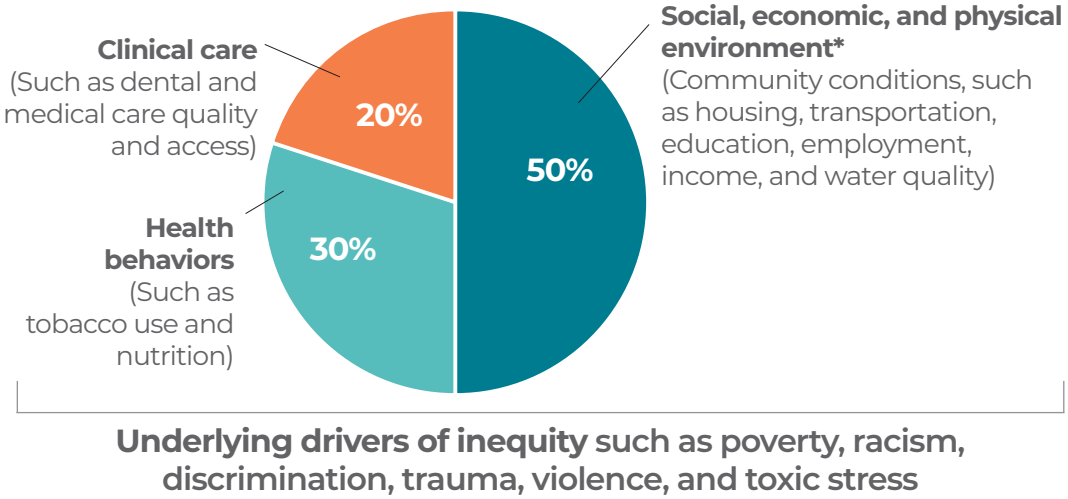
Since then, organized medicine and dentistry have fought to keep the medical and dental systems separate due to desires of professional autonomy and independence, and the belief that oral health does not affect overall health—a misconception that factored into the separation of medical and dental insurance.

The idea of medical insurance first originated in the U.S. in 1929[18], but dental insurance was not created until several decades later, in 1954.[19] Since their creation, the two have served different functions. While medical insurance was designed to protect against large, unpredictable expenses, dental insurance was intended to fund predictable and lower-cost preventive care. Dental insurance has often been perceived as a "benefit" rather than a "necessity."[20]

What shapes our oral health?

There are many modifiable factors that influence oral health and overall health, as shown in figure 11. These factors are sometimes referred to as the "social determinants of health" or the "social drivers of health." The State Plan addresses many of these drivers, including poverty, transportation, healthy food access, health behaviors, and access to quality oral health care.

Figure 11. **Factors that influence oral and overall health**



* These factors are sometimes referred to as the "social determinants of health" or the "social drivers of health."
Source: Booske, Bridget C. et. al. *County Health Rankings Working Paper: Different Perspectives for Assigning Weights to Determinants of Health*. University of Wisconsin Public Health Institute, 2010.

How will we know if oral health is improving?

The long-term goal of the State Plan is that Ohio has an oral healthcare system that is available, accessible, and affordable for all Ohioans. This goal contributes to the vision of optimal oral health for all Ohioans across the lifespan. To achieve this goal and vision, Ohioans need regular access to preventive dental care and treatment when issues, such as tooth decay, arise. Ultimately, we will know if oral health is improving when there is reduced tooth decay and periodontal (gum) disease, increased early detection of oral and pharyngeal cancers, and when disparities in oral health outcomes are eliminated, as displayed in the conceptual framework (figure 2 on page 5).

How was the State Plan developed?

Facilitated by the Health Policy Institute of Ohio (HPIO), under contract with Oral Health Ohio, the State Plan was developed with an analysis of secondary data and input from approximately 200 Ohioans through:

- **Healthcare provider focus groups:** HPIO and Oral Health Ohio hosted five virtual focus groups with 52 participants from a variety of dental and medical specialties and locations across the state (refer to the **Assessment of Ohio's oral health strengths and challenges** for more information)
- **Consumer focus groups:** A total of 114 community members in five cities (Columbus, Athens, Cleveland, Toledo, and Cincinnati) attended focus groups to provide input on the state of oral health in their communities (refer to the **Assessment of Ohio's oral health strengths and challenges** for more information)
- **Advisory committee**: A multi-sector advisory committee with 27 members met four times to provide guidance and feedback throughout development of the Plan (see Appendix A for a list of committee members and the group's core values). The advisory committee was responsible for reviewing, discussing, and selecting the priorities for this State Plan, as well as the goals and action steps to address each priority:
  - **Priority selection**: After reviewing assessment findings, advisory committee members were asked to complete a prioritization survey to select the areas of focus for the State Plan.
  - **Goals and action steps selection**: The advisory committee selected the Plan's goals via an online survey. Action steps for achieving each goal were collected from public repositories of evidence-based strategies and selected with advisory committee input.

Components of the State Oral Health Plan

To provide partners with a roadmap to reach the vision of the State Oral Health Plan, the Plan includes the following components:

Equity

Priorities

Taking action

Tracking progress

The following sections describe each component in more detail.

 Equity

This Plan defines **health equity** as the attainment of the highest level of health for all people. Achieving health equity requires valuing everyone equally, focusing on societal efforts to address avoidable inequalities, recognizing and rectifying historical injustices, addressing contemporary injustices, eliminating health and healthcare disparities, and assuring structural and personal conditions are in place to support optimal health. To eliminate disparities and inequities, policies, programs, and services must be tailored to Ohioans with the greatest need, such as Ohioans of color, Ohioans with disabilities, Ohioans with low incomes, and Ohioans living in rural or Appalachian regions. These groups, among others, face bias, discrimination, and structural barriers to oral and overall health that can be eliminated through deliberate action.

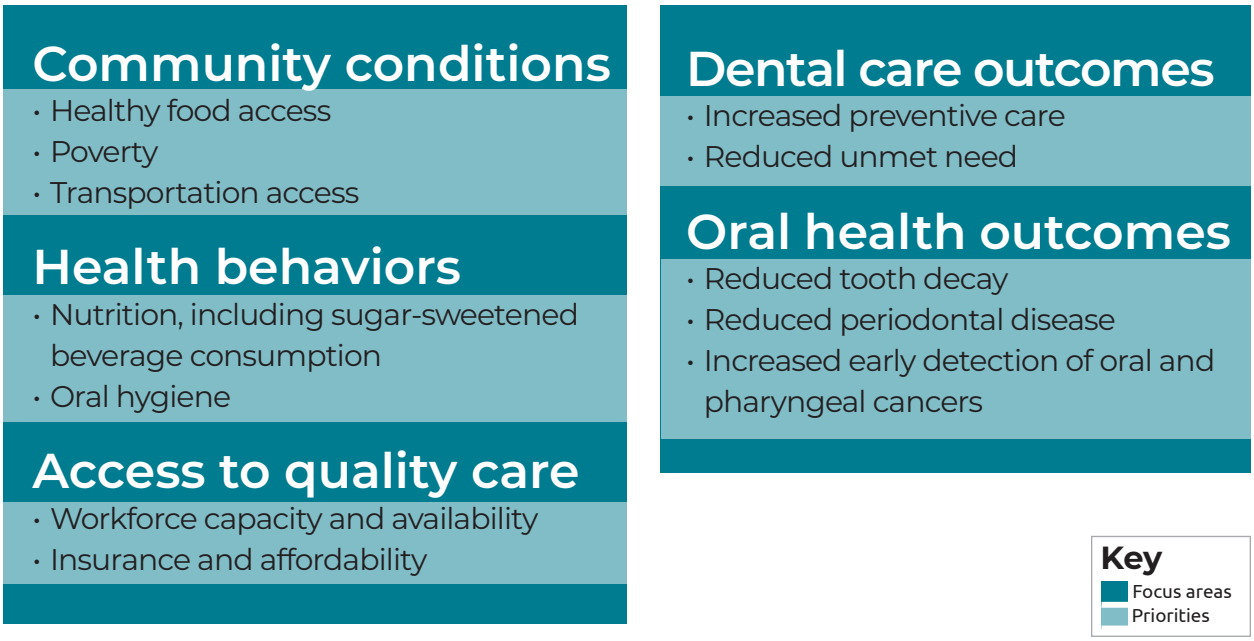
The State Plan helps partners advance equity by:

- **Identifying priority populations**. Based on available data, groups of Ohioans who experience outcomes at least 10% worse than the state overall were identified as priority populations. Priority populations were also identified based on the **Assessment of Ohio's oral health strengths and challenges**, including findings from the healthcare provider and consumer focus groups, as well as feedback from the advisory committee.
- **Prioritizing equity in action steps.** Each of the Taking Action sections in the State Plan highlights considerations for prioritizing equity when implementing policies, programs, and services. Additionally, action steps marked with the equity symbol () are likely to reduce disparities based on a review of research by **What Works for Health**. An action step without an equity symbol can still be effective in advancing equity if it is tailored and adapted to meet the needs of priority populations.
- **Setting universal targets to eliminate disparities.** All State Plan SMART objectives include universal long-term targets to reinforce the importance of eliminating disparities for Ohioans that experience the worst outcomes. This means that the long-term targets for all priority populations are the same as the long-term targets for the state overall. More information about SMART objectives can be found on page 41.

Priorities

The State Plan is organized into five focus areas. Within these focus areas, the State Plan identifies 12 priorities. Figure 12 lists the focus areas and priorities of the State Plan.

Figure 12. **Focus areas and priorities of the State Oral Health Plan**



These priorities were identified through a multi-step selection process informed by:

- The results of the **Assessment of Ohio's oral health strengths and challenges**, including secondary data analysis and findings from the healthcare provider and consumer focus groups
- Advisory committee feedback provided through a prioritization survey and small group discussions
- Input from other subject matter experts

Taking action

The purpose of the Taking Action sections is to provide state and local partners with next steps to advance the priorities and achieve the vision of the State Plan.

Each Taking Action section includes:

- **Goals**: Broad statements that express a desired outcome to address the priority.
- **Action steps:** Specific recommendations, including the implementation of policies, programs, and services to achieve the goal.

Figure 13 provides an example of a goal and action step.

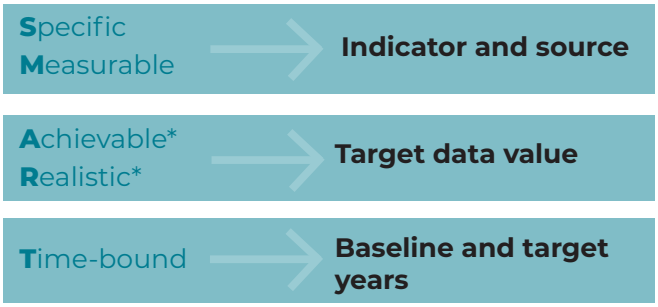
Figure 13. **Goal and action step example**

The goals in the State Plan were selected by the advisory committee through a prioritization survey, and then action steps were added to address each prioritized goal. The action steps in the State Plan are evidence-informed, meaning that there is either research evidence showing that the policy, program, or service has achieved positive outcomes relevant to State Plan priorities, or there is information provided by subject matter experts that the approach is promising.

Tracking progress

Progress will be tracked on the State Oral Health Plan priorities so that partners across the state will know whether we are advancing the vision of optimal oral health for all Ohioans across the lifespan.

State Plan progress will be tracked using SMART objectives, which are:



The State Plan includes 8 SMART objectives, based on the indicators included in the tables on p. 29-34. Oral Health Ohio will track and report progress on these objectives at the short-term and intermediate target dates (2024 and 2027). Oral Health Ohio will also report on progress on the goals and action steps in the State Plan.

The eight SMART objective indicators were selected with advisory committee assistance. Data for each indicator is:

1. Publicly available
2. Measured at the state level
3. Able to be broken out by factors such as race, ethnicity, income, insurance type, and/or disability status so that priority populations could be identified
4. Updated regularly (annually or biannually) so that targets could be set and progress could be monitored

Each SMART objective includes a short-term (2024), intermediate (2027), and long-term (2030) target, as well as priority populations. By setting universal long-term targets, the State Plan sets a bold goal that disparities will be eliminated across these SMART objectives by 2030. To achieve this goal, action must be focused on supporting priority populations who experience significantly worse outcomes than the state overall.

Community conditions

Although the State Plan does not include SMART objectives related to the community conditions priorities, this Plan encourages oral health stakeholders to engage in a collective impact approach with partners across the state who are working toward improvement in healthy food access, poverty, and transportation. Relevant state plans with priorities and/or targets in these areas are linked on page 14.

Target setting methodology

To select the long-term, universal targets for each SMART objective in the State Plan, HPIO identified a similar metric from Healthy People 2030 or another state's oral health plan to use as a rough benchmark. HPIO then calculated the percent change of each benchmark metric from baseline year (e.g., 2019) to target year (e.g., 2030) and applied that as a rate of change to the number of years between baseline and target for Ohio's State Oral Health Plan.

After this calculation was performed, some targets in the State Plan were adjusted based on:

- Whether the target was an appropriate balance of achievable and aspirational given Ohio's policy environment.
- The degree of disparities for priority populations. For SMART objectives with the largest disparities, the target for the state overall was reduced so that the priority population targets were more achievable.

The long-term target for dental workforce had no benchmark metric on which it could be based. HPIO set the long-term target for this metric based on information collected at the consumer and provider focus groups, as well as feedback from subject matter experts.

After the long-term targets were selected, HPIO calculated a consistent rate of annual change for both Ohio overall and priority populations from their baseline values to the long-term target value. This means that the rate of change is greater for priority populations so that universal targets can be achieved in 2030. The targets for 2024, 2027, and 2030 were pulled out as the short-term, intermediate, and long-term targets for the State Plan.

All targets were reviewed by members of the advisory committee, as well as several additional oral health data experts in Ohio, and their feedback was integrated into target setting decisions.

Appendices

Appendix A. **State Oral Health Plan advisory committee**

Name	Title	Organization/Agency
Reem Aly, JD, MHA	Executive Director	Ohio School-Based Health Alliance
Homa Amini, DDS, MPH	Public Policy Advocate	Ohio Academy of Pediatric Dentistry
Frank Beck, DDS	Program Director, GPR Dental Residency Program	Bon Secours Mercy Health, Youngstown
Ron Browder, MSE	Executive Director	Federation for Health Equity & Social Justice
Paul Casamassimo, DDS	Pediatric Dentist	Nationwide Children's Hospital
Yvonka Hall, MPA, RA, CTTS	Executive Director	Northeast Ohio Black Health Coalition
Chris Harmison, RDH	Officer	Ohio Dental Hygienists' Association
Theresa Hatton, BA	Vice Chair, Board of Directors	Ohio School-Based Health Alliance
Ashiko Hudson	Program Manager	Ohio Commission on Minority Health
Jeannette Jarrett	Operations and Support Specialist	Ohio Association of Community Action Agencies
Susan Lawson, MHRM	Director of Oral Health Services	Ohio Association of Community Health Centers
Kate Mahler, CAE	Deputy Executive Vice President	Ohio Academy of Family Physicians
Misti Malfe, RDH	Director, Dental Hygiene Program	Hocking College
Christina May, MS, BSN, RN	School Based Health Coordinator, Office of Whole Child Supports	Ohio Department of Education
Ursel McElroy, MPA	Director	Ohio Department of Aging
Jason Menchhofer, MPH, REHS	Health Commissioner, Mercer County Health District	Association of Ohio Health Commissioners, Inc.
Vinod Miriyala, BDS, MPH, CAGS, DDS	Pediatric Dentist	Keep Smiling Kids and Centerville Pediatric Dentistry
Erum Qayum, MD	Physician Administrator, Twin Valley Behavioral Healthcare	Ohio Department of Mental Health and Addiction Services
Eric Richmond, Esq.	Director of Legal and Legislative Services	Ohio Dental Association
Laura Sorg, MD	Medical Director	Ohio Dept of Developmental Disabilities
Justin Trevino, MD	Medical Director	Ohio Department of Mental Health and Addiction Services

Appendix A. **State Oral Health Plan advisory committee** (cont.)

Name	Title	Organization/Agency
Carroll Ann Trotman, BDS, MA, MS	Dean, College of Dentistry	Ohio State University
Kelly Vyzral, BA	Senior Health Policy Associate	Children's Defense Fund
Susan Wallace, MSW, LSW	President/CEO	LeadingAge Ohio
Angela Weaver, BA	Director of Regulatory Affairs	Ohio Association of Health Plans
John Weigand, MD	Chief Medical Officer	Ohio Department of Health and Ohio Department of Aging
Melissa Wervey Arnold, BSJ	Chief Executive Officer	Ohio Chapter, American Academy of Pediatrics

State Oral Health Plan core values

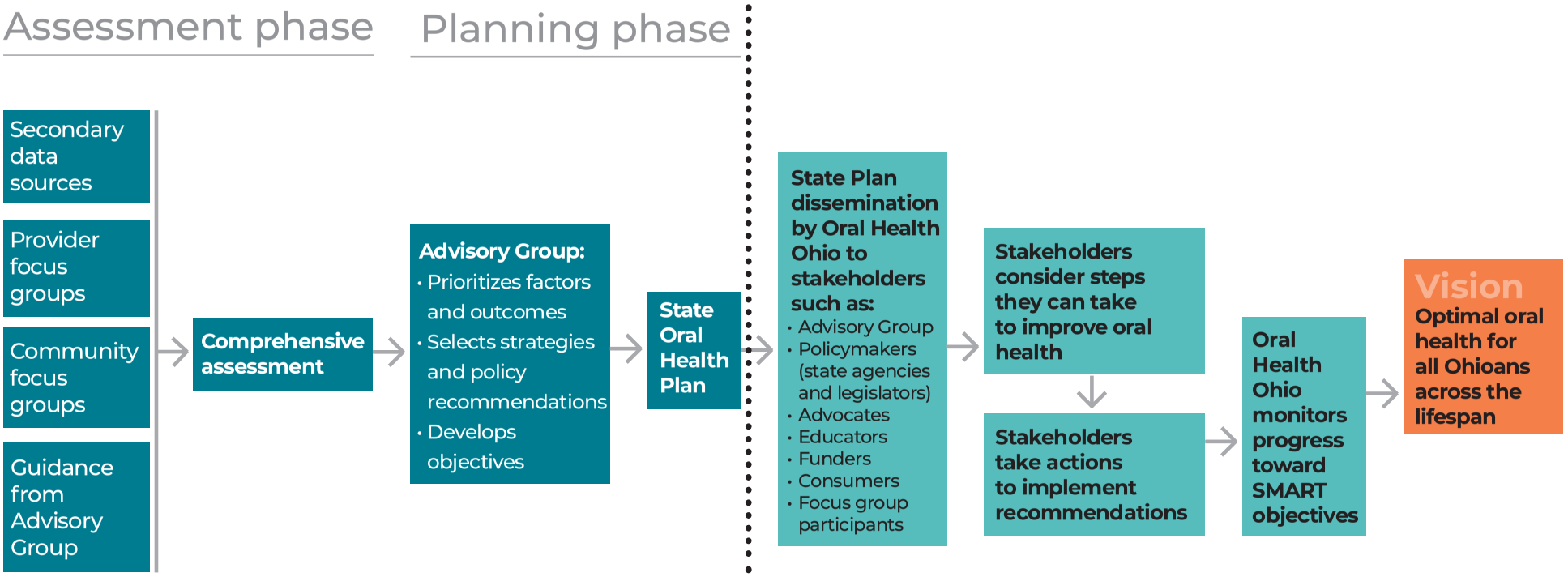
To guide their decisions on the State Oral Health Plan, the advisory committee agreed to the following list of core values. These core values were adopted from the **Healthy People 2030 Foundational Principles**:

1. The health and well-being of all people and communities is essential to a thriving, equitable society.
2. Promoting health and well-being and preventing disease are linked efforts that encompass physical, mental, and social health dimensions.
3. Achieving health and well-being requires eliminating health disparities, achieving health equity, and attaining health literacy.
4. Promoting and achieving health and well-being across Ohio is a shared responsibility that is distributed across the national, state, and community levels, including the public, private, and not-for-profit sectors.

Appendix B. **State Oral Health Plan Pathway to Impact**

The Ohio 2023-2027 State Oral Health Plan was produced through a collaborative effort of approximately 200 Ohioans (State Plan page 38). This State Oral Health Plan Pathway to Impact outlines the phases of developing the Plan and steps that can be taken by Oral Health Ohio and State Plan partners after its release to achieve the vision of optimal oral health for all Ohioans across the lifespan.

Purpose The Ohio State Oral Health Plan is an actionable roadmap to ensure oral health is integrated with, and elevated to, the same importance as overall health. The State Plan is designed to guide actions taken by policymakers, advocates, educators, providers, and funders.



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