

About this document: This is an installment of the Massachusetts State Oral Health Series (MOHS), developed by the Massachusetts Department of Public Health (MDPH). The series focuses on important issues in oral health in the state through topic-specific installments to be released over time. This issue outlines the programs and statistics in Massachusetts. Please visit www.mass.gov/orgs/office-of-oral-health for more information.

FOCUS ON ORAL HEALTH

In recent years, oral health, particularly for children and adolescents, has been both a national and state priority due to the evidence of growing disparities in oral health-related outcomes and access to care. This document outlines the importance of oral health during childhood, data trends, and next steps for Massachusetts.

Programs that have made oral health a priority include:

United States

Oral Health is a **Healthy People 2030** leading health indicator topic¹

Massachusetts

Title V program previously selected Oral Health as a state priority in 2010²

THE FACTS

Oral Health Issues

Tooth decay is the most common chronic condition in children across the United States and in Massachusetts.³ Periodontal disease is also a common condition in children. Some biological reasons for the high prevalence of caries and periodontal disease include:

- Viral conditions
- Fluctuations in hormone levels
- Diabetes
- Medications
- Genetic predispositions

Consequences of Poor Oral Health⁴

- **Loss of productivity** in school and inhibited learning due to pain
- Increased **medical and dental costs**
- Decreased **oral health-related quality of life**
- Decreased **self-esteem**
- Increased **risk of developing future dental issues**, both in primary and permanent teeth

Inequities and Determinants⁵

Among children in the United States, dental caries and periodontal disease are conditions with **significant inequities**. Some examples include:

- **Hispanic and Black non-Hispanic children** aged 2-4 and 6-8 years are most likely to experience tooth decay.
- Children from **low-income families** are more likely to have tooth decay.
- Children with **Medicaid** are less likely to receive dental services.

Community and societal factors influencing these inequities include:

- Lack of preventive oral health services available in the community
- Availability of insurance and providers who take public insurance plans
- Lack of access to healthy food options in the community
- Lack of fluoridated community water supply
- Access to providers who speak the same language as patients

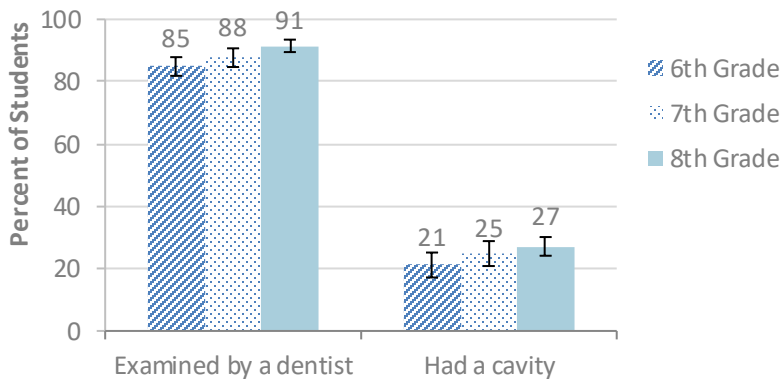
THE DATA Trends in Massachusetts

The primary source of data that is currently available for children and adolescent oral health in Massachusetts is the Youth Health Survey (YHS)⁶ and Youth Risk Behavior Survey (YRBS).⁷ The YHS is a MDPH surveillance survey established in 2007 which aims to assess the health of youth and young adults in middle and high school. The YRBS is a national survey established in 2005 to assess risk behaviors in high school students.

Note: The data presented in this section includes students who answered 'not sure' or did not respond to the corresponding oral health questions.

Overall Trends

Massachusetts Middle School Student Oral Health Indicators in the Past Year, 2017

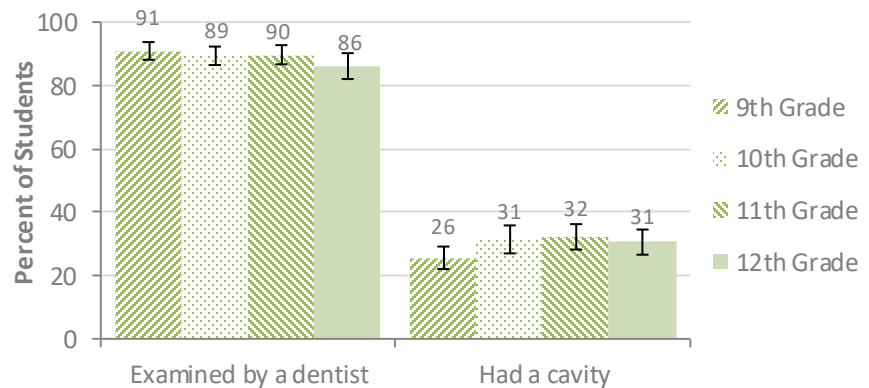


In Massachusetts: Overall, the majority of middle school students across grade levels reported being examined by a dentist in the previous 12 months. A subset of middle school students (between 7-10%) reported being examined by a dental provider at school in the past year.

In Massachusetts: The majority of high school students reported being examined by a dentist in the previous 12 months. A subset of high school students (between 6-7%) reported being examined by a dental provider at school in the past year.

Nationally: 75.7% of high school students had seen a dentist in the past 12 months.

Massachusetts High School Student Oral Health Indicators in the Past Year, 2017

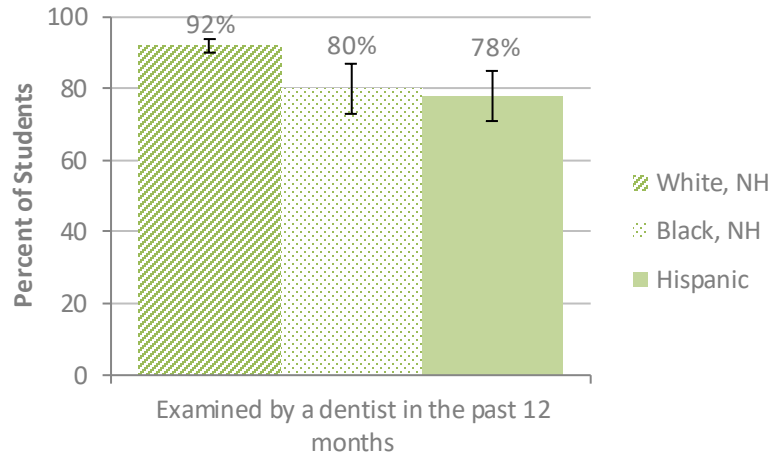


A note on oral health inequities for children/adolescents: Nationally, Mexican American and Black, non-Hispanic children ages 3 to 9 experience the greatest tooth decay rates compared to other racial and ethnic groups.⁵ These differences are unjust and avoidable, and often due to societal and environmental factors such as lack of community water fluoridation, transportation barriers impacting ability to attend appointments, poverty, and complexity of the Medicaid benefit.⁵

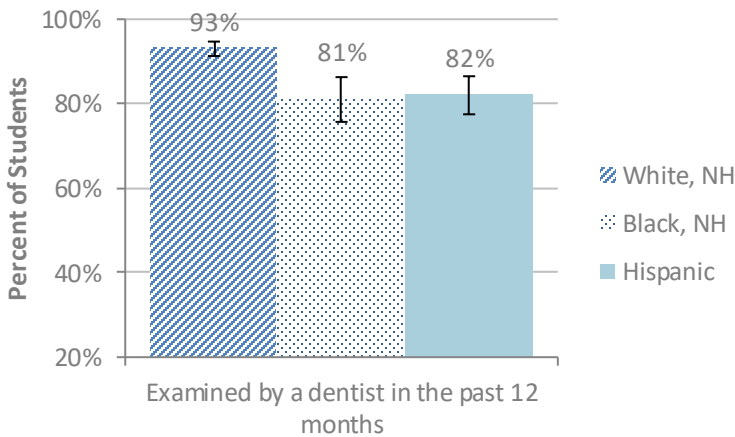
Race/Ethnicity

In Massachusetts: Significantly fewer middle school students who identified as Black, non-Hispanic (NH) or Hispanic reported being examined by a dentist in the past year compared to White, NH students. Communities of color often face numerous barriers accessing culturally competent oral health care and poor access to oral health care among children of color means fewer preventive services, higher rates of undiagnosed and untreated dental caries, and poor long-term oral health outcomes.

Massachusetts Middle School Student Oral Health Indicators by Race in the Past Year, 2017



MA High School Student Oral Health Indicators by Race in the Past Year, 2017

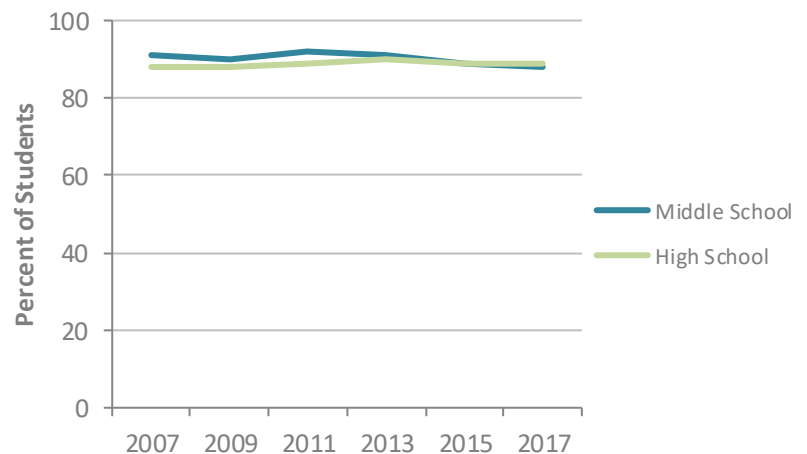


In Massachusetts: The racial and ethnic inequities in oral health care utilization among middle school students exist among high school students as well. Significantly fewer high school students who identified as Black, non-Hispanic (NH) or Hispanic reported being examined by a dentist in the past year compared to White, NH students.⁸ Rates of reported cavities among middle and high school students did not vary significantly by race/ethnicity. However, because fewer Black, NH and Hispanic students are being seen by oral health providers, many cases of dental caries are likely being undiagnosed and untreated.

Trends

In Massachusetts: The percent of middle and high school students who reported being examined by a dentist in the past 12 months has remained largely unchanged since the YHS started in 2007. A slight decrease in percent of students who were examined by a dentist in the past 12 months can be seen between 2011 and 2017. **Nationally,** the Healthy People 2020 Leading Health Indicator data suggests that there is an upward progression of low-income children and adolescents who received dental services within the past year since 2007.

Percent of Middle and High School Students who Saw a Dentist in the Past 12 Months 2007-2017



THE PROGRAMS

The MDPH Office of Oral Health and its partners implement several projects in Massachusetts to address the oral health inequities that children and adolescents face. Several stakeholders are involved in planning and implementing the programs including schools, early childhood programs, community groups, and community health centers. The programs include:

- **Community-Based Dental Care:** Community-Based Dental Care Programs, typically operated by dental hygienists, provide portable dental services including screenings, education, dental sealants, fluoride, and referrals in schools and community sites across the state. These programs aim to increase access to oral health prevention and treatment services.⁹
- **Fluoride Varnish Training Programs:** Fluoride varnish is an effective method of preventing cavities for children. MDPH partners train medical and dental professionals across the state in the fluoride varnish application. Trainings available to healthcare professionals include Smiles for Life.¹⁰
- **City and town fluoride monitoring:** Community water fluoridation is a safe and effective public health intervention to reduce tooth decay. MDPH monitors fluoride levels across the state to ensure effectiveness for all age groups and MDPH partners provide education on the benefits and importance of community water fluoridation.

The Oral Health Equity Project

The MDPH Office of Health Equity recently participated in the Department of Health and Human Services Office of Minority Health State Partnership Initiative to Address Health Disparities (SPI).¹¹ Through the initiative, the DPH Office of Health Equity and Office of Oral Health worked together to implement the Oral Health Equity Project.

Project Goal: The overarching goal across project states is to improve the health of People of Color through the development of policies and programs that will help eliminate health disparities.

The Oral Health Equity Project (OHEP) in Massachusetts: Massachusetts is one of 22 states that participated in the SPI initiative. OHEP focused on increasing the number of Black and Hispanic youth aged 0-14 in the communities of Worcester and Holyoke, Massachusetts, who see a dentist/dental hygienist each year. Although OHEP has ended, our community partners have sustained aspects of this work to continue connecting youth to dental care. **Strategies used in OHEP include:**

- Developing robust partnerships with community organizations (including schools, community health centers, and early childhood organizations)
- Providing education and training opportunities for staff members at both clinical and community partner sites
- Establishing strong referral systems between community organizations and clinical sites
- Improving data collection tools and protocols for community health centers, schools, and other community partners

NEXT STEPS

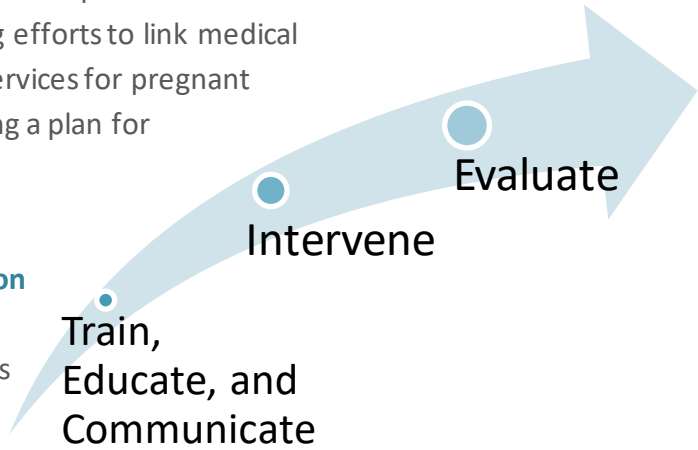
The **goal of the MDPH Office of Oral Health** is to improve, promote and protect the oral health of all Massachusetts residents throughout their lifespan by focusing on prevention, education, and linkage of dental and medical care. The next steps include:

Prevention: Developing partnerships to prevent oral health issues in children and adolescents. **Education:** Training medical and dental providers on prevention and treatment for children and adolescents. **Linkage:** Continuing efforts to link medical and dental practices to create comprehensive oral health services for pregnant women and infants. **Surveillance and Evaluation:** Developing a plan for long-term surveillance of statewide oral health outcomes.

Dental and medical providers can aid in this effort by:

ensuring that all provider staff receive **training and education** focused on the importance of treating children and adolescents, providing **screening / referrals** for treatment as needed, and **communicating** between medical and dental practices.

Community stakeholders can aid in this effort by: **developing** oral health programs and materials for children and adolescents and their families, **engaging** with community members and other stakeholders to identify the barriers to accessing oral health care in the community, **connecting** children and adolescents with community resources and **communicating** with providers to determine opportunities for collaboration.



Healthy People 2030: Progress and Next Steps

Healthy People 2030 is a national initiative aimed at creating 10-year national objectives for improving health across the United States.¹ Children and adolescents are a large focus area for the Healthy People 2030 goals. Some of the indicators relevant to children and adolescents oral health are presented below:

- Reduce the proportion of children and adolescents with **lifetime tooth decay experience** in their primary or permanent teeth
- Reduce the proportion of children and adolescents with **active and untreated tooth decay**
- Increase the proportion of low-income youth who have a **preventive dental visit**
- Increase the proportion of children and adolescents who have **dental sealants** on one or more molars

Efforts to impact these indicators are underway both nationally and in Massachusetts. MDPH oral health initiatives for children and adolescents all center on achieving these national goals through building, sustaining, and evaluating evidence-based programs across the state.

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