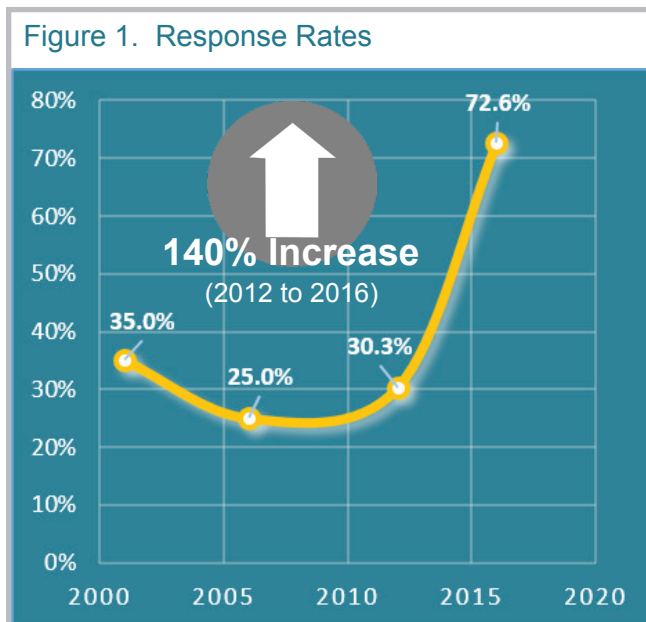


Key Finding: For children 6-9 years old, Maryland surpasses the Healthy People 2020 national objectives and targets in three key areas: caries experience, untreated decay, and dental sealants.

PROJECT BACKGROUND

The Maryland Department of Health has conducted several statewide oral health surveillance projects of Maryland's school children over the past 20 years. The first surveillance project was during the 1994 - 1995 academic year, followed by projects in 2000 - 2001, 2005 - 2006, 2011 - 2012, and 2015 - 2016. Dental caries is the most common chronic disease affecting U.S. children.¹ The purpose of these projects is to describe the oral health status of Maryland's public elementary school children, and to provide surveillance data that will help shape appropriate public health strategies and targeted programs to mitigate this disease.

In the 2015 - 2016 surveillance project, a total of **7,923** kindergarten and third-grade students in **56** public schools statewide received an oral screening. This participation level marked a record for Maryland, the highest response rate (**72.6%**) since these projects started. Figure 1 below illustrates the 52.3 percentage point increase from 2012 to 2016, or **140% response rate increase**.



A major factor contributing to this participation increase was the use of a passive consent process, one used widely across states, whereby all children were considered eligible for the oral screening, unless the parent/guardian returned

a signed opt-out notice. Other key project changes include using dental hygienists instead of dentists to conduct the oral screenings, and using tablets to streamline data collection.

KEY PERFORMANCE INDICATOR PROGRESS

The overall oral health status of Maryland's children has improved significantly over the last sixteen years, yet health disparities exist within certain regions and among certain groups. Maryland and its partners are working to address these disparities and to improve to the oral health of all residents. Surveillance projects provide data that can be parsed to align with existing disparity focus areas and used to determine targeted programs and services. Tracking surveillance data, analyzing data trends, reporting progress, and linking state performance measures to key national performance indicators, such as Healthy People 2020, add another level of analysis and accountability. This linkage is also an effective way to standardize, compare, and measure success over time.

Overall, Maryland's 2015 - 2016 findings surpass the Healthy People 2020 national objective target percentages in three key performance areas: **caries experience, untreated decay, and dental sealants**.

¹ Benjamin, R. Oral health: the silent epidemic. Public Health Reports. March 2010;125(2):158-159. MEDLINE, Ipswich, MA. Accessed September 22, 2017.

KEY PERFORMANCE INDICATOR PROGRESS (cont'd)

Caries experience represents the prevalence of a lifetime history of dental caries, including treated and untreated disease. Untreated decay represents the prevalence of active disease only. Dental sealants represent the prevalence of having at least one dental sealant on a permanent first molar.

For children 6-9 years old, Maryland has **less caries experience (41.3%)**, **less untreated decay (13.8%)**, and **more dental sealants (41.4%)** compared to the Healthy People 2020 objective targets (49%, 26%, 28%).

Figure 2 illustrates Maryland's performance progress since 2001 and compares it to the Healthy People 2020 targets (the white bar) in each above-mentioned focus area. The key performance indicator observations as they relate to **third-grade school children** participating in the 2015 - 2016 Maryland Oral Health Survey of School Children show the following:

Caries Experience:

- In 2016, Maryland surpassed the Healthy People 2020 caries experience targets by **7.7 percentage points (41.3% vs. 49%)**.
- Since 2001, caries experience has **decreased by 2.6%** (42.4% vs. 41.3%).

Untreated Decay:

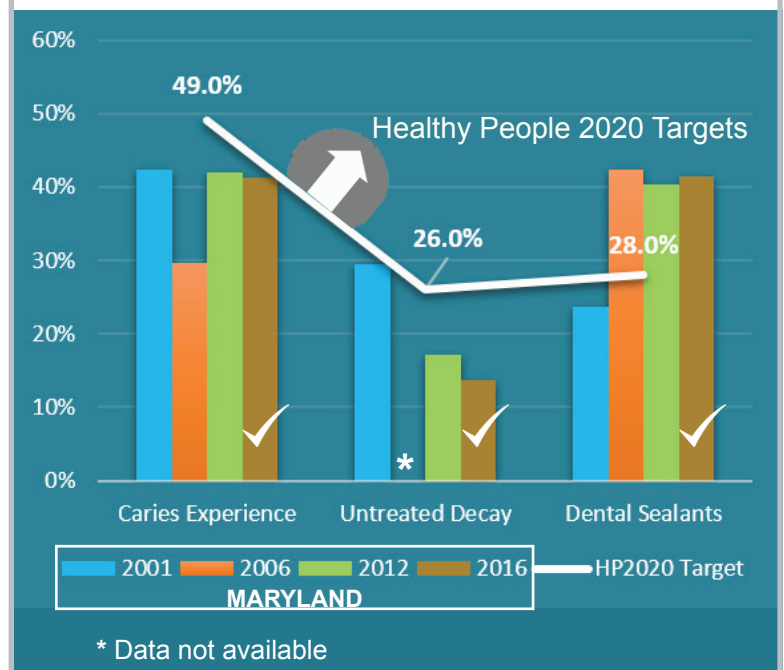
- In 2016, Maryland outperformed the untreated decay Healthy People 2020 targets by **12.2 percentage points (13.8% vs. 26%)**.
- Overall, untreated decay has **decreased by 53%** since 2001 (29.4% vs. 13.8%).

Dental Sealants:

- In 2016, Maryland exceeded dental sealants Healthy People 2020 targets by **13.4 percentage points (41.4% vs. 28%)**.
- Since 2001, dental sealants have **increased by 75%** (23.7% vs. 41.4%).

Maryland's third-grade student 2016 **untreated decay** and **dental sealants findings** are quite **significant** compared to both the Healthy People 2020 targets and the 2001 survey findings. There are many factors contributing to these performance improvements. Improved access to oral health care and a greater focus on disease prevention through programs like the Maryland Department of Health, Office of Oral Health's school-based/linked Dental Sealant Program,

Figure 2. Maryland's Healthy People 2020 Performance Progress: Third-Grade Student Indicators



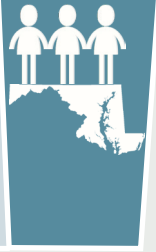
and Fluoride Varnish and Oral Health Screening Program, implemented by medical providers during well-child visits, are two such examples. Targeted literacy and education campaigns such as Healthy Teeth, Healthy Kids, launched in 2012 as a result of the successful partnering of the Maryland Department of Health, Office of Oral Health and the Maryland Dental Action Coalition, is yet another example.

Maryland's performance improvement can also be credited to its overarching focus on partnerships and planning. The 2011 - 2015 Maryland Oral Health Plan and updated 2018 - 2023 Maryland Oral Health Plan detail these evolving improvement plans, and describe how projects, like this surveillance, fit into and shape Maryland's overall plan.

PERFORMANCE MEASURES & DISPARITIES

Performance progress typically represents statewide performance. Overall performance measure data are very telling, however, achieving successful overall performance outcomes requires an in-depth **understanding** of the corresponding **disparities** (geographic, demographic, socioeconomic, grade level, survey year to survey year, etc.), coupled with the intent of using the information learned, to **guide transformative programs and interventions**.

An in-depth understanding of disparities should guide transformative programs and interventions.



The oral health status data indicated the following key findings:

Caries Experience:

- Third-grade students had significantly higher dental caries history compared to kindergarten children (41.3% vs. 30.2%).
- The prevalence of dental caries in third-grade students slightly improved from 2012 to 2016 (41.9% vs. 41.3%), whereas, the prevalence of **dental caries in kindergarten students increased by 22% from 2012 to 2016** (24.7% vs. 30.2%).
- Maryland's Eastern Shore had the highest percentage of dental caries (44.4%) and Western Maryland had the lowest (28.8%).
- Children in schools with **high proportions of free/reduced meals (low socioeconomic status) have a higher lifetime caries experience** (45.4%).

Untreated Decay:

- The prevalence of untreated decay in third-grade students decreased from 2012 to 2016 (17.1% vs. 13.8%), whereas, the **prevalence of untreated decay in kindergarten students significantly increased (31%) from 2012 to 2016** (10.2% vs. 13.4%).
- Maryland's Southern region had the lowest prevalence of untreated decay compared to the Eastern Shore region (9.1% vs. 19.5%).
- Children in schools with **middle and high proportions of free/reduced meals (mid to low socioeconomic status) are more**

likely to have untreated decay compared to children in schools with a low proportion of free/reduced meals (high socioeconomic status) (15.9% and 15.5%, respectively vs. 10.4%).

Dental Sealants:

- In Maryland, **66% of third-grade children could benefit from a new or an additional dental sealant**.
- The Southern region had the highest prevalence of dental sealants compared to the Eastern Shore, which had the lowest (48.5% vs. 27.8%).
- Children in schools with **high proportions of free/reduced meals (low socioeconomic status) are more likely to have dental sealants** compared to children in schools with a low proportion of free/reduced meals (high socioeconomic status) (45.1% vs. 39.7%).

Need for a Dental Cleaning:

- Overall, 12.6% of Maryland's students needed a dental cleaning.
- **Children in third grade were twice as likely to need a dental cleaning compared to kindergarten students** (16.7% vs. 8.2%).

Treatment Urgency:

- The clear majority of Maryland's public-school children had no unmet dental need and **less than 1% had any urgent needs**.

CONCLUSION

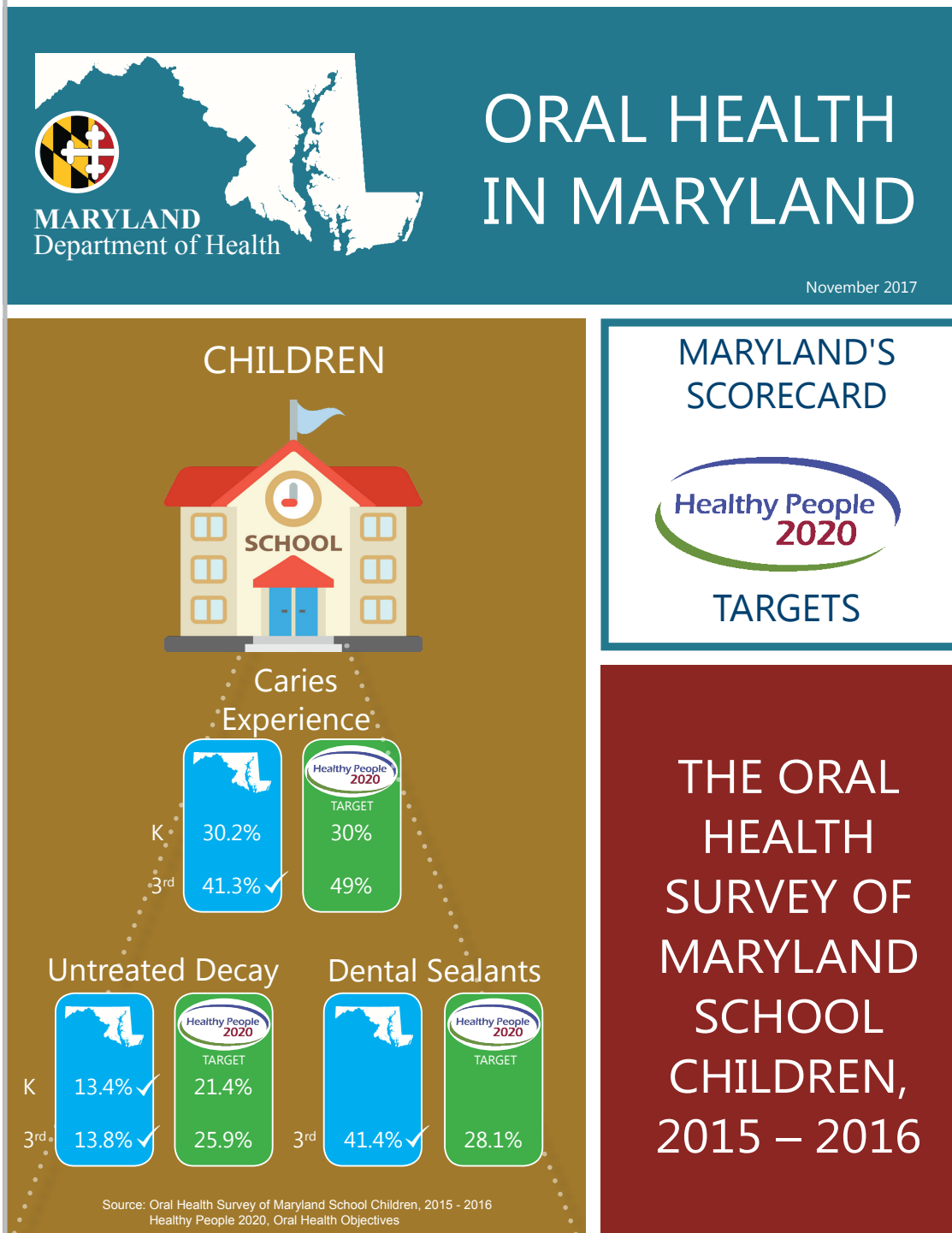
The Maryland Department of Health, Office of Oral Health, in partnership with the University of Maryland School of Dentistry, has conducted several statewide oral health surveillance projects of Maryland's school children over the past 20+ years. These projects have provided and continue to provide data that impact positive oral health outcomes and position Maryland as a leader in oral health. The infographic in Figure 3 illustrates Maryland's latest performance progress as it relates to the Oral Health Survey of Maryland School Children, 2015-2016, and the nationally recognized Healthy People 2020 targets. Maryland's focus in three key areas, access to oral health care, oral disease and injury prevention, and oral health literacy and education, provides the framework for continued improvement

and success, and makes outcomes like this possible. This project is one of many described in Maryland's Oral Health Plan, the blueprint detailing Maryland's framework and its roadmap to success.

The oral health status of Maryland's children has improved significantly. The findings from this 2016 survey quantify this improvement, and in comparison to national targets, substantiate Maryland's solid standing in the oral health community. Unfortunately, the findings also show that disparities still exist: regionally, by socioeconomic status, by grade level, and from survey to survey.

Maryland's oral health journey continues. Through meaningful partnerships, planning, and innovative programs, oral health will continue to improve.

Figure 3. Maryland's Healthy People 2020 Performance Scorecard



To preview the full report, please visit:
<https://phpa.health.maryland.gov/oralhealth/Pages/Surveys.aspx>