

Prevention First: Making Sure New York Smiles

Overview

Healthy teeth are vital for a healthy life. Unfortunately, far too many New Yorkers suffer from dental pain and the burden of high dental treatment costs. Poor dental health results in missed days of work, poor performance in school, acute and chronic pain and in extreme cases, death.^{1,2,3} This isn't exclusive to New York State. Tooth decay remains the most common chronic childhood disease in America.⁴ The good news is that tooth decay is largely preventable. The bad news is that New York is not taking full advantage of several proven prevention strategies—including increasing access to fluoridated water, school-based sealant programs, and fluoride varnish.

Nature of the disease

Unlike many diseases, caries—the disease that causes tooth decay—can be prevented. Improvements in the field of dentistry have allowed many Americans to protect and keep their teeth for most of their lives. As a result of these improvements, edentulism, the total loss of one's teeth, has steadily decreased over the past 70 years.

While oral health has improved overall for most Americans, some groups are disproportionately impacted by dental disease, including low-income adults and children, Native Americans, Latinos and African Americans.⁵ Disparities in dental health are real and persistent in our state. Poor oral health has human, financial, and social costs. Recent studies show that children with poor dental health are three times more likely to miss class and more likely to have a lower grade-point average than their healthy peers.⁶ Adults who have decayed or missing teeth are less likely to get or keep a job.⁷

The New York State Department of Health highlighted the importance of oral health in its 2013-2017 Prevention Agenda and identified the reduction of tooth decay in children as one of its goals.⁸

The status of oral health in New York State

Adults

According to the most recent data, 51% of New York adults said that they have lost one or more teeth to decay or gum disease.⁹ Individuals with fewer years of



education and lower incomes, as well as minorities and younger adults, were less likely to visit a dentist.¹⁰

New York is one of only three states to cover adult dental services in its Medicaid program. While the program does not have comprehensive coverage for adults, it does cover basic benefits such as cleanings, extractions, some root canals, fillings and dentures. Coverage does not always translate into care, however. Barriers to care include not having enough dentists; New York State has 126 dental professional shortage areas impacting over 1.7 million residents.¹¹ Oral health providers are poorly distributed across the state, as fewer dentists and hygienists practice in rural areas. Additional barriers include poor oral health literacy, inadequate transportation, and difficulty finding a provider who will accept Medicaid.¹² Older New Yorkers are particularly vulnerable to decay and tooth loss, and Medicare does not cover dental care.

Expectant mothers

Since oral health impacts overall health, good dental health during pregnancy and for new mothers is especially important. According to the most recent data available, only 45% of pregnant women in New York visited a dentist in 2011.¹³ This was down from 51% in 2009.¹⁴ Dental decay is a communicable disease. Once a child is born, cavity causing bacteria can be transferred from mother to child through many natural mother-child interactions. It is essential that moms with active decay get treatment to prevent it from spreading.¹⁵

Children

Data from the 2012 New York Oral Health Surveillance Project shows that one in four third-graders has untreated decay.¹⁶ Children from low-income families in our state are more likely to have untreated decay than their wealthier peers. Specifically, 32% of low-income children had untreated decay compared to only 15% of children in higher-income families.¹⁷ Children enrolled in Medicaid are eligible for comprehensive dental services but because coverage often doesn't always translate into care, 61% of children on Medicaid did not see a dentist in New York in 2012.¹⁸

Young children from low-income families are also more likely to develop “early childhood caries,” a particularly aggressive and often devastating form of tooth decay.¹⁹ Also known as “baby bottle tooth decay,” this disease can destroy emerging teeth and lead to problems in speech development and transitioning to solid foods. Often treatment requires children to be put under general anesthesia so that all decayed teeth can be treated or removed. Research shows that treating severe early childhood caries can cost up to \$10,000 per child.²⁰ These procedures are costly and being sedated also presents risk to the child.²¹

The costs associated with dental disease

The costs for the State, individuals, and families to treat decay are significant. When decay goes unchecked, people often go to the emergency room (ER) even though the problem could have been addressed earlier or prevented altogether in a dental office. This results in higher costs and is the wrong care, at the wrong time, in the wrong setting.²² A 2012 study found that 25,633 New York children under age six visited an ER or ambulatory surgery facility for a preventable dental condition between 2004 and 2008.²³ In one year alone, 75% of these children were treated using expensive general anesthesia procedures. The total spending on these visits for one year equaled \$31 million, and the study also found an increase in the number of these preventable dental conditions. These kinds of cases can, and should, be prevented.

Further, a 2010 study found that Medicaid enrollees in less fluoridated counties of New York needed 33% more fillings, root canals, and extractions than those in counties where fluoridated water was more prevalent.²⁴ As a result, the treatment costs per Medicaid recipient were \$23.65 higher for those living in less fluoridated counties.²⁵



Potential solutions

The role of individual behavior

While communities can take a number of steps to help protect their residents' oral health, it's also important for individuals to regularly brush with fluoridated toothpaste, visit the dentist, and eat a balanced diet with limited intake of sugary foods and beverages. Drinking tap water is one inexpensive and easy way to improve dental and overall health. In order to maximize health and save state Medicaid dollars, community-based prevention policies and individual behaviors should work in tandem.

Community problem, community solutions

Prevention is the best medicine for the health of citizens as well as taxpayers and state budgets. Fortunately there are many ways to prevent tooth decay. Fluoridation, or the practice of adjusting the level of naturally occurring fluoride in water to the optimal level to protect teeth, can prevent up to 25% of decay.²⁶ It is the single

STORY:

As a dental hygienist, I really see the power of prevention. I met a man who has always felt that his poor oral health has impacted his ability to get work. He's in his 50's but only has two 'top' teeth. He has an associate's degree and works with computers but he has always had difficulty finding the jobs he is really capable of. He spent many years working jobs he was overqualified for, such as working in a grocery store, while trying to find a job in his field.

—Dental hygienist, Orange County

There is no child who ever signed up to be poor. They are not poor by choice and yet, these children are much more subject to decay than those who live outside of the poverty level. If there is anything our leaders should do to improve oral health, the safest, least expensive way to do this is water fluoridation.

—Retired dental surgeon, Steuben County

least expensive, most effective way to reduce decay for all residents.²⁷ About 72% of New Yorkers on community water systems have access to this time-tested prevention practice.²⁸ However, less than half of those outside New York City do.²⁹ Millions of New Yorkers are being denied the benefit of fluoridated water.

School-based dental programs can also help children maintain good oral health.³⁰ These include fluoride rinse programs, where children use a concentrated fluoride mouthwash. Kids who don't have access to fluoridated water can take fluoride supplements, either at home or via a school-based program. Fluoride varnish, a sticky substance painted onto a child's teeth, can also be administered in a school or a medical or dental office. Most state Medicaid agencies, including New York, reimburse pediatricians for applying fluoride varnish to children who are at risk for tooth decay. Dental hygienists are uniquely suited to provide these types of preventive services directly to children because they are prevention experts and can deliver care at a lower cost.

School-based sealant programs are another option to help reduce disparities in oral health and save money. Dental sealants, which are clear plastic coatings that are applied to cavity-prone teeth, can prevent up to 60% of decay.³¹ In addition, the average cost of sealing one molar is less than one-third of the expense of filling a cavity.³² Currently, over half of high-need schools in New York lack sealant programs.³³

While these interventions can help reduce decay, they are more costly than fluoridation and frequently do not reach the children most in need of protection.³⁴ A 2000 CDC report estimated the following costs for several practices (in 1999 dollars):³⁵

- ▶ Community water fluoridation: 72 cents per child per year;
- ▶ School-based fluoride rinse programs: \$1.41 per child per year;
- ▶ School-based programs providing fluoride supplements: \$3.52 per child per year;
- ▶ Fluoride toothpaste: \$6-\$12 per child per year;

STORY:

I remember a patient with particularly poor oral health. The 36-year-old man admitted he had never seen a dentist before in his life. He worked as a travelling salesman and told me that sometimes the pain in his mouth was so bad he would pull over by the side of the road and wait for it to subside. After regular dental treatment, he is so happy to be living without pain.

—Dentist, Steuben County

- ▶ Prescribed fluoride supplements: \$37 per child per year;
- ▶ Professionally applied fluoride gel (for older children): \$66 per child per year; and
- ▶ Professional applied fluoride varnish (for children ages zero to seven): up to \$120 per child per year.³⁶

Conclusion

Tooth decay remains a problem in New York State, but there are a number of prevention measures available to policymakers that can make New Yorkers healthier and save the State money. Protecting and expanding access to fluoridated water is one proven, safe and cost-effective way to do so. Increasing the number of children, especially low-income children, who receive dental sealants and topical fluoride applications is another. After all, investing in the prevention of tooth decay in children will help maintain the health of adults as they grow older and will ultimately allow the State to spend less on dental treatment costs.

The Schuyler Center will be working with our skilled advisory group over the next months and will have a set of recommendations New York can take action on in the fall of 2014.

All New Yorkers deserve good oral health. Let's take the right steps to make sure that all of New York State smiles.

Endnotes

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