

Testimony to Senate Committee on Health and Welfare, 1/24/19

Barbara Frankowski, MD, MPH

Oral health is more than just healthy teeth, and includes healthy gums, tongue, the hard and soft palate, the mucosal lining of the mouth and throat, the tongue, the lips, the salivary glands, and the chewing muscles. These are tissues whose functions we often take for granted, yet they represent the very essence of what makes us human. They allow us to speak and smile; smell, taste, chew, and swallow; kiss, cry out in pain; and convey feelings and emotions through facial expressions.

Oral health is intimately linked with overall physical health. The mouth provides protection against many types of infections. Research points to associations between chronic oral infections and heart and lung diseases, stroke, and low-birth-weight, premature births. Associations between gum disease and diabetes have long been noted. (see quote from Dr Kall at end)

Oral health is also linked with mental health and social well-being. It affects obtaining a job, self-confidence, and enjoyment of life.

Most people just think about teeth they think about oral health, so let's focus on caries in children. The public perception is largely that tooth decay is an insignificant occurrence. If left untreated, however, poor oral health has significant consequences on children and their families including:

- **Pain:** Tooth decay can cause acute or chronic pain. Many children are not aware that teeth are not supposed to hurt.
- **Infection:** Infected teeth are reservoirs of bacteria that can enter the rest of the body, leaving the child prone to many other childhood infections, including ear infections and sinus infections. Development of secondary infections, in more severe cases, may require emergency care or hospitalization.
- **Nutrition problems:** Chronically painful and infected teeth make chewing and swallowing uncomfortable and difficult. Children with dental disease often do not get the nutrition they need to grow.

- **Tooth and space loss:** Chronic childhood tooth decay often results in the early loss of “baby” teeth. This can result in space loss due to movement of remaining teeth into the space, leaving insufficient room for the adult teeth to come into the mouth.
- **Sleep deprivation:** Children with chronically painful teeth have trouble getting a good night’s sleep.
- **Attention problems:** Children with infected and painful teeth have a hard time relaxing, sitting still, and paying attention in class.
- **Slower social development:** Disfigured or missing teeth can lead to difficulties speaking and can negatively affect a child’s self-esteem. When a child’s front teeth are damaged or missing in their very crucial early years of development, they often can’t form words correctly.
- **Missed school days:** Children with infected and painful teeth miss more school days than other children, disrupting their educational and social experiences. Dental caries are the most common chronic childhood disease – 3-5 times more common than asthma! It is one of the most common causes of school absenteeism.
- **Missed work hours:** Parents are more likely to miss work because of their child’s dental problems.
- **Increased costs of dental care:** As tooth destruction progresses, the treatment costs for families and states increase considerably.
- **Poor overall health:** Dental disease impacts overall health and children with poor oral health often have poor overall health.

What’s going on with children in VT?

Keep Smiling VT is a periodic survey of a representative sample of children in K and 3rd grade. KEY FINDINGS are:

1. About one-third of Vermont’s children have experienced tooth decay.

2. In the last 15 years, there has not been a significant decline in the prevalence of tooth decay among Vermont's third grade children.
3. One in ten children are in need of dental care.
4. Only 55% of third graders have dental sealants, a rate that has not improved in recent years.
5. **Poverty** has a significant impact on a child's oral health. Children eligible for the national school lunch program are more likely to have tooth decay.
6. **Parent/guardian education** has a significant impact on a child's oral health. Children whose parents/guardians have less than a college degree are more likely to have tooth decay.
7. **Parent/guardian's oral health** has a significant impact on a child's oral health. Children whose parents/guardians have lost three or more teeth due to dental disease are more likely to have tooth decay.
8. Most children in Vermont are drinking one or more sugar-sweetened beverages per day, a risk factor for tooth decay.

The results of Keep Smiling Vermont support the need for community-based prevention and education programs, screening and referral services, and restorative dental care targeted toward children at highest risk of decay.

Oral Health Prevention doesn't look good in VT:

Only 22% of VT Medicaid eligible children born in 2012 received any dental services by a dental provider by 18 months of age.

Only 43% aged 1-5 received preventative dental services in 2014

Only 62% aged 6-18 received preventative services in 2014

Only 16% of 19-64 received dental services (44% of adults have no dental insurance)

Only 56% of VT's population live in communities with water fluoridation (compared with 75% nationwide)

1700 Medicaid eligible children aged 1-5 (9%) were treated for extraction, endodontics or restorations in 2014. Of these, 23% were treated in a hospital setting, for a total cost of \$1.9 million, average of \$4,800/visit!!!!!!

TOOTH DECAY IS PREVENTABLE

With early efforts, tooth decay can be prevented. Because teeth develop before birth and start to appear in the mouth when a child is about 6 months old, efforts to prevent tooth decay must start during pregnancy and continue throughout childhood. **Two is too late!**

Several key strategies have been identified to improve the oral health of children in Vermont: (I will highlight the ones pertaining to pediatrics!)

- **Promote evidence-based strategies to reduce dental disease, including fluoride varnish application in the medical home, community water fluoridation or fluoride supplementation, and dental sealants.**
- Expand comprehensive decay prevention to include pregnant women, infants and toddlers, by expanding the Health Department's Local Health Office's Public Health Dental Hygienist program; **providing trainings to medical practitioners to assess the oral health of young children, apply fluoride varnish, educate parents and guardians about pediatric oral health, and make dental referrals;** and providing trainings to dental practitioners on seeing children by age 1 and pregnant women.
- Teach parents/guardians how to use the dental health care system and advocate for oral health for themselves and their children.
- Increase the number of dental insurance (private and public) enrollees who use their dental benefits for themselves and their children.
- Expand place-based dental care (bring the care to people), such as preschool, community, and school-based dental programs.
- **Promote adherence to the Early and Periodic Screening, Diagnostic and Treatment periodicity schedule. These recommendations outline preventive pediatric oral health services that children should receive at their pediatric or general dental home.**

• Promote the integration of oral health and primary medical care. Increase communication and care coordination between medical and dental practitioners.

- Promote oral health as part of general health and well-being to all Vermonters.
- Partner with the Health Department's Physical Activity and Nutrition Program, and others, to reduce the consumption of sugar-sweetened beverages and to ensure oral health is included in nutrition messaging.
- Build capacity in dental public health.
- Increase the number of dental providers throughout Vermont, particularly in underserved areas, that accept Medicaid.

Promote higher utilization of existing or new workforce models and their ability to work to the fullest extent of their scope of practice.

- Increase private and public sector participation in mobilizing resources and developing policy to pursue and sustain these strategies.

Thank you for allowing me to speak with you today!

Here is something from our epidemiologist, Dr. Denise Kall:

The 3-4-50 framework emphasizes that three behaviors (poor diet, tobacco use, and no physical activity) contribute to four chronic diseases (Type 2 diabetes, cardiovascular disease and stroke, cancer, and lung disease) that are the cause of more than 50 percent of deaths in Vermont. These same health behaviors and chronic diseases also correlate with poor oral health, including tooth loss from tooth decay or gum disease. Vermonters with cardiovascular disease, diabetes or prediabetes, lung disease or cancer were [more likely to have lost all of their teeth](#) compared to those without the chronic disease. This remains true after considering other variables, such as education, household income, dental visits within the past year, and age. The odds of losing all teeth was 3 times greater for Vermonters with cardiovascular disease than Vermonters without cardiovascular disease, even after controlling for other variables. Vermonters with cardiovascular disease, diabetes or prediabetes, and lung disease were also [less likely to visit the dentist](#) in the past year than those without the chronic disease.

