Dental Public Health
State Activity Submission Form

ASTDD's goal in collecting information about successful state Dental Public Health activities (e.g., practice, program, service, event, or policy) is to share this information with other states, territories, and stakeholders who may be interested in implementing similar activities. We thank you for your time and willingness to share your experiences.

Please complete the form below and return to Lori Cofano, ASTDD Best Practices Project Coordinator, at lcofano@astdd.org

FIRST CONTACT PERSON FOR INQUIRIES	
Name:	Laural Dillon, MPH, M.Ed., RDA
Title:	Oral Health Program Manager
Agency/Organization:	NH Dept. of Health and Human Services
Street:	29 Hazen Drive
City, State, Zip Code:	Concord, NH 03301
Phone:	(603) 271-0460
Email:	laural.l.dillon@dhhs.nh.gov
SECOND CONTACT PERSON FOR INQUIRIES	
Name:	Dr. Richard Niederman, DMD
Title:	Professor and Chair, Dept. of Epidemiology & Health Promotion
Agency/Organization:	WHO Collaborating Center, College of Dentistry, New York University
Street:	433 First Avenue
City, State, Zip Code:	New York, NY 10010
Phone:	(212) 998-9719
Email:	rniederman@nyu.edu

STATE DENTAL PUBLIC HEALTH ACTIVITY (e.g., practice, program, service, event, or policy) Minimum=300 Maximum=500	
Activity title:	**Caried*Away*: Delivering Essential Dental Care in Schools**
State/Territory:	NH
Summary overview, which may include the following: • Objectives • Rationale • Personnel • Key partners • Costs & sustainability	

Following the 2000 Surgeon General's Report on Oral Health in America we considered which oral health malady, age group, and interventions might provide the greatest beneficial impact.

Caries, the most prevalent oral, systemic, and life-span disease, became our focus. We considered critical ages and interventions periods. We decided on school-age children, school-based care, and prevention based on current CDC recommendations, available preventive interventions, and the absence of outcome measures. In parallel quality and improvement measures and the HealthyPeople 2010 goals emerged from multiple federal and academic centers.

We incorporated all of the above-mentioned and opted for an all-in care bundle - multiple effective interventions twice per year, for all teeth, in all children, in all grades, delivered by dental hygienists. The interventions were glass ionomer for both sealants and interim therapeutic restorations, fluoride varnish, and fluoride toothpaste. Our short- and long-term results indicated that this approach is effective (>50 caries reduction), cost-saving, and cost effective, and meets all the quality, health, and HealthyPeople goals.[1]

Ten years after the first Surgeon General's Report on Oral Health the following began emerging: the Centers for Medicare and Medicaid (CMS) interest in value-based care; U.S. Food and Drug Administration (FDA) approval of silver diamine fluoride (SDF); national guidelines for non-restorative dental care; HealthyPeople 2020 and 2030 goals; the 2020 Surgeon General's Report on Oral Health in America; and the World Health Organization (WHO) Global Oral Health Strategy for essential dental care.[2]

We are now integrating all of these guidance documents. The current work compares the efficacy of the original more complex all-in bundle with a simpler all-in bundle that substitutes SDF for glass ionomer. The results of both bundles appear to have similar clinical outcomes (~50% caries arrest, ~80% caries prevention), and both improve oral health related quality of life. Importantly, these results accrued during a 2-year, COVID-19 pandemic induced, care hiatus. As importantly, all of these interventions are aerosol-free.[3]

The lessons learned are relatively simple. Comprehensive school-based caries prevention programs can be effective and cost saving but are not sustainable given current Medicaid reimbursement methods and state practice restrictions.

The opportunity is also relatively simple. If Medicaid were to provide a bundled payment for cycle of school-based care, and if State rules for school-based and private practice were aligned, then the cost savings would be sufficient to cover essential adult dental care benefits.[4]

Summary Details

1.

We provide twice yearly, comprehensive, elementary school-based caries prevention to all students in all grades who have a signed parental informed consent form. We tested two types of care that we named "Simple" and "Complex." Both types of care are aerosol free.

Based on efficacy (see table below), we postulated that the two would be equally effective, and that simple would be less costly.

a. Simple care: SDF + fluoride varnish + fluoride toothpaste and toothbrush
b. Complex care: Glass ionomer sealants + glass ionomer interim therapeutic restorations + fluoride varnish + fluoride toothpaste and toothbrush.

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[1] Short-term outcomes: https://jada.ada.org/article/S0002-8177(14)61899-7/fulltext
Long-term outcomes: https://jada.ada.org/article/S0002-8177(20)30842-4/fulltext
Economics: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6749793/pdf/10.1177_2380084419837587.pdf

[2] ADA Guidance: https://jada.ada.org/article/S0002-8177(18)30469-0/fulltext
WHO Global Oral Health Strategy: https://apps.who.int/gb/ebwha/pdf_files/WHA75/A75_10Add1-en.pdf
WHO Essential Dental Medicines: https://apps.who.int/iris/bitstream/handle/10665/345554/WHO-MHP-HPS-EML-2021.01-eng.pdf
Essential Dental Care: https://journals.sagepub.com/doi/full/10.1177/0022034520979830

[3] Quality of Life: https://bmcoralhealth.biomedcentral.com/articles/10.1186/s12903-022-02159-5
Clinical outcomes: https://www.medrxiv.org/content/10.1101/2022.04.26.22274321v1.full.pdf

[4] Economics: https://ajph.aphapublications.org/doi/epdf/10.2105/AJPH.2016.303614

c. Based on efficacy (see table below) we postulated, that simple would be less costly, and non-inferior to complex (see #4)
d. We do not provide a prophylaxis nor do we take radiographs

Caried*Away*

Protocols and % Cavity Reduction

		Simple Prevention		Complex Prevention	
Terminology	Focus	Toothpaste + F-varnish	SDF	Toothpaste + F-varnish	Seal + ITR
1° Prevention	Smooth surface	25%+40%		25%+40%	
	Pits and fissure		80%		80%
2° Prevention	Caries arrest		80%		80%

Niederman R, et al. Dentistry. DCP3, World Bank, 2015

2. Registered dental hygienists provide comprehensive caries prevention in schools. The goal is to increase reach (bring care to kids rather than kids to care) and effectiveness (comprehensive caries prevention) to increase program impact.

3. Complex costs are ~$100 per child (~$85 for personnel; ~$15 supplies). This is cost-saving and cost-effective (See: https://pubmed.ncbi.nlm.nih.gov/31009589/). We are currently assessing the costs for Simple.

4. Effectiveness of both Simple and Complex are ~50% reduction in untreated caries and ~80% caries prevention. This result was maintained across the 2-year COVID-19 pandemic care hiatus.
See: https://jada.ada.org/article/S0002-8177(20)30842-4/fulltext

The program is aerosol free, evidence-based, effective, and meets all six IOM quality aims, the Institute for Healthcare Improvement (IHI) triple aim and adheres to the American Dental Association (ADA) guidance for non-restorative care.

Lessons learned (Successes and **Challenges**):
Lessons learned: a. Informed consent can be improved using a school's electronic communication: i. Sending electronic informed consent multiple times per year ii. Having the consent cover the entire time a child is in the school b. Programs are not sustainable under current Medicaid fee for service compensation architecture. Instead, programs rely on donations or grants. Consequently, a quarter of the programs closed permanently during COVID-19. The remainder are determining how to restart. Specifically, i. Medicaid does not compensate for program: 1) Startup costs (e.g. school and city approval) 2) Pre-care work for informed consent and scheduling 3) Either SDF or interim therapeutic restorations (ITR) 4) Post-care work for care coordination and both quarterly and annual reports 5) Medicaid billing and reconciliation c. Medicaid pays private DDS higher fees than school programs and does not require reporting d. Dental practice act limit care provision in schools to certified public health dental hygienists rather than just RDH. e. RDH training programs do not include training in essential dental care (e.g. use of SDF, glass ionomer sealants or ITRs.

TO BE COMPLETED BY ASTDD	
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