



Dental Public Health Project Descriptive Report Form

Name of Project

Helen M. Knight School-based Oral Health Program

Executive Summary

Untreated dental decay remains the most common chronic disease among children, directly impacting their academic success, attendance, and social development. To tackle this issue in Grand County, school nurse Mary Frothingham initiated a strategic partnership with the Brigham Young University (BYU) College of Nursing and the Utah Department of Health and Human Services (DHHS) Oral Health Program. With funding from the Bates Family Foundation and the BYU College of Nursing, this intervention delivers essential preventive services to a rural community facing considerable geographic and economic barriers to care.

This program, piloted in March 2024, continues to operate each school year. It provides classroom education, hygiene kits, oral health risk assessments, and fluoride varnish applications. Since its inception, 1,237 students have received visual dental assessments and 698 have received fluoride varnish applications. 40.7% of students who were screened were identified with oral health concerns and in need of timely dental intervention.

Beyond immediate clinical care, the program gathers critical data, offering objective evidence of the community’s dental needs. It serves as a "win-win" for professional development. BYU nursing students acquire hands-on experience in health equity and interprofessional collaboration, while the school taps into outside resources for vital services that would otherwise be inaccessible.

Despite challenges in accessing specialized pediatric dental care, our partnership provided information to direct and prioritized care. Through collaboration with local partners, the nurse successfully facilitated access to care for many children at high-risk.

Name of Program or Organization Submitting Project

Utah Department of Health and Human Services - Oral Health Program

Detailed Project Description

Project Overview

The project addresses the high prevalence of untreated tooth decay, the most common chronic childhood disease. Moab, located in Grand County, Utah, is a census designated frontier county with a population of about 10,000 people. This distinction indicates a greater level of isolation

compared to rural communities. Factors contributing to poor dental outcomes include the lack of community water fluoridation, a severe shortage of dental professionals, a high percentage of children without health or dental insurance, and distances of at least 120 miles to the nearest pediatric dental specialist.

How it was identified:

This oral health need was identified through observations made by the BYU College of Nursing faculty, who recognized the necessity for local outreach to support Utah communities. The faculty reached out to school districts throughout Utah for potential partner. Mary Frothingham, the school nurse at Helen M. Knight Elementary School, responded. Through a rural health grant and support from BYU, the program was born from frontline observations. Mary Frothingham, serving as the school nurse for the Grand County School District, noticed a recurring pattern of students missing school or struggling to concentrate due to dental pain. She identified dental issues as a significant concern in her school. While the need was evident, the district lacked objective data necessary to measure the problem's extent and mobilize resources. The partnership with the BYU College of Nursing and DHHS catalyzed the shift from reactive care to proactive dental assessments and fluoride varnish applications.

The primary target population are the students at Helen M. Knight Elementary School, the only elementary school in Grand County, Utah.

- **Early Childhood/Primary Grades:** The initial dental clinic in March 2024 focused on students in first grade. In November 2024, this was expanded to include students in kindergarten, first, second, third, and fifth grade. Fourth grade students were not included because they could not be pulled out of class on the dental clinic days.
- **High-Risk Students:** In May 2025, we conducted another dental clinic for children previously identified with dental concerns, as well as those who missed previous screening events (totaling 93 students)
- **Rural/Underinsured Families:** We specifically target families in Grand County lacking regular access to dental insurance or specialized local providers.

The program builds upon a multi-tiered framework that addresses immediate clinical needs while promoting long-term community health.

Primary objectives

- **Hands-on clinical training:** Provide BYU nursing students with direct, supervised experience in conducting oral health assessments, applying fluoride varnish, and practicing health equity in a rural "frontier" setting.
- **Early detection and referral:** Visual dental assessments identify early dental concerns and trigger urgent referrals requiring care within 48 hours.
- **Preventive intervention:** Aim is to reduce the incidence of future dental issues through education and preventive care measures.
- **Oral Health Literacy:** Aim is to improve community knowledge and oral health literacy by providing classroom education, teaching students proper brushing techniques with

hands-on practice, and connecting mouth health to total body health. This progress is reflected in the reduction of student “fear scores,” which indicated that increased knowledge directly lowered anxiety toward dental care. By observing students demonstrate these techniques during their visual assessment, we ensure that the educational session has successfully translated into practical, self-care skills.

Capacity building and sustainability

Interprofessional training: Provide a clinical rotation site for BYU nursing students to develop skills in community health, health equity, pediatric oral health assessment, and fluoride varnish application.

Collaborative partnerships: Combining a local "champion" (school nurse), an academic institution (BYU), local dental providers, and a state agency (DHHS) created a sustainable ecosystem of labor, expertise, and oversight.

Strategic implementation and impact

Data collection: Moving from anecdotal concerns to quantitative data, the numbers (e.g., "incident of tooth decay 38% in November 2024") were vital for securing continued funding from the Bates Family Foundation and the BYU College of Nursing.

Classroom integration: Providing education in the classroom before the oral health assessment reduced student anxiety and increased participation.

What lessons learned would be useful for others seeking to implement a similar project, including what did not work?

The project succeeds by meeting two needs at once: the elementary school gains clinicians for screenings, while BYU nursing students gain a clinical setting to practice pediatric oral health and health equity.

To support this, the BYU College of Nursing integrated a specific oral health module into its curriculum. Developed with input from local dental professionals, the training requires family nurse practitioner (FNP) students to complete the [Smiles for Life online modules](#) followed by a two hour in-person session and a live child assessment demonstration.

Challenge	Lesson Learned / Advice
Referral-to-Treatment Barrier	Extensive case management is critical for medium and high-risk students facing language, transportation, and poverty barriers. This requires personal phone calls, often with interpretation services, rather than just paper/email referrals. The school nurse is uniquely qualified to fill this role.

Consent & Participation	Integrate the dental consent form into the digital "back to school" registration packet at the start of the year. The program used an opt-out model for assessments and opt-in for fluoride varnish, noting that asking teachers to send paper forms home resulted in a poor return rate. We also had a doctor's standing order in place for the fluoride varnish.
Urgent Care Pathway	Establish a working relationship with a specific local dentist who agrees to prioritize school-referred urgent cases. Include other community partners when additional resources are needed such as a multicultural center for interpretation services.
Sustainability	Partner with nearby universities or technical colleges to integrate the program as a recurring clinical rotation, ensuring a consistent, supervised workforce.
Efficacy	A bi-annual model (fall and spring) is ideal for high-risk populations to see a measurable decrease in chronic decay, rather than a "one and done" dental day.
Future Intervention	Explore using silver diamine fluoride (SDF) , where allowed by scope of practice, to halt disease progression and buy critical time for securing definitive restorative care in remote areas.
Rapport	Giving every child a new toothbrush, toothpaste, and oral health education prior to the assessment builds rapport and reduces dental anxiety.

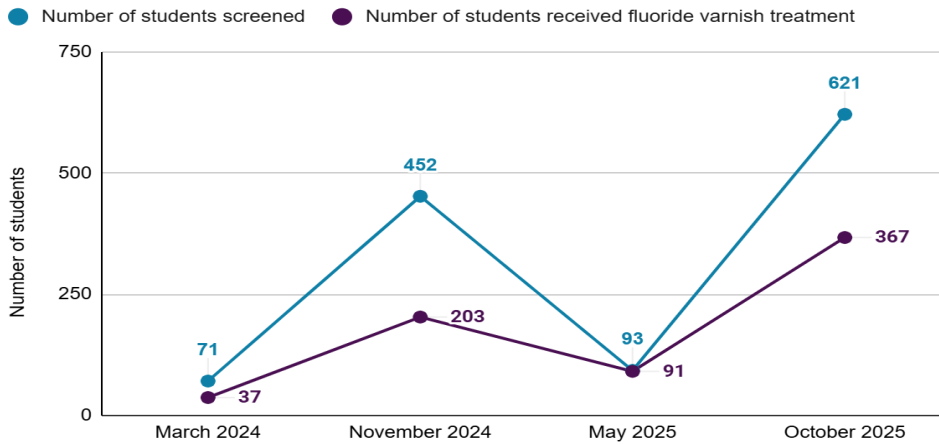
Resources, Data, Impact, and Outcomes

- **BYU College of Nursing:** BYU provided clinical faculty to oversee nursing students and used grant funding to purchase supplies, including headlamps, reclining chairs, mirrors, gauze, tongue depressors, and fluoride varnish.
- **Grand County School District:** The school nurse managed logistics, including student scheduling and securing dental clinic locations. She secured vital support from school administration and teachers.
- **DHHS Oral Health Program:** The state oral health program (OHP) dental director and two hygienists rotated between the events, ensuring two team members were always present to provide technical assistance to the nursing students during the assessment. The OHP budget funded all travel, lodging, and staff time for the OHP team members.

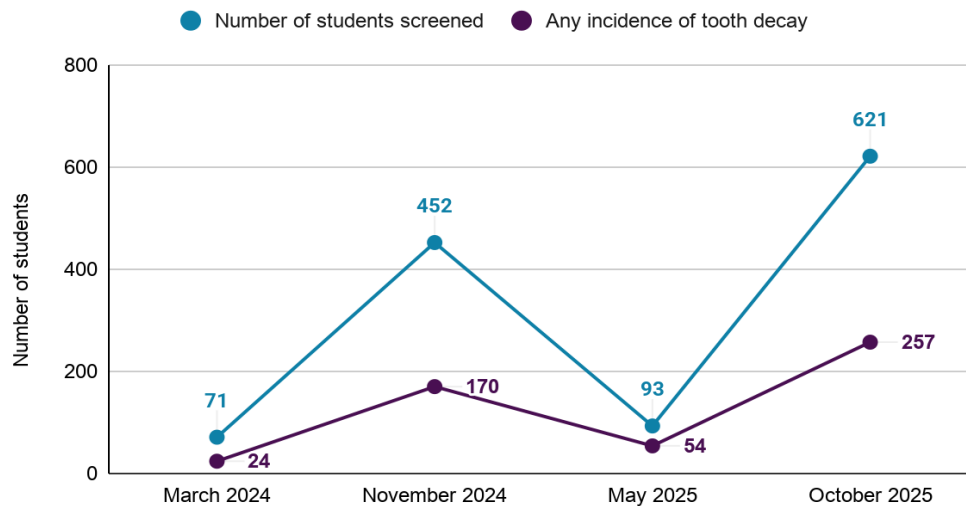
What process measures data (counting) were collected, such as the number of sealants placed or people served?

The program tracks **oral health risk assessments**, **fluoride varnish applications**, and **decay incidence** to evaluate service delivery. These metrics measure the reach of preventive interventions and identify shifting student health needs.

Fluoride placed at Helen M. Knight elementary

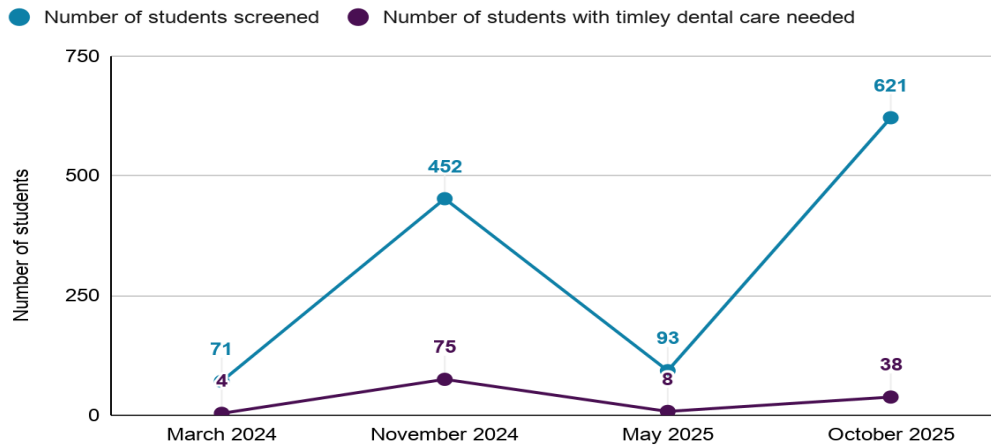


Tooth decay at Helen M. Knight elementary



The program evolved its treatment urgency over the project period. During the 2024 and May 2025 clinics, staff used a binary system to categorize students as needing either routine follow-up care or emergent intervention. By October 2025, the program adopted the [Colgate 4-Class System](#) to refine these assessments. To maintain reporting consistency, the October 2025 figures below aggregate **Class 3** (prompt attention) and **Class 4** (immediate emergency) ratings.

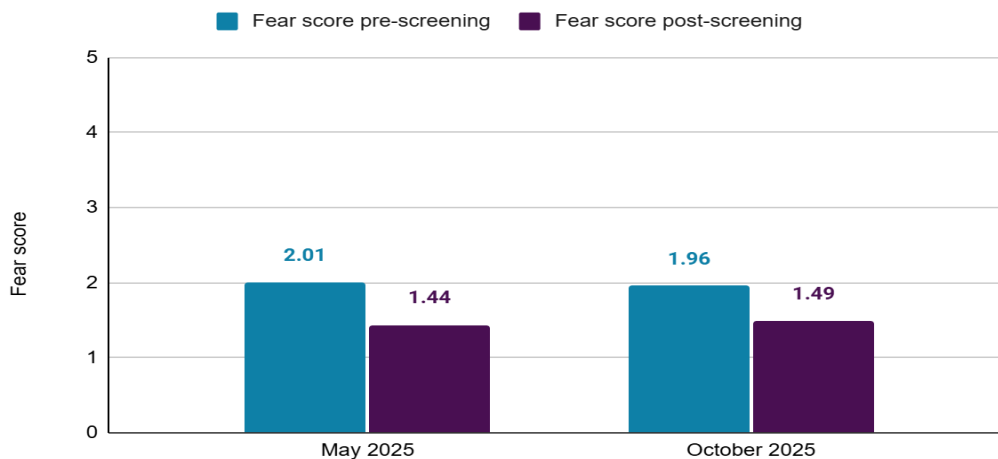
Treatment urgency at Helen M. Knight elementary



What outcome measure data (results) were collected, such as improvement in health?

In May 2025, the program introduced a "fear score" assessment utilizing a validated 1–5 "faces scale" (where 5 represents "very afraid"). This metric tracks student feelings both before and after the dental assessment. Data from May 2025 and October 2025 clinics show that students generally arrived with low fear levels. Several factors likely contributed to this baseline comfort: entering with a peer group, using fidget toys and coloring activities, and participating in oral health education and toothbrushing before entering the clinic. Notably, both clinic sessions demonstrated lower fear scores following the assessment, suggesting that the school-based intervention provided a positive experience for students.

Fear score of children



How frequently were data collected?

Data is collected during each clinical visit, which occurs twice in the school year, once in the fall and once in the spring. The spring dental clinic held in May is for "at risk" children so the numbers are much smaller.

How were the results shared?

Results have been shared in multiple ways including blogs, grant reporting, podcast, and presentations. Both the BYU nursing program and DHHS oral health program have written and posted blogs about this program. Additionally, BYU writes grant reports to maintain funding. Janelle Macintosh from BYU and Mary Frothingham co-presented at the March 2026 Utah Oral Health Coalition Meeting.

On a national level, Lauren Neufeld, Utah Oral Health Educator, presented to the Association of State and Territorial Dental Directors school and adolescent subcommittee and Mary Frothingham was featured on the Beyond Band-Aids podcast hosted by the National Association of School Nurses.

Budget and Sustainability

What was the budget for the project?

Each dental clinic operates on a budget of \$20,000 to \$25,000 dollars and runs twice a year. The Bates Family Foundation and various BYU mini grants fund the initiative. Both the BYU undergraduate and graduate students fulfill clinical rotations requirements by participating in these screenings.

The majority of the budget is for lodging. Moab is a frontier town more than 50 miles away from the nearest town and situated between two major national parks. Moab is a tourist destination and as such hotel rooms are more expensive.

How was the project funded, such as governmental or philanthropic funding?

Funding for this program is primarily philanthropic through the Bates Family Foundation. The staff time, per diem, and hotels are covered by each respective organization.

What was the sustainability plan for the project?

Each partner organization funds its own staff. Additionally, the Moab Dental Project maintains a consistent workforce by integrating the clinic as a recurring rotation for graduate FNP students. This academic training model ensures a steady influx of supervised providers, reducing reliance on short-term volunteers. By embedding the project in the curriculum, the model sustains service delivery while training future providers to work in rural and underserved settings, strengthening long-term workforce capacity.

Resources

Image of the Oral Health Assessment form: Oct 2025

Fear: Pre _____ / Post _____

Oral Health Assessment Form – Helen M. Knight Elementary School

Patient Information

October 2025

Child's name (Nombre del estudiante)

Oral Healthcare Service Delivered

Assessment

Plaque is present: Yes No
(La placa está presente)

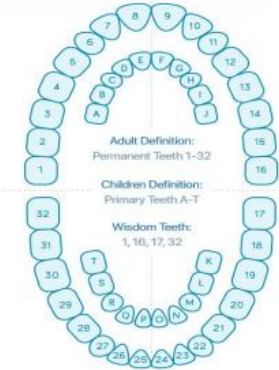
Gums (Cena)

Pink and healthy: Yes No
(Rosado y saludable)

Red and/or inflamed: Yes No
(Roja e inflamada)

Fluoride varnish: Yes No
(barniz de fluoruro)

Has sealant (S)
Decay (Circle area of concern)
Filling in tooth (color in tooth)



Findings & Additional Information

- This child should have a dental check-up in six months (Class I).
- This child needs dental care and should see a dentist within one month (Class II).
- This child has severe dental problems and should see a dentist as soon as possible (Class III).
- This child needs emergency dental treatment and should see a dentist immediately (Class IV).

Additional Dental Care Advice

- This child could benefit from sealants.
- This child could benefit from an orthodontic consultation for better dental health.
- Other:

Oral Healthcare Assessor


Assessor name (Nombre del evaluador)

Image of the 5-point faces scale:

How Do You Feel About Your Dental Check Today?

(Circle the face that shows how you feel right now)

AFTER the dental check:



Happy Okay Not Sure Nervous Scared

The following resource was used during this project: Smile for Life: A National Oral Health Curriculum: <https://www.smilesforlifeoralhealth.org/all-courses/>

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