



## Dental Public Health Project Descriptive Report Form

Please provide a description of your organization’s successful dental public health project by completing this form. Add extra lines to the form as needed but stay within **word limits**.

Please return the completed form to Lori Cofano: [lcofano@astdd.org](mailto:lcofano@astdd.org)

Name of Project						
<b>Montshire Pediatric Dentistry: Inspire Wellness</b>						
Executive Summary (250-word limit)						
<p>Montshire Pediatric Dentistry is a dental practice with an ambitious mission: to “Inspire wellness and empower people to create the best world.” The founding doctors wanted to use their skills for the betterment of the community and truly make a positive impact.</p> <p>Less than 5 years after adopting a minimally invasive treatment philosophy, it appears they have “cracked the code” to the triple aim of health care: improving the patient experience, improving the health of populations, and reducing per capita costs of health care. This was made possible by adopting evidence-based caries management guidelines, educating and empowering patients and their families to play an active role in their treatment and maintenance of good oral health, and training staff to practice at the top of their license to operate more efficiently. By adhering to their motto: “Every child is welcome,” the Montshire team plays an important role towards the achievement of health equity in their communities.</p>						
Name of Program or Organization Submitting Project						
Montshire Pediatric Dentistry						
<b><i>Essential Public Health Services to Promote Health and Oral Health in the United States</i></b>						
Place an “X” in the box next to the Core Public Health Function(s) that apply to the project.						
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; width: 50px;"><input checked="" type="checkbox"/></td> <td>Assessment</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Policy development</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Assurance</td> </tr> </table>	<input checked="" type="checkbox"/>	Assessment	<input checked="" type="checkbox"/>	Policy development	<input checked="" type="checkbox"/>	Assurance
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<a href="http://www.astdd.org/state-guidelines/">http://www.astdd.org/state-guidelines/</a> Project submissions will be categorized by the Core Public Health Functions on the ASTDD website.						

## Healthy People 2030 Objectives

List Healthy People 2030 objectives related to the project.

- OH-01: Reduce the proportion of children and adolescents with lifetime tooth decay experience in their primary or permanent teeth
- OH-02: Reduce the proportion of children and adolescents with active and currently untreated tooth decay in their primary or permanent teeth
- OH-08: Increase the proportion of children, adolescents, and adults who use the oral health care system
- OH-09: Increase the proportion of low-income youth who have a preventive dental visit
- OH-10: Increase the proportion of children and adolescents who have received dental sealants on 1 or more of their primary or permanent molar teeth
- AHS-05: Reduce the proportion of people who can't get the dental care they need when they need it
- NWS-10: Reduce the consumption of calories from added sugars by persons aged 2 years and over

This information will be used as a data resource for ASTDD purposes.

### **Keywords for sorting the project by topic.**

Provide **three to five** keywords (e.g., access to care, children, coalitions, dental sealants, fluoride, policy, Medicaid, older adults, pregnant women, etc.) that describe the project. Keywords are used to categorize submissions.

Children; Medical Management of Caries; High-Risk; Minimally Invasive Dentistry; Education

## Detailed Project Description

### **Project Overview**

(750-word limit)

1. What problem does the project address? How was the problem identified?

Dental caries is the most common global disease, affecting people of all ages. According to the [CDC](#), "Cavities (also known as caries or tooth decay) is the most common chronic disease of childhood in the United States. Untreated cavities can cause pain and infections that may lead to problems with eating, speaking, playing, and learning." Over half of children aged 6 to 8 have had a cavity in at least one of their (primary) teeth, and more than half of adolescents aged 12 to 19 have had a cavity in at least one of their permanent teeth.

Traditional treatment of dental caries involves surgical removal of large amounts of infected tooth structure to remove bacteria – followed by restoring the tooth with a material to improve function and cleansability. The problem with this conventional approach: it fails to address the underlying cause of disease. Restorations can fail and new caries can form. Surgically treating the tooth creates a more compromised tooth that may require additional treatment. Adopting a medical approach helps to treat the underlying disease process and helps to prevent costly, invasive surgical procedures.

The Montshire doctors identified many children with large amounts of decay. The traditional “drill and fill” modality of care proved to have limited efficacy in curing the underlying disease – resulting in many children with caries progression and subsequent pain, abscesses, etc.

Access was limited for many children with Medicaid due to relatively few providers rendering services for these children. Adopting a minimally invasive dentistry (MID) philosophy using medical management allowed the Montshire team to significantly increase access to care. Training dental auxiliaries allows delegation of many treatments (e.g., hygienist placement of silver diamine fluoride) to help increase dental service access.

Another strong motivator that led Montshire to embrace MID was the observation of so many children undergoing dental treatment under sedation (nitrous oxide or general anesthesia). Avoiding sedation allows for more interaction with children. This fosters active participation from children and parents in their dental care - providing them with a positive experience, fostering resilience, and shaping them for a lifetime of optimal oral health.

## 2. Who is the target population?

Montshire Pediatric Dentistry sees patients from all different socio-economic backgrounds; approximately 70 percent of their patient base is composed of children living in New Hampshire and Vermont, and who are insured by Medicaid. The Montshire team wants to help every child in need. To summarize: *“at Montshire, every child is welcome, regardless of their financial status.”*

## 3. Provide relevant background information.

What served as a turning point for the Montshire team was attending a presentation on minimally invasive dental care (MID) and medical management of caries (MMC). This event was organized by the Vermont Department of Health’s Oral Health Program and featured Dr. John Frachella, a national expert on MID and MMC (including [SDF - silver diamine fluoride](#), glass ionomer materials, and SMART - silver modified atraumatic restorative treatment). This presentation served as their inspiration to dive into scientific literature and ultimately to practice in a different way. The doctors at Montshire realized that a paradigm shift needed to happen in dentistry – one that focuses on addressing the underlying disease. The Montshire team can attest that prioritizing minimally invasive care is most gratifying and rewarding. Although MID prioritizes simpler and lower-cost procedures, the evidence demonstrates the absolute best in world-class care.

The treatment involved in MID is generally much more comfortable (particularly for anxious young children). Although Montshire specializes in pediatric dentistry, it’s important to note that MID can benefit adult patients too. The same principles of medical management apply to adults.

## 4. Describe the project goals.

The doctors who founded Montshire shared the desire to practice in a community where their skills could be best used for the betterment of the community; to truly make a positive impact. Their goal is to ensure that all children are treated with dignity and compassion and have equal access to quality dental care. Thus, Montshire prioritizes educating families so they can play an active role in their oral health. Montshire’s mission is to *“Inspire Wellness and empower people to create the best world.”*

One important goal for Montshire’s founding doctors is to reduce the number of children who undergo dental treatment under sedation. Apart from the extensive cost (it is estimated that

each instance of pediatric dental care under general anesthesia costs between US \$3,000 and US \$5,000), it can cause severe anxiety for children and their families. In addition, lengthy and/or repeated use of general anesthesia may pose serious health risks to the developing brains of children under three years of age ([FDA warning, 2017](#)). As mentioned above, there is a high risk of failure of composite restorations placed in young children, and replacing those restorations could mean repeated surgical treatment. In fact, studies show over half of young children who receive dental treatment under general anesthesia have recurrent decay within two years of the procedure.

When children are seen at a young age, it is very rare for them to require sedation. MID using medical management has dramatically decreased the necessity. There has been an estimated 90+% reduction in sedation cases utilizing MID techniques including education, SDF, Glass Ionomer, Povidone Iodine, etc.

### **Resources, Data, Impact, and Outcomes** (750-word limit)

1. What resources were/are necessary to support the project (e.g., staffing, volunteers, funding, partnerships, collaborations with other agencies or organizations)?

Montshire Pediatric Dentistry started in 2018 with a single practice and 11 patients. Now, five years later, there are five practices across New Hampshire and Maine. Currently, the Montshire team is composed of three dentists, eight administrative professionals, seven dental hygienists, and eight dental assistants. Montshire is very selective when hiring to ensure the best culture and care delivery. All staff undergo extensive and continuous training, which includes calibration and training modules. Staff follow specific clinical protocols compiled in a treatment planning manual.

Some of Montshire's partners and collaborators include the NHTI (New Hampshire Technical Institute, where Montshire doctors teach principles of Medical Management of Caries), New Hampshire and Vermont Medicaid, and the Vermont Department of Health's Office of Oral Health.

2. (a) What process measure data are being collected (e.g., sealants placed, people hired, etc.)?

Montshire's EHR system collects all treatments rendered, such as sealants placed, SDF application, etc. The Montshire team has experienced significant reduction in the percentage of patients requiring sedation (both general anesthesia and nitrous oxide sedation).

- (b) What outcome measure data are being collected (e.g., improvement in health)?

Outcome measures include sedation utilization and nitrous oxide utilization along with patient visits and new patient volume.

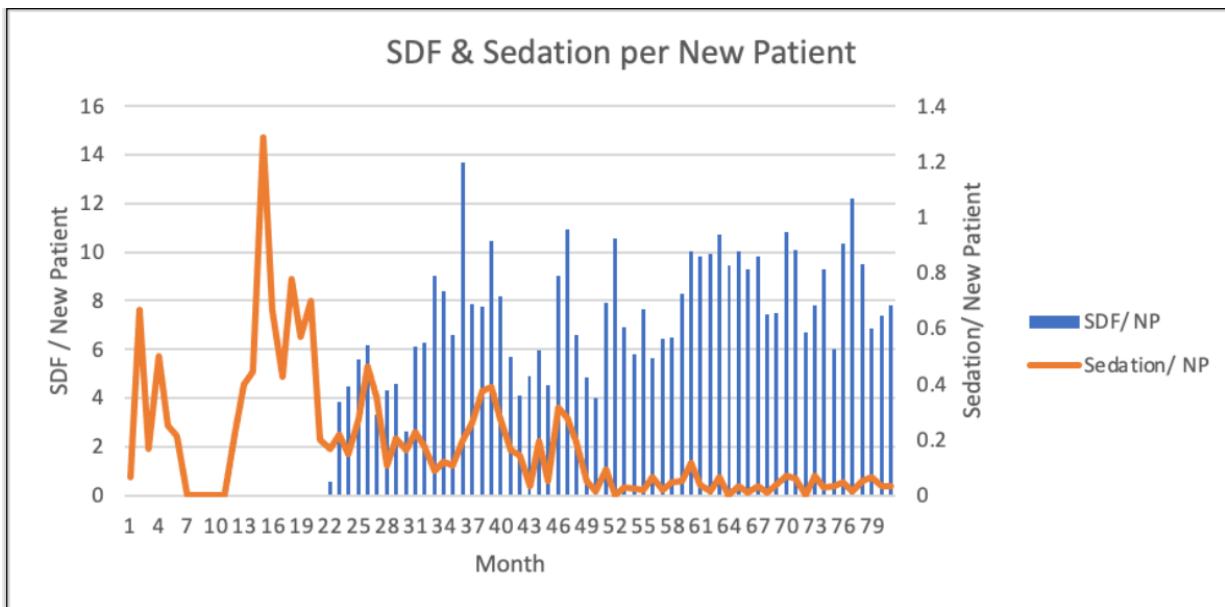
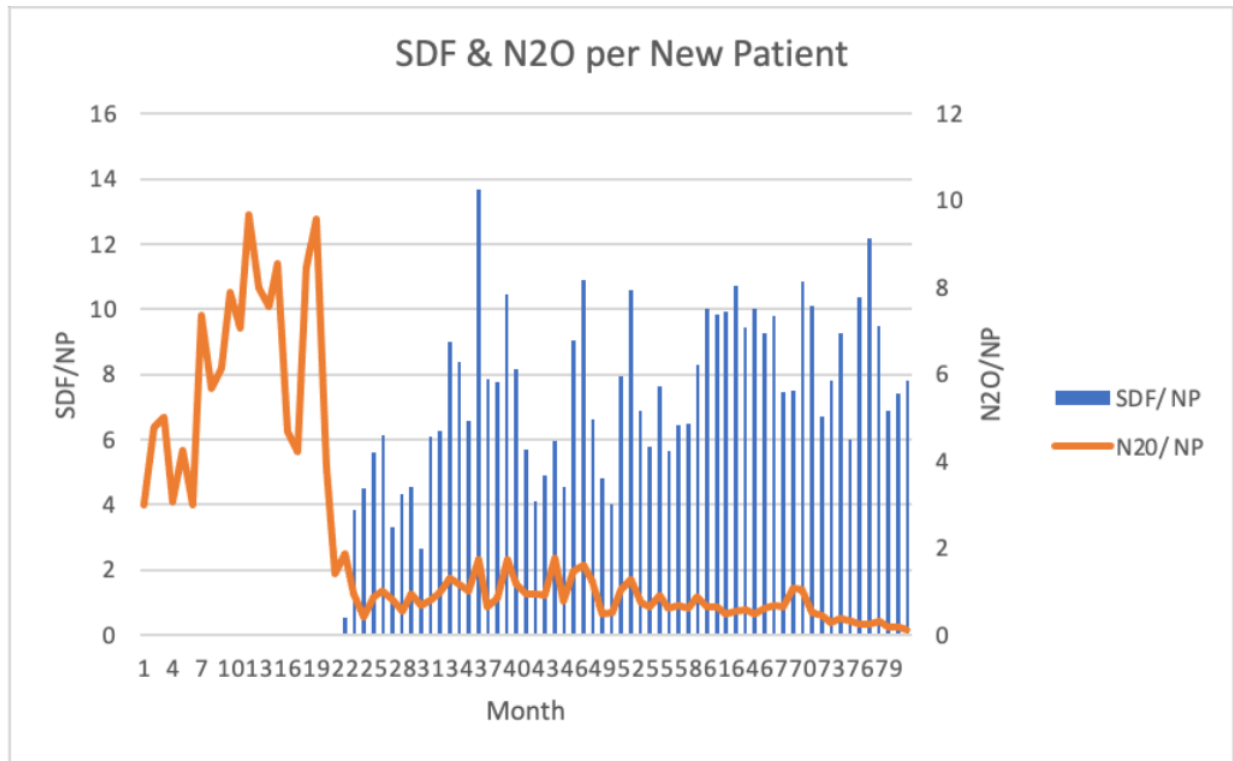
- (c) How frequently are data collected?

Data can be collected from the dental-specific software. This was collected approximately 3 years following acquisition of the practice.

3. How are the results shared?

Montshire is currently working to publish literature regarding the benefits of MID in terms of reducing surgical procedures and decreasing the volume of sedation dentistry. The graphs

below depict the reduction in the number of new patients requiring nitrous oxide or sedation after Montshire incorporated SDF into their practice. These results are from the Claremont, NH location. Please note, month 22 is when the Montshire doctors attended Dr. Frachella's presentation on MID and MMC.



## **Budget and Sustainability**

(500-word limit)

Note: Charts and tables may be used.

### 1. What is/was the budget for the project?

There was no particular budget. A typical dental set-up was completed at the start including: dental chairs, vacuum, air compressors, digital radiography, instruments including high/low speed handpieces, hygiene polishers, nitrous oxide, etc.

### 2. How is the project funded (e.g., federal, national, state, local, private funding)?

Private funding from doctor/owners.

### 3. What is the sustainability plan for the project?

The estimated cost to start a 5-chair dental practice with all the resources needed (chairs, handpieces, nitrous oxide, sterilization equipment, etc.) is roughly USD \$150,000. Regarding sustainability, Montshire is proof that the minimally invasive treatment philosophy is best both for the patients' health and is financially viable. The Montshire team started in Keene, NH, then expanded to Claremont, NH; the former practice had 11 patients less than five years ago; now there are approximately 18,000 patients across five locations. Initially, Montshire was unable to offer benefits to staff, but now they are proud to offer comprehensive benefits including: health insurance, retirement, paid maternity leave, and profit sharing.

## **Lessons Learned**

(750-word limit)

- (a) What lessons were learned that would be useful for others seeking to implement a similar project?
- (b) Any unanticipated outcomes?
- (c) Is there anything you would have done differently?

It is amazingly rewarding to see a community heal. The amount of decay has drastically decreased in the communities where there has been a presence. Helping patients avoid noxious procedures is immensely meaningful. Children and families are now empowered to take control of their health and wellness.

Reading and understanding the relevant literature is very important. Educating parents and children regarding options and outcomes helps them to take-control and make informed decisions about their wellness and outcomes.

Working as a team is critical. Developing and implementing training processes has allowed efficient, world-class delivery of dental care.

## **Resources**

Some recommended resources:

- [Montshire Pediatric Dentistry website](#), describing their philosophy and mission
- [MMC Library](#), which contains over 500 articles and videos on the topic of Medical Management of Caries.
- CareQuest's [Noninvasive Caries Therapy Guide](#)

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<b>To Be Completed By ASTDD</b>	
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