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## Maintaining Oral Health in the Era of COVID-19

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# Maintaining Oral Health in the Era of COVID-19

Milton Family Practice

Kelly MacPherson & Sameer Alidina

Family Medicine Clerkship July-August 2020

Project Mentors: Kimberly Sikule, MD, David Swift, MD & Holly VanWinkle



The University of Vermont  
LARNER COLLEGE OF MEDICINE

## 2. Problem Identification and Description of Need

- Poor oral health is linked with several health complications such as Chronic Obstructive Pulmonary Disease, endocarditis, and bacteremia (1).
- 20% of low-income adults in Vermont claim their oral health is in poor condition (2).
- Although tooth loss has decreased nationally, tooth loss among adults in Vermont has stayed constant at 45% (3).
- Among adults who did not visit the dentist in the past year, 47% reported fair or poor health (3).



# 3. Public Health Cost and Unique Cost Considerations in Host Community

- Medicare does not cover most dental care or supplies such as cleanings, fillings, tooth extractions or other dental procedures (4).
- While only 14% of Vermont health care expenses are paid out of pocket, 60% of dental care expenses are paid out of pocket (5).
- Medicaid provides dental programs, however few Vermont dentists accept new medicaid patients, resulting in only 29% of medicaid eligible adults make use of its dental program (5).



# 4. Community Perspective on Barriers and Future Efforts

- Interview questions:
  - How do you believe oral health (prevention, maintenance) has been impacted at Milton Family Practice since the start of the pandemic?
  - What are your thoughts on current and potential solutions to address oral health maintenance? Especially given there is likely going to be second wave of increased COVID cases (with potential shutdowns, patient cancellations, strictly telehealth visits, etc.) in the coming months?



# 4a. Community Perspective on Barriers and Future Efforts

- Kelly Brooks, MD
    - “Like many aspects of preventative care, I think oral health care has fallen lower on the priority list in the setting of the pandemic—This is likely for many reasons: patients nervous to or unable to access care with dental office closures, or due to loss of dental insurance (employment changes/job losses, etc.).
    - Being even more mindful of, and helping patients navigate access to dental care with the medical home: Perhaps hosting dental care providers within primary care offices to provide education, etc.?
    - Finding ways to offer fluoride treatment and education regarding the importance of prevention with regular flossing and proper brushing techniques, limiting sugary drinks/sodas.”
- 
- Kimberly Sikule, MD
    - “Less people coming into the office, cannot evaluate it [oral health] and not able to do fluoride varnish, which I think is a great preventative tool especially for those people who do not have dental access. When the pandemic started, dental offices closed and people have not had their maintenance exams. It will be interesting to see the costs over the next 1-5 years...
    - Handing out toothbrushes and paste/floss to people that do not have access, teaching home fluoride varnish to parents, and doing mouth exams on people that come into the office to assess their risk. And escalate those that may need cleanings sooner.”



# 4b. Community Perspective on Barriers and Future

## Efforts

- David Swift, MD

- “Has definitely been affected with many patients unable to see their dentist. Milton has a high percentage of patients struggling with financial insecurity and poor dentition so we have seen a rise in oral health challenges. Specifically, lots of infected teeth treated with antibiotics by us during the pandemic vs extraction with dentist (regular care non pandemic times). Also lots of potential use for fluoride varnish for kids that are not able to get in for fluoride treatments at their dental home. In Milton, our dental care in office is limited so we have seen an uptick in tasks we are being asked to manage that might normally be done by a dentist but the impact on our typical day is fairly limited.”
- “Dental care will remain a challenge with ongoing pandemic due to the inherent risk of working around an airway with pandemic. I think many local dentist offices are trying to use PPE appropriately to minimize risk. From a primary care perspective, we can be more proactive with fluoride varnish for kids in the appropriate age range, can ensure we have access for patients with acute dental needs- infections, etc. Part of our role can also be emphasizing appropriate access with dental providers as able- patient with non-emergent conditions may need to pause care to maintain access for more acute issues.”

- Melisa Gibson, MD

- “Oral health has definitely suffered. Dentists were some of the first places to close and last to open up. Definitely seeing patients with worse dental disease d/t delayed care from the pandemic. I personally sent several patients to the emergency department for abscesses from decayed tooth. One gentleman had to get IV abx and be admitted due to his disease. Dental saw him and eventually pulled the tooth in the OR
- One thing is to encourage good dental hygiene at home. Brushing BID, flossing, potentially mouthwash. We can also provide antibiotics if patients seem to be having dental infections to try and keep infection at bay until they can be seen by a dentist. My hope is that even with a second wave, we can get patients in for urgent dental care (which was not the case early in the pandemic, when many dental offices closed – even for emergencies).”



# 5. Intervention and Methodology

- Modernize outdated oral health handouts previously utilized by practice with updated information to be provided to all staff members, as well as patient resources.
- Distribute handouts to staff via email and hard copy forms.
- Provide online training resource through Smiles for Life coursework.
- Create a dot phrase for after-visit summaries for patients.





# 6. Results/Response

- The below handouts were distributed to Milton Family Practice staff via mailboxes and email blast and were positively received as a useful resource.
- The link to the Smiles for Life website (<http://smilesforlifeoralhealth.org/>) was provided via email, with specific reference to Course 6: Caries Risk Assessment, Fluoride Varnish & Counseling. This was positively received as a useful resource.
- A dot phrase for after-visit summaries named "oralhealth2020" was created for provider notes and was positively received as a useful resource.

Oral Health 2020  
Oral Health for Children: Fluoride  
Provider Quick Information Sheet

**Oral Health Risk Assessment**

- Complete the risk assessment tool at well child visits age 6 months to 6 years (located in blue/gold nurses station filing cabinet in exam room hallway)
- Use as opportunity for counseling and dental referral

**Fluoride Benefits**

- Topical (in varnish and toothpaste)
  - Inhibits tooth demineralization. Enhances remineralization. Inhibits bacterial metabolism
- Systemic (in water and supplementation)
  - Reduces enamel solubility through incorporation into tooth structure during development

**Fluoride Risks**

- Fluorosis: discoloration of the teeth due to excessive exposure to fluoride during tooth development

**Fluoride Supplementation**

- Recommended for children to receive a certain amount of systemic fluoride –optimal water fluoridation is 0.7 ppm
- Determine how much fluoride is in drinking water
  - For town water see sheets of fluoride concentrations (some don't meet optimal amount)
  - For well water have caregiver fill out testing sheet (located in blue/gold nurses station filing cabinets in exam room hallway)
    - State will send caregiver a test kit; results sent back to office
  - FYI most filters are charcoal-based and do not remove fluoride –only reverse osmosis filters remove fluoride. Bottled water must list it on label if added, otherwise natural content unknown (may or may not contain fluoride).
- If drinking water has fluoride concentration below 0.6 ppm will need order for fluoride supplement –see chart for dosing of drops or tablets

Child's Age	Average Fluoride Supplementations		
	< 3 ppm	3.1 - 6 ppm	> 6 ppm
6 mos - 3 yrs	0.25 mg	None	None
3 yrs - 6 yrs	0.50 mg	0.25 mg	None
> 6 years	1.00 mg	0.50 mg	None

**Fluoride Varnish**

- Who gets varnish:
  - ALL infants and children (regardless of fluorinated water exposure)
  - Start at appearance of first primary tooth through age 5
- How often:
  - Apply every 6 months
  - For high risk children apply every 3 months
- How to do in office:
  - Order Topical Fluoride Varnish (part of well child smartests under "other orders" tab)
  - Provider can apply in conjunction with oral exam (if completed module and turned in certificate) ([smilesforlife@oralhealth.org](mailto:smilesforlife@oralhealth.org), Course 6: Caries risk assessment, fluoride varnish & counseling)
  - CCA or nurse can apply (mention during pre-session huddle)
- How to document and code
  - Need for prophylactic fluoride administration (Z41.8) (links in smartest with order)
  - Charge capture: under "miscellaneous"
- After application advise caregiver:
  - Child's teeth will be discolored for 24-48 hours
  - No brushing until the next morning
  - Soft foods for the rest of the day –avoid sticky or hard foods

Oral Health 2020

Resources for finding a dentist in Vermont

Vermont Department of Health Office of Oral Health:  
<http://healthvermont.gov/family/dental/services.aspx#dentist>

Find a Vermont Dentist: Vermont State Dental Society  
<http://www.vsdso.org/for-the-public/find-a-dentist>

Find Providers that Accept Medicaid: <http://www.vtmedicaid.com/secure/providerLookup.do>

Federally Qualified Health Centers – Pay what you can afford based on income. You can get health care and dental care at these locations even if you do not have insurance. All accept Medicaid insurance.

- Community Dental Clinic (Morrisville): 802-888-7585
- Community Health Center of Burlington: 802-652-1050
- Community Health Center of the Rutland Region: 802-774-5050
- Health Center (Plainfield): 802-454-1047
- Island Pond Dental Center: 802-723-4300
- Ludlow Dental Center: 802-228-4446
- Richford Dental Center (Richford): 802-255-5520
- NOTCH Dental Clinic (Swanton): 802-868-5551

Vermont Tech Dental Hygiene Clinic – Clinic with dental hygiene students closely monitored by their faculty. Services include oral hygiene education, dental cleaning, fluoride treatments, dental sealants and dental X-rays at a decreased cost. Located in Williston, VT.  
<http://www.vtc.edu/dental-hygiene-clinic>  
Call to schedule an appointment: 802-879-5643

Smiles Change Lives – A nonprofit organization that will help kids from low-income families receive braces. <http://www.smileschangelives.org/>  
Toll Free: 888-900-3554  
Office: 816-421-4949

Oral Health 2020

**Dental Guidelines for your child**  
Adapted from the American Academy of Pediatric Dentistry (AAPD)

**When should my child first go to the dentist?**  
Your child should visit a pediatric dentist when the first tooth comes in, usually 6-12 months. This first visit is usually to let your child get used to the dentist.

**How can I prevent tooth decay in my child?**

**Birth to 3 years**

- Babies should not fall asleep with a bottle containing anything other than water. Juice, milk and formula all contain sugar and can increase the risk of tooth decay.
- You can start by cleaning your baby's gums with a cloth and water, even before they have any teeth.
- Give your toddler liquids in a cup rather than a bottle. Drinking from a bottle increases risk of tooth decay.
- Once teeth start to appear, clean them with a soft toothbrush twice a day, especially at night. Until your child can spit, they should not use toothpaste with fluoride. It's important that children learn early not to swallow toothpaste.
- Once your child can spit (about 3 years old), you can use a "smear" (a very thin layer of toothpaste that covers less than half the bristle surface) of fluoridated toothpaste.
- Sharing utensils or cleaning a pacifier with your mouth can transmit bacteria that cause tooth decay to your child.

**Ages 3 to 6 years**

- Give your child healthy foods to eat. These include whole grains, vegetables, and fruits.
- Children can start learning to brush their own teeth, and often can brush their own teeth by age 4. They should still have supervision to assess for adequate cleaning and rinsing after brushing.
- A child's teeth should be flossed as soon as they start touching each other. Talk to your child's dentist for tips on how to floss your child's teeth.

**Ages 6 to 16 years**

- After your child's permanent teeth start to appear, talk to your child's dentist about having dental sealant placed on molars. This can help prevent tooth decay.
- Encourage healthy diet and dental habits, as this leads to a healthy mouth and a healthy smile!

**What is fluoride and how does it prevent cavities?**  
Fluoride is important for growing teeth because it mixes with and strengthens tooth enamel, the hard protective coating on your teeth. Even after teeth are formed, fluoride mixes with saliva to protect your teeth from sugars, plaque and natural bacteria in your mouth. Infant formulas may contain fluoride. Bottled, filtered and well waters contain varying amounts of fluoride.

**When should you call for help?**  
Call your dentist now or seek immediate medical care if:

# 7. Evaluation of Effectiveness and Limitations

- Evaluation of Effectiveness:
  - Assessment of effectiveness would be measured by usage of training materials by staff, as well as distribution of patient resources by clinical providers.
  - Future follow up visits could include patient inquiry regarding resource utilization and any impact on their oral health practices.
  
- Limitations
  - Unpredictable environmental pandemic circumstances may further negatively impact patient access to Family Medicine and oral healthcare.
  - Cost of added dental visits may be prohibitive for those with lower socioeconomic status, as well as patients who became unexpectedly unemployed during the pandemic.



## 8. Recommendations for Future Interventions

- Specific to COVID-19 and pandemic preparedness, handing out dental supplies (toothpaste, toothbrushes, floss) to those who do not have access ahead of a potential second surge could be beneficial. This could also be utilized during regular maintenance follow up.
- Pop-up fluoride varnish sites in rural or low-resource settings.
- Provide patient and caregiver education for at-home fluoride varnish application.
- Assess high-risk patients for time-sensitive oral health needs and refer to a dental provider as soon as possible.



# 9. References

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- (4) Dental Services. Medicare. [https://www.medicare.gov/coverage/dental-services#:~:text=Medicare%20doesn't%20cover%20most,plates%2C%20or%20other%20dental%20devices.&text=Some%20Medicare%20Advantage%20Plans%20\(Part,vision%2C%20hearing%2C%20or%20dental.](https://www.medicare.gov/coverage/dental-services#:~:text=Medicare%20doesn't%20cover%20most,plates%2C%20or%20other%20dental%20devices.&text=Some%20Medicare%20Advantage%20Plans%20(Part,vision%2C%20hearing%2C%20or%20dental.)
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# 10. Interview Consent Form





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