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ORAL HEALTH SCREENING FOR AT- RISK ADULTS

Community Health Centers of Burlington

By: Karla Brandao

July 13th -August 14th

Mentor: Dr. Heather Stein

2A: Identifying the problem

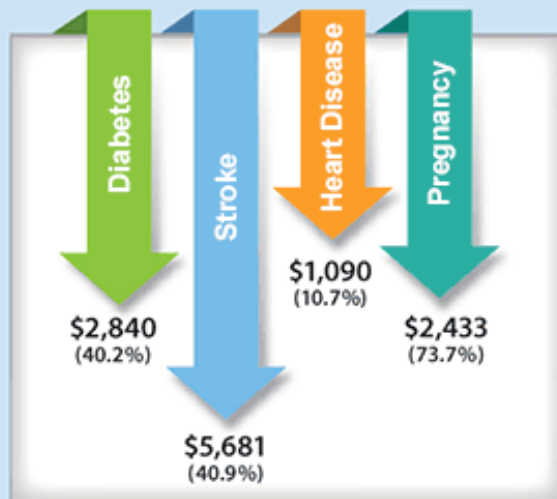
- Oral health is not just about having healthy teeth, it also encompasses having healthy gums, tongue, oropharynx and throat. In addition, it also includes not having oral cancers or congenital abnormalities (such as cleft lip/palate)¹
- “The mouth is a mirror”
 - A thorough examination of the mouth can yield pertinent information about systemic health, including microbial infections, injury/trauma, immune disorders and nutritional deficiencies. ¹
- Periodontitis has been shown to have an observed relationship with obesity, coronary heart disease, cerebrovascular events, rheumatoid arthritis and metabolic syndrome^{4,5,6}
- There is strong evidence for a causal relationship between periodontal disease and diabetes²
- Periodontal disease in pregnant women has been implicated in low-birth weight and premature babies^{3,7}
- Lastly, use of tobacco, alcohol, marijuana, cocaine, opiates and methamphetamine is associated with cancer (tobacco and alcohol), dental caries (all), leukoplakia (marijuana), moderate (marijuana) to severe (methamphetamine) gum/periodontal disease and missing teeth (opiates and methamphetamine).
- Despite all of this, current guidelines do not emphasize oral health screening in susceptible adult populations

2B: Identifying the problem

- At CHCB, oral health screening is completed at each well-child check, however adult oral health screening is generally only offered to pregnant women, members of the buprenorphine program and those who specifically ask.
- Ironically, there is an affiliated dental office right downstairs with an entirely different and difficult to access electronic medical record.
- The goal of this project is to identify high-risk individuals and offer a short oral health screen to identify their needs. Next, to provide those patients with resources in the community to try to improve their oral health outcomes, their overall health outcomes and their social smile.
- The oral health screening will include: people with prediabetes/diabetes, those who use any recreational drug (including alcohol/tobacco), those who are pregnant, those who are overweight/obese, those with xerostomia for any cause, those with a history of cardiovascular disease and/or risk factors and people with autoimmune disorders.

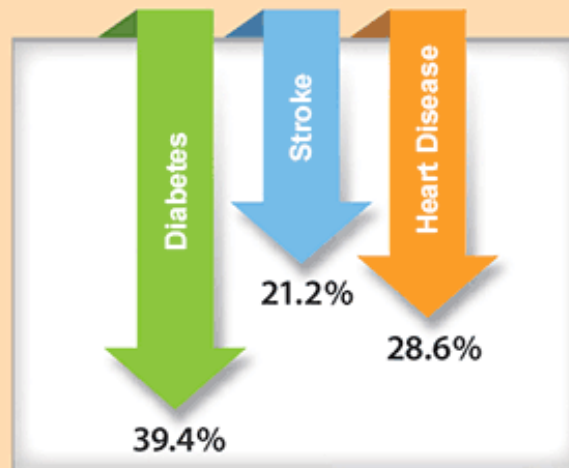
3A: Public Health Cost

Treating Gum Disease Means Lower Annual Medical Costs



Significant annual cost savings are possible when individuals with certain chronic diseases (diabetes, cerebral vascular disease, or coronary heart disease), or who were pregnant, received dental treatment for their gum disease, after accounting for the effect of diabetes.

Treating Gum Disease Reduces Hospital Admissions



Significant decreases in annual hospitalizations are possible when individuals with certain chronic diseases received dental treatment for their gum disease, after accounting for the effect of diabetes.

Vermont:


- In 2012, about 70% of adults 18+ had visited the dentist in the past year¹².
- In 2016, 17.5% of adults 18+ had lost all their teeth in Vermont¹².
- CHCB dental serves about 8,000 patients, including 800 low income/uninsured children ¹¹.
- Oral health screening costs vary at CHCB because they accept various insurance and they provide a sliding scale for the uninsured and those who may need it¹¹.
- However, looking at the data on the left, it is easy to see that early intervention can save a lot of money both for patients, community and CHCB

4A: Community Perspective on Oral Health

- I interviewed several members of the community, and picked two quotes:
 - *“Oral health is very important. Incorporating oral health into the practice is a wonderful idea and it is something that we can definitely work on... especially given the dental office right downstairs” – Dr. Michelle Dorwart*
 - *“The demographic that we work with is vulnerable. We have many people without proper dental care and a poor diet. We also have many people abusing drugs. Many of my patients have no teeth”- Dr. Rachel Inker.*

I also spoke with a dentist of the Vermont Department of Health who wishes to remain anonymous. She supported the project and expressed excitement. She provided helpful resources to give patients after the visits.

5A: Intervention and Methodology



Determine who is at risk. Research guidelines and create a short oral health screening tool

Distribute oral health screening tool to identify at risk patients

Give high-risk patients referral to CHCB dental, explain the importance of oral health, provide resources in the community (211)

5B: Intervention and Methodology

Oral Health Screening Tool:

The following questions are based on CDC, WHO and ADA guidelines. They are specifically intended for pregnant women, people with cardiovascular conditions and risk factors, obesity, history of any cancer but especially oral, diabetes, any substance use disorder, and mental illness. This will be on a sheet of paper for the patient to fill out.

- How do you feel about your oral health (scale 1-5)
- How many times do you brush your teeth in one day? (0, 1, 2, 3+)
- How many times do you floss in one day? (0, 1, 2, 3+)
- How many times do you visit the dentist for a routine dental cleaning in one year? (0, 1, 2, 3+)

Add the last three questions

0, 1 and 2 = refer to dentist, provide resources, and counsel.

3 = refer to dentist for check up if they haven't been in the last year, provide resources and counsel

4-5= This person is not at high risk. Continue to ask about their practices at each visit and encourage to continue to regular visits the dentist .

- The average person should brush 2 times a day, once in the morning and once before bed, floss at least once per day and get their teeth cleaned twice a year.

A pamphlet with resources and information will be provided

6B: Results/Response

- Multiple providers reacted positively to the oral health screening and resources
- One provider expressed concern about the target population due to extremely poor dentition and rampant tooth loss. They felt the intervention needed to be more aggressive
- Actual data was not collected due to time constraints, but several patients were consulted. Overall, the reception was good, but some patients felt confused and one even asked me if I “was a dental hygienist.” However, once I explained the impact of oral health on systemic health, they felt compelled to follow up with a dentist.

7A: Evaluation of Effectiveness and Limitations

■ Effectiveness

- Effectiveness was not evaluated due to time constraints
- In the future, we could measure which patients went to the dentist after their oral health screen.
- In addition patient satisfaction surveys could be collected
- Lastly, improvements in symptoms for diseases such as diabetes can be tracked

■ Limitations

- COVID-19
- Dental insurance is expensive and tends to cover only preventative services
- Many patients have already lost most if not all their teeth, so they do not see the point. However, it is important to remind patients that oral health is about more than just the teeth.
- Many patients do not want to or are not able to change their sugary diet
- Perhaps most common, people are very afraid of the dentist. Encouragement and reassurance must be provided.
- Rarely, patients may be offended when asked about their teeth. It is important to normalize it and say things like “I ask these questions to all my patients.”

8A: Future Recommendations

- Distribute the oral health screen to each patient with the specified risk factors
- Collect this data at first visit, then again at 6 months and again at 12 months
- Compare the data
- Merge the EMR, require dentists to post their patient data onto the NextGen EMR so that it can be accessed by medical providers
- Inform other community health centers and encourage them to distribute the brochure

9A: References

1. US Department of Health and Human Services. Oral health in America. A Report of the Surgeon General. Rockville, MD: US Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health; 2000. <http://www.nidcr.nih.gov/AboutNIDCR/SurgeonGeneral/>
2. Mealey BL. Periodontal disease and diabetes: A two-way street. *J Am Dent Assoc.* 2006; 137: 26-31.
3. Clothier B, Stringer M, Jeffcoat MK. Periodontal disease and pregnancy outcomes: exposure, risk and intervention. *Best Pract Res Clin Obstet Gynaecol.* 2007; 21(3): 451-66.
4. Janket S, Baird AE, Chuang S, Jones JA. Meta-analysis of periodontal disease and risk of coronary heart disease and stroke. *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology & Endodontics.* 2003; 95(5): 559-569.
5. Wu T, Trevisan M, Genco RJ, Dorn JP, Falkner KL, Sempos CT. Periodontal disease and risk of cerebrovascular disease: The first national health and nutrition examination survey and its follow-up study. *Arch Intern Med.* 2000; 160: 2749-2755.
6. Al-Zahrani MS, Bissada NF, Borawskit EA. Obesity and periodontal disease in young, middle-aged, and older adults. *J Periodontol.* 2003; 74(5): 610-5.
7. Srinivas SK, Sammel MD, Stamilio DM, et al. Links Periodontal disease and adverse pregnancy outcomes: is there an association? *Am J Obstet Gynecol.* 2009; 200(5):497.e1-8.
8. Medical Expenditure Panel Survey, AHRQ, 2011. https://meps.ahrq.gov/mepsweb/data_stats/quick_tables_results.jsp?component=1&subcomponent=0&year=-1&tableSeries=6&searchText=&searchMethod=1&Action=Search
9. Prasad, M., Manjunath, C., Murthy, A. K., Sampath, A., Jaiswal, S., & Mohapatra, A. (2019). Integration of oral health into primary health care: A systematic review. *Journal of family medicine and primary care*, 8(6), 1838–1845. https://doi.org/10.4103/jfmpc.ifmpc_286_19
10. Jeffcoat MK, Jeffcoat RL, Gladowski PA, Bramson JB, Blum JJ. Impact of periodontal therapy on general health: evidence from insurance data for five systemic conditions. *Am J Prev Med.* 2014;47(2):166-74. www.uccifedvip.com/fedvip/DentalHealthCenter/conditions/ucwellness-oral-health-study/results-ucwellness-oral-health-study/?text-only Accessed 11/17/2017.
11. <https://www.chcb.org/about/>
12. https://nccd.cdc.gov/oralhealthdata/rdPage.aspx?rdReport=DOH_DATA.ExploreByTopic&isTopic=AD7&isYear=2012&go=GO