Oral Health and Diabetes in Patients Experiencing Homelessness

Factsheet
March 2019

Purpose

This factsheet was developed by the National Health Care for the Homeless Council and the National Network for Oral Health Access. The purpose is to highlight linkages between periodontal disease, diabetes and homelessness as well as address frequently asked questions related to understanding and caring for individuals who are experiencing homelessness.

Prevalence of diabetes and periodontal disease for persons experiencing homelessness

Diabetes and periodontal disease are a chronic conditions that impact all groups and individuals despite level of income, education, or housing status. However, the access to resources and barriers to obtain sufficient care can determine an individual's response to either disease. Lack of stable housing impacts care for individuals experiencing homelessness with co-morbidities including diabetes and oral disease. Between 2012-2017 there has been a steady increase in patients seen at health care for the homeless health centers with diabetes. There was an estimated four diabetes related visits per patient in 2017 (Figure 1).[1] Rehabilitative and restorative services were the most frequent dental service provided among health centers that receive health care for the homeless funding (Figure 2).[1]

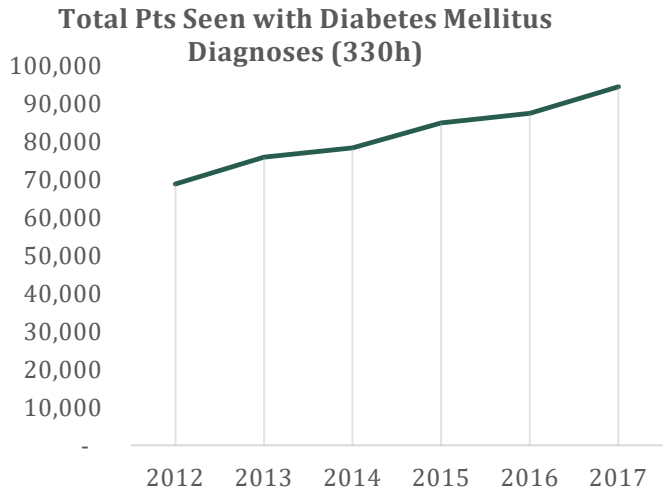


Figure 1. Number of patients with a Diabetes Mellitus Diagnosis seen at health care for the homeless health centers.

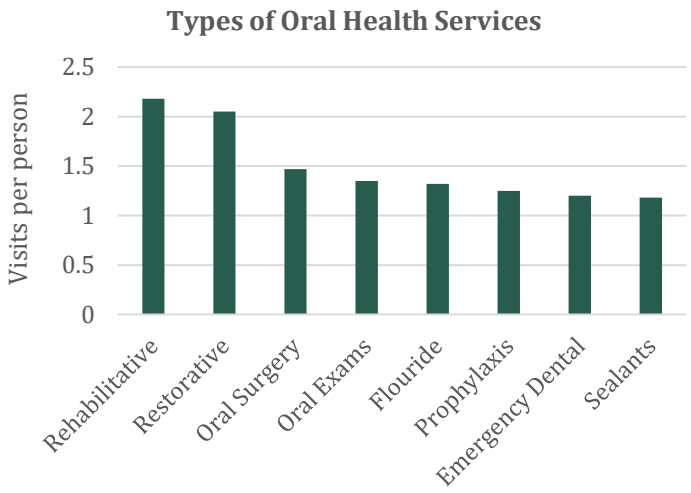


Figure 2. Frequency of type of dental visits seen at Health Care for the Homeless health centers.

Prevalence of periodontal disease for persons experiencing homelessness

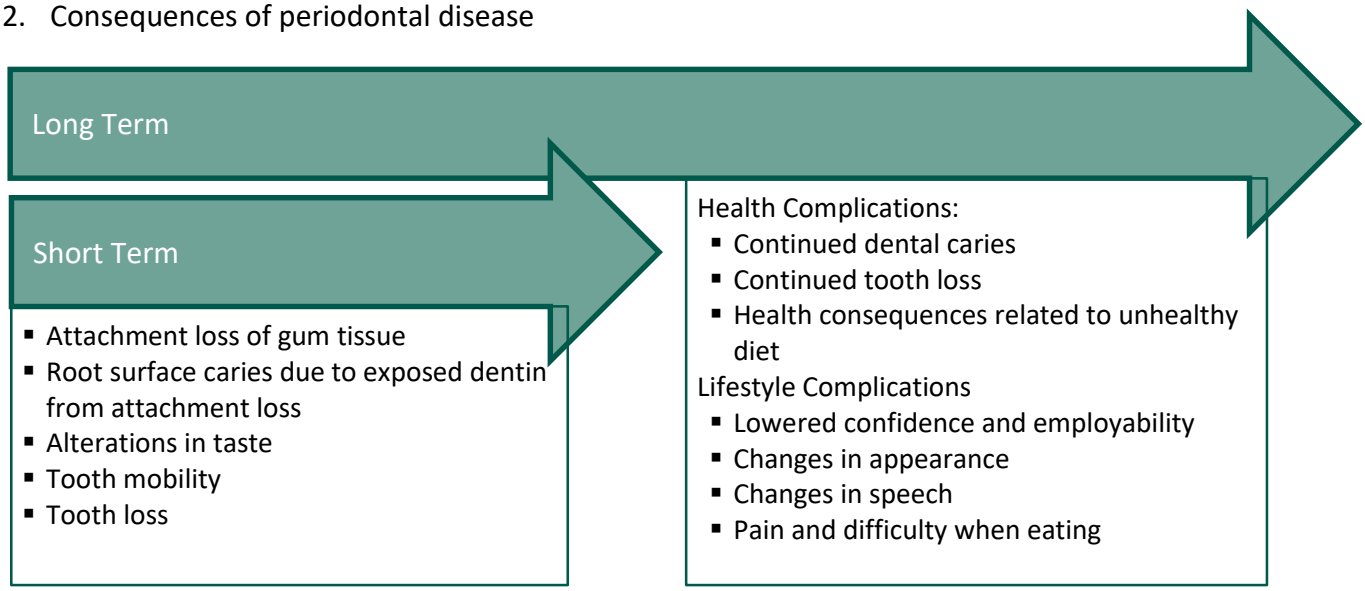
a. According to National Health and Nutrition Examination Survey (NHANES) 2009-2014 data on periodontal disease in US adults, 60.4% of adults under or less than 100% the federal poverty level experienced periodontal disease. Prevalence of periodontal disease increases with increased poverty levels.[2]
b. Over 59% of individuals with diabetes has periodontal disease.[2]

c. In Seattle, a study on periodontal disease indicators among youth and adults experiencing homelessness, showed the most common reasons for seeking care were: sensitive teeth, sore/bleeding gums, painful chewing, and loose teeth.[2]

Relationship between oral health, diabetes and consequences of periodontal disease

1. Relationship between oral health and diabetes
    a. Diabetes and periodontal disease are both inflammatory diseases.
    b. There is an association between diabetes and periodontal disease.
    c. Individuals with diabetes have higher risk of developing periodontal disease.
    d. People with poor glycemic control have a higher risk of periodontal disease compared to those with good glycemic control.
    e. Reduced circulation in blood vessels during diabetes weakens the body's resistance to infections, including infections of the gum tissues and bone structures in the mouth.
    f. Some research indicates that periodontal treatment results in statistically significant reduction in HbA1C levels at 3 months.[4]

2. Consequences of periodontal disease



Barriers to oral health care

Experiencing homelessness can introduce competition between human needs often topped by safety and food, which often leaves personal health as a lower priority. Despite competing priorities, barriers specific to oral care exist such as lack of access to a dentist, clean water, toothbrush, toothpaste, floss, and nutritious foods. Persons with unstable housing have higher rates of comorbidities including increased rates of chronic disease such as diabetes and hypertension, substance use and alcohol use. These comorbidities alongside multiple prescriptions, weakened immune systems, and food insecurity underscore causes that lead to and are a result of poor oral health.

Limited health care access results in poorer health outcomes and missed opportunities for early detection. Although improving, there are some health care for the homeless health centers that do not offer on-site direct dental services. Instead, these organizations rely on outside entities to provide dental care through

referrals or contracting dental services. Overall, access to providers continue to present hurdles to dental care for experiencers of homelessness.

Access to Care

1. Medical and Dental Integration
   There are many barriers for patients experiencing homelessness (PEH) to gain access to oral health care. In addition to the barriers previously stated, health centers may experience lower capacity in their dental clinics compared to their medical clinics. The national statistic indicates that dental programs in US health centers have 26% the capacity of medical programs.[1] Based on this information, PEH may be more likely to receive medical care than dental care. As one strategy for increasing access to oral health care, health centers can integrate oral health and primary care practice.

   a. Dental Providers' Role in Diabetes Management
      i. Dental providers can engage in primary care services during dental visits for diabetes management and prevention. Dental providers can perform diabetic screenings with risk assessment tools and hemoglobin A1c tests. (Example risk assessment tool: http://main.diabetes.org/dorg/PDFs/risk-test-paper-version.pdf)
      ii. Develop a workflow for dental appointments to integrate diabetic screenings. Dental programs can utilize the whole care team including providers and support staff to perform diabetes risk assessments and hemoglobin A1c testings.
      iii. Check with your state Medicaid office if point-of-care A1c testing is billable.

   b. Medical Providers' Role in Oral Health
      i. With the reduced capacity experienced by dental programs, medical providers who treat PEH can engage in some oral health activities to help with periodontal disease management and oral health prevention. The Health Services and Resources Administration (HRSA) has identified five oral health core clinical competencies for primary care providers:
         1. Risk Assessment
         2. Clinical Evaluation
         3. Preventive Interventions
         4. Communication and Education
         5. Interprofessional Collaboration
      ii. The clinical evaluation can be done by simply assessing the mouth for any abnormalities: bleeding gums, swollen gums, loose teeth, missing teeth, visible plaque, and dental caries. (Training tool for clinical evaluations: https://www.smilesforlifeoralhealth.org)
      iii. The oral health risk assessment can be completed with a combination of medical provider and support staff. (Example tool: https://www.ada.org/en/member-center/oral-health-topics/caries-risk-assessment-and-management)

Tools and Resources:

Evidence-Based

a. American Dental Association: https://www.ada.org/en/member-center/oral-health-topics/diabetes

b. American Diabetes Association: http://www.diabetes.org/living-with-diabetes/treatment-and-care/oral-health-and-hygiene/diabetes-and-oral-health.html
c. National Institute of Health: https://www.nidcr.nih.gov/health-info/diabetes and https://www.niddk.nih.gov/health-information/diabetes/overview/preventing-problems/gum-disease-dental-problems
d. American Dental Hygiene Association: http://www.adha.org/sites/default/files/7836_Diabetes_Mellitus.pdf

Medical and Dental Integration

a. NNOHA User's Guide for Implementation of Interprofessional Oral Health Core Clinical Competencies: http://www.nnoha.org/nnoha-content/uploads/2018/04/IPOHCCC-Users-Guide-Final_01-23-2015.pdf
b. Oral Health and Patient-Centered Health Home Action Guide: http://www.nnoha.org/nnoha-content/uploads/2013/09/PCHHActionGuide02.12_final.pdf
c. 2017 NNOHA Annual Conference Presentation – Collaborations to Promote Integrated Care for Patients with Diabetes: http://www.nnoha.org/nnoha-content/uploads/2017/12/Collab-to-promote-integrated-care-diabetes.pdf

Patient Education Tools

a. Mouth Healthy: https://www.mouthhealthy.org/en/az-topics/d/diabetes
b. Brochures and Pamphlets:
    i. https://www.nidcr.nih.gov/health-info/diabetes
    ii. https://www.acponline.org/system/files/documents/practice-resources/patient-resources/oral-health-and-diabetes.pdf
c. Articles for patients:
    i. https://www.ada.org/~/media/ADA/Publications/Files/For_the_Dental_Patient_July_2010.pdf?la=en
    ii. https://jada.ada.org/article/S0002-8177(16)30610-9/pdf
    iii. https://jada.ada.org/article/S0002-8177(18)30049-7/fulltext

Oral Health and Homelessness

a. In Focus: Vision & Oral Health among Individuals Experiencing Homelessness. http://www.nhchc.org/wp-content/uploads/2015/06/in-focus_vision-oral-and-homelessness_june20153.pdf
b. Healing Hands. Dental and Vision Care for Homeless Patients. https://www.nhchc.org/wp-content/uploads/2015/10/healing-hands-fall-2015-web-ready-pdf.pdf
c. NNOHA and NHCHC 2018 Webinar Slides: Oral Health and Diabetes for Patients Experiencing Homelessness. http://www.nnoha.org/nnoha-content/uploads/2018/11/Diabetes-OH_NNOHANHCHC-11.27.18.pdf

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1. Health Resources and Services Administration: Bureau of Primary Health Care. 2017 National Health Center Data. https://bphc.hrsa.gov/uds/datacenter.aspx.
2. JADA 2018: 149(7):576-588. https://doi.org/10.1016/j.adaj.2018.04.023.

3. Chi D, Milgrom P. The oral health of homeless adolescents and young adults and determinants of oral health: preliminary findings. Spec Care Dentist. 2008; 28(6):237-242.
4. Madianos PN, Koromantzos PA. An update of the evidence on the potential impact of periodontal therapy on diabetes outcomes. J Clin Periodontol. 2018 Feb;45(2):188-195.

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