

the percentage of the population visiting an orthodontist rebounded to 3.1%.

The impact on orthodontic visits was most evident among adults age 19 years or older. The percentage visiting an orthodontist declined from 1.1% in 2008 to 0.7% in 2010, but then increased back to 1.1%. Both lower-income and higher-income individuals age 19 years or older evidenced the same pattern of impact from the economic conditions. When children 8 through 18 years were the focus, which is when most orthodontic treatment is undertaken, the higher-income group had a decline in attendance in the first half of the study period and recovered to a large degree in the second half. The lower income-group had a slight increase in visits by 2015 compared to 2003 data.

For orthodontic patients, private insurance expenditures fell by 8% through 2015. Medicaid/CHIP expenditures increased by 8.3%. As noted, out-of-pocket expenses showed similar patterns for general dental and orthodontic services, with the latter falling by just 0.04%. Differences in out-of-pocket spending can be explained by contractual time payments, which are a common method of payment for orthodontic patients. Governmental assistance programs paid for both types of services and the payouts increased for both.

DISCUSSION

The number of patient visits for general oral health care increased by 5.3% and expenditures for services increased by

6.5% from 2003 through 2015. For orthodontics, the number of patients increased by 2.4%, with expenditures for orthodontic services increasing by about 18.4% in inflation-adjusted dollars from 2003 through 2015. The changes in patient attendance were not statistically significant. Although the numbers of people treated in 2003 and 2015 remained about the same, the US population increased by about 28 million over that same time.

Clinical Significance

The conflicting trends between general dental and orthodontic visits emphasize the importance and immediate effect of the economic factors on demand for care. Orthodontic care was more deeply affected than general oral health care. These data should be carefully evaluated to help in planning for the next economic downturn.

Guay AH, Blatz A: The effect of the Great Recession on the demand for general oral health care and orthodontic care. *J Am Dent Assoc* 150:287-293, 2019

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HOMELESS ADULTS

Oral health and access to dental care



BACKGROUND

Oral disease has been termed a silent epidemic, with oral health improving minimally over the past 2 decades. Almost a quarter of US adults age 20 to 64 years have untreated dental caries and over half have lost a permanent tooth. Those who live in poverty or are homeless are at higher risk for poor oral health. People experiencing homelessness have inadequate resources for providing regular dental hygiene and a higher risk for tooth loss, which is a key indicator of poor oral health. Edentulism is also a risk factor for coronary artery plaque formation, diabetes, and some cancers. Older homeless persons not only suffer from the privation of homelessness but also have poorer oral health because of their age. The prevalence of tooth loss, oral pain, and denture fit was investigated in a population-

based cohort of older homeless adults in Oakland, California. In addition, factors associated with poor oral health were identified.

METHODS

The population-based study group included 350 homeless adults age 50 years or older (median age 58 years). Trained researchers conducted structured interviews with each participant, covering demographics, health-related behaviors, use of health care resources, and health status. The specific dental concerns evaluated were tooth loss, oral pain, and need for dental care that went unmet. Factors associated with missing half or more teeth were identified using multivariable logistic regression.

Table 2. Self-Reported Oral Health Indicators (N = 350)

| Characteristics | N (%) |
|---|------------|
| Number missing teeth | |
| Missing at least 1 tooth | 326 (93.1) |
| Missing 1 or 2 teeth | 32 (9.1) |
| Missing more than 1–2, but < half of teeth | 93 (26.6) |
| ~ Missing half of teeth | 58 (16.6) |
| Missing more than half but fewer than all teeth | 75 (21.4) |
| Missing all teeth | 68 (19.4) |
| Unable to eat | 89 (25.4) |
| Mouth pain | |
| Mouth pain in last 6 months | 191 (54.6) |
| Prevented from eating | 101 (28.9) |
| Prevented from sleeping | 73 (20.9) |
| Last dental visit | |
| <6 months ago | 52 (14.9) |
| 6–12 months ago | 44 (12.6) |
| >1 and <5 years ago | 110 (31.4) |
| 5+ years ago | 141 (40.3) |
| Unmet need (last 6 months) | |
| Sought dental care, but could not obtain | 190 (54.3) |

(Courtesy of Freitas DJ, Kaplan LM, Tieu L, et al: Oral health and access to dental care among older homeless adults: Results from the HOPE HOME study. *J Public Health Dent* 79:3-9, 2019.)

RESULTS

Demographics

The study sample was 77.1% men and 79.7% African American. Seventy-four percent had graduated from high school or obtained a GED. The median time spent as a homeless adult was 2.5 years. When asked about substance use, 26.0% reported moderate-to-high risk alcohol use, 43.1% reported moderate-to-high risk cocaine use, 39.1% cannabis use, 12.9% use of opioids, and 8.0% methamphetamine use. Smoking behavior at any point in their life was reported by 77.7% of participants.

Oral Health

Regarding tooth loss, 93.1% of participants were missing at least 1 tooth, 57.4% were missing half or more of their teeth, and 19.4% were missing all of their teeth (Table 2). Issues with teeth prevented 25.4% from eating.

About a third (32.4%) of those missing all their teeth had no dentures, and 19.5% of the dentures worn by those missing all their teeth did not fit. Most of the participants (54.6%) had experienced oral pain in the previous 6 months. The pain was sufficiently severe in 28.9% of the individuals that it interfered with eating and sleeping.

About 40% had not seen a dentist in over 5 years. Among the participants who tried to obtain dental care in the previous 6 months, 54.3% were unsuccessful.

Factors Associated with Missing Teeth

Among the factors found to be associated with missing at least half of one's teeth were increased age, moderate-to-high risk alcohol use, moderate-to-high risk cocaine use, and ever smoking. Moderate-to-high risk cannabis use was associated with higher odds of missing at least half of one's teeth, but the data did not reach statistical significance. Although moderate-to-high risk opioid use was associated with an increased risk of missing half or more teeth in bivariate analysis, it had no such association in multivariate analysis.

Factors that had a lower risk for losing at least half of one's teeth included moderate-to-high risk methamphetamine use and reporting oneself as of 'other' race/ethnicity compared to reporting oneself as 'white'.

DISCUSSION

Homeless adults evidenced both poor oral health and poor access to dental care. Their experience of oral pain was nearly 3 times greater than that seen in the general population over age 65 years and over twice that of the general population over age 65 years who were considered to live in poverty. Older homeless adults were often unable to access dental care to resolve their problems. Only about 25% indicated they had visited a dentist in the previous year.

Clinical Significance

Poor oral health and limited access to dental care among older homeless persons are problems that the Affordable Care Act (ACA) and expanded Medicaid programs may be able to address, depending on state regulations. Access to care should be a priority because oral care will allow these persons to maintain not just better oral health but improved overall health as well. Both preventive and restorative options should be offered to them.

Freitas DJ, Kaplan LM, Tieu L, et al: Oral health and access to dental care among older homeless adults: Results from the HOPE HOME study. *J Public Health Dent* 79:3-9, 2019

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