Original Contributions

Disparities in oral health by immigration status in the United States

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ABSTRACT

Background. Few investigators have explored differences in oral health status between immigrants and natives. To address this gap, the authors used nationally representative data to characterize disparities in oral health among noncitizens, naturalized citizens, and native adults.

Methods. The 2013 to 2014 National Health and Nutrition Examination Survey, a nationally representative in-person survey, provides oral health data for US natives, naturalized citizens, and noncitizens. Univariate and multivariate regression analyses were conducted to compare evidence of caries and periodontal disease, as well as recommendations for oral health care, stratified by immigration status for adults.

Results. More than one-half of noncitizens (50.5%) received a diagnosis of periodontal disease, and 38.0% had caries; for natives, these rates were 34.4% and 27.0%, respectively. Differences between natives and naturalized citizens were not statistically significant. After adjusting for age, sex, race or ethnicity, education, poverty, tobacco smoking status, and number of permanent teeth, noncitizens still had 45% higher adjusted odds of periodontal disease and 60% higher odds of receiving recommendations for oral health care than natives. However, differences between noncitizens and natives were no longer important after adjusting for insurance.

Conclusions. Noncitizen immigrants reported having substantially poorer oral health than natives in the United States. However, disparities between noncitizens and natives are no longer important when accounting for health insurance.

Practical Implications. Although noncitizen adults have a higher likelihood of poor oral health than native adults, having insurance may close this gap. Health care reform initiatives should provide dental benefits for adults to help mitigate the current economic and legal barriers that many immigrants face when accessing oral health care.

Key Words. Dental health services; caries; periodontal diseases; health policy; dental care; dental public health; minority groups; public policy; public health or community dentistry; vulnerable populations.

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Prior research on health disparities between immigrants and natives in the United States has been mixed. For example, immigrants were found to have better health outcomes than expected compared with natives for a number of chronic diseases.[1-5] Other research suggests that certain health outcomes are worse for immigrants than for natives in the United States.[6-9] The causes for these inconsistent results for immigrants are likely due to barriers accessing care, particularly because of federal and state policies, as well as variations in socioeconomic status.[10-14] Because of these barriers, it is important to differentiate noncitizens from naturalized citizens and US natives. In particular, noncitizen immigrants face substantial restrictions in accessing federally funded benefits programs owing to the 1996 Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA).[10] PRWORA prevents the use of federal funding in Medicare, Medicaid, or other programs to provide coverage or services to undocumented immigrants or noncitizens with fewer than 5 years of US residency. Therefore, states vary substantially in expanding eligibility for medical assistance programs to recent legal resident or undocumented immigrants.[15] Most states provide medical assistance to only lawfully residing children or pregnant women.[15] Only 19 states provide some form of

medical assistance regardless of immigration status. However, this assistance is almost always restricted to prenatal or child health care services.[15] To our knowledge, no state extends nonemergency dental coverage to legal residents with fewer than 5 years of US residency or who are undocumented.[15] Although states are required to provide dental coverage to legal immigrant children under the Children's Health Insurance Program, states are not required to extend this coverage to undocumented immigrant children.[16] In their study of Medicaid enrollees, Yun and colleagues[17] found that US-born children of immigrants in Pennsylvania were more likely to use preventive oral health care services than children in nonimmigrant families. However, further research is needed to understand the role of Medicaid dental coverage, if provided, in reducing immigrant disparities in oral health status.

In addition to facing legal barriers to accessing federal or state medical assistance, 21.6% have incomes below the federal poverty guidelines versus 11.1% for natives and 11.8% for naturalized citizens.[18] Thus, noncitizens are less likely than natives to afford private insurance coverage or supplemental dental coverage. In fact, investigators reported 27% of noncitizens had private dental insurance compared with 41% for naturalized citizens and 44% for natives.[18] Therefore, differentiating noncitizens from naturalized citizens and natives is important in characterizing immigrant-related health disparities.

Few investigators have examined disparities in oral health between immigrant and native adults.[18,19] With the use of nationally representative data, Wilson and colleagues[18] reported that only 23% of noncitizen immigrants had a comprehensive dental examination in 12 months compared with 44% of US natives. Noncitizens were also substantially more likely to experience tooth extraction during their dental visits than natives.[18] Sanders[19] examined the effect of race or ethnicity and nativity status on self-reported oral health quality of life among adults and found that Hispanic immigrant adults had lower adjusted odds of impaired oral health quality of life than non-Hispanic natives. These findings were not statistically significant for other racial or ethnic and immigrant groups.[19]

With the use of a large-scale, nationally representative database, we expand on this prior research. Specifically, we differentiate naturalized citizens from noncitizens among immigrants and identify disparities in oral health outcomes relative to US natives, isolating the impact on oral health of immigration status by adjusting for race or ethnicity and other relevant confounders such as socioeconomic status and access to care. We hypothesize that, based on important socioeconomic and legal barriers accessing care, noncitizens will have a higher need for oral health care than either naturalized citizens or US natives. Furthermore, insurance status will be a major policy-modifiable factor in helping reduce disparities in oral health across immigrant groups.

METHODS

Data and sample

We used data from the 2013 to 2014 National Health and Nutrition Examination Survey (NHANES) to examine oral health by immigration status.[20] The data were collected by the National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention biannually. NHANES is a nationally representative database publicly available to researchers and includes in-person interviews and results from medical examinations. NHANES has been reviewed and approved by the NCHS Research Ethics Review Board (protocol 2011-17). The NHANES database is a publicly available deidentified secondary database, and this research is exempt from human participant review by the University of Nebraska Medical Center Institutional Review Board. We examined all adults 20 years or older with nonmissing demographic, socioeconomic, insurance, and dental examination data. Of 5,777 adults, there were 5,194 with nonmissing immigration status who received a dental examination. An analytical sample of 4,520 respondents remained after exclusions of those with missing socioeconomic (n = 387), insurance (n = 4), and tobacco smoking (n = 283) data. Of these, 3,738 adults 30 years and older received periodontal assessments.

Measures

Trained and calibrated dentists contracted by NHANES examined the teeth of participants, recorded their conditions, and made recommendations to visit a dentist as needed.[21] Caries were determined based on examination of pits and fissures on tooth surfaces and smooth areas on tooth

ABBREVIATION KEY

FGM: Free gingival margin.
NCHS: National Center for Health Statistics.
NHANES: National Health and Nutrition Examination Survey.
PRWORA: Personal Responsibility and Work Opportunity Reconciliation Act.