ADA CE Program ARTICLE 2

The effect of growing income disparities on U.S. adults' dental care utilization

Kamyar Nasseh, PhD; Marko Vujicic, PhD

ABSTRACT

Objective. The authors conducted a study to measure the gap in dental care utilization between poor and nonpoor adults at the state level and to show how the gap has changed over time.

Methods. The authors collected data from the 2002, 2004, 2006, 2008 and 2010 Behavioral Risk Factor Surveillance System prevalence and trends database maintained by the Centers for Disease Control and Prevention to measure differences in dental care utilization between poor and nonpoor adults. Poor adults are defined as those at or below the federal poverty threshold. The authors estimated a series of linear probability models to measure the dental care utilization gap between poor and nonpoor adults, while controlling for potentially confounding covariates.

Results. In 12 states (Arkansas, California, Florida, Georgia, Illinois, Indiana, Nebraska, Ohio, Oklahoma, South Carolina, Texas and Washington), the gap in dental care utilization between poor and nonpoor adults grew from 2002 through 2010. The remaining states had a stable utilization gap from 2002 through 2010. The study results show that four states (Alaska, Massachusetts, Minnesota, New York) and the District of Columbia had a smaller gap in dental care utilization in 2010 than that in other states.

Conclusions. At the state level, poor adults face greater access barriers to dental care than do nonpoor adults. As states limit dental coverage through Medicaid, poor adults are at greater risk of experiencing poor oral health outcomes.

Practical Implications. In states that are experiencing increasing inequality in dental care utilization between poor and nonpoor adults, policymakers may wish to explore alternative approaches that could address this situation.

Key Words. Dental care utilization; income inequality; access to dental care; oral health; Medicaid.

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In recent analyses, researchers have demonstrated that dental care utilization among adults has declined in the past decade.[1,2] Given the importance of oral health to wages, labor productivity[3] and general health,[4,5] this decline should be of concern to the health care and business community. Lack of access to dental care causes many people to seek care in hospital emergency departments,[6] further increasing health care costs. These associated costs are assumed by the hospitals because many patients do not have dental coverage.

Poor adults, whom we define as people with incomes at or below the federal poverty threshold, face significant financial barriers to accessing dental care in the United States.[7] A recent documentary titled "Dollars and Dentists" highlighted the oral health crisis facing poor adults and children in the United States.[8] Research findings at the national level have shown a gap in dental care utilization—defined as whether a person visited a dentist in the previous 12 months—between poor and nonpoor people, and this gap increased between 1977 and 1996.[9] To our knowledge, the only research at the state level showed that the gap in dental care utilization between those with health insurance and those without any insurance has widened since 2002.[10] However, the data for that study do not allow identification of dental insurance status.

One key driver of these observed differences in dental care utilization, according to insurance or income status, is Medicaid. Medicaid programs in most states offer limited dental benefits because states are not mandated to provide dental benefits to adults.[11] In many states, low-income adults who qualify for Medicaid likely have limited dental benefits, and these benefits vary widely across states. For children enrolled in Medicaid, states must provide access to comprehensive dental benefits through the Early Periodic Screening, Diagnostic, and Treatment program.[12]

The results of an American Dental Association analysis of adult dental benefits in state Medicaid programs in 2012 showed that 11 states (Alaska, Connecticut, Iowa, New Mexico, New York, North Carolina, North Dakota,

Dr. Nasseh is a health economist, Health Policy Resources Center, American Dental Association, 211 E. Chicago Ave., Chicago, Ill. 60611-2637, e-mail nassehk@ada.org. Address correspondence to Dr. Nasseh.
Dr. Vujicic is managing vice president, Health Policy Resources Center, American Dental Association, Chicago.

Ohio, Oregon, Rhode Island and Wisconsin) provided extensive dental benefits; the District of Columbia and 14 states (Arkansas, Indiana, Kentucky, Louisiana, Massachusetts, Michigan, Minnesota, Nebraska, New Jersey, Pennsylvania, South Dakota, Vermont, Virginia and Wyoming) provided limited dental benefits; 17 states (Arizona, Colorado, Florida, Georgia, Hawaii, Idaho, Illinois, Kansas, Maine, Mississippi, Missouri, Montana, New Hampshire, South Carolina, Texas, Washington and West Virginia) provided emergency benefits only; and eight states (Alabama, California, Delaware, Maryland, Nevada, Oklahoma, Tennessee and Utah) provided no dental benefits to adults through Medicaid.[13]

Between 2002 and 2012, 24 states (Alabama, Arizona, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Kansas, Kentucky, Louisiana, Maine, Mississippi, Nebraska, Nevada, New Hampshire, New Mexico, New York, North Dakota, Oklahoma, South Carolina, Vermont, West Virginia and Wisconsin) made no changes in dental benefits provided to adults enrolled in Medicaid; the District of Columbia and 11 states (Alaska, Arkansas, Colorado, Iowa, North Carolina, Ohio, Oregon, Rhode Island, Texas, Virginia and Wyoming) increased coverage; and 15 states (California, Illinois, Indiana, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, New Jersey, Pennsylvania, South Dakota, Tennessee, Utah and Washington) decreased coverage.[14]

In this study, we measured the gap in dental care utilization between poor adults (defined as adults at or below the federal poverty threshold)[15] and nonpoor adults (defined as adults above the federal poverty threshold).

TABLE 1

Gap in dental care utilization between poor and nonpoor adults, according to the BRFSS.*†

STATE	ESTIMATED DIFFERENCE IN DENTAL CARE UTILIZATION BETWEEN POOR AND NONPOOR ADULTS IN 2002, IN PERCENTAGE POINTS (95% CI‡)	ESTIMATED DIFFERENCE IN DENTAL CARE UTILIZATION BETWEEN POOR AND NONPOOR ADULTS IN 2010, IN PERCENTAGE POINTS (95% CI)
Alabama	11.7 (5.8-17.6)§	16.0 (11.3-20.8)§
Arkansas	10.2 (4.8-15.6)§	19.7 (13.0-26.5)§
Arizona	11.0 (1.1-20.9)¶	15.7 (8.9-22.5)§
Alaska	15.3 (4.7-25.9)§	6.9 (−6.1-19.9)
California	8.3 (2.7-13.8)§	14.6 (12.0-17.3)§
Colorado	17.9 (11.3-24.5)§	14.7 (9.8-19.5)§
Connecticut	10.1 (2.9-17.3)§	11.4 (3.2-19.5)§
Delaware	13.3 (5.4-21.3)§	11.7 (5.0-18.5)§
District of Columbia	3.0 (−6.0-12.0)	7.4 (−0.03-14.8)#
Florida	11.0 (5.5-16.5)§	16.9 (13.1-20.8)§
Georgia	8.9 (3.7-14.0)§	18.0 (12.7-23.2)§
Hawaii	7.9 (1.8-14.1)¶	9.2 (2.8-15.6)§
Idaho	9.0 (4.0-14.0)§	14.3 (9.3-19.3)§
Illinois	7.7 (−1.3-16.6)#	19.6 (13.1-26.0)§
Indiana	9.8 (4.3-15.2)§	16.7 (12.2-21.1)§
Iowa	11.8 (4.7-19.0)§	16.2 (9.6-22.7)§
Kansas	16.2 (9.7-22.7)§	16.2 (11.1-21.3)§
Kentucky	13.2 (7.0-19.5)§	13.2 (7.7-18.6)§
Louisiana	11.2 (6.3-16.0)§	15.4 (10.7-20.1)§
Maine	15.3 (8.4-22.1)§	18.6 (13.7-23.4)§
Maryland	15.5 (7.1-24.0)§	13.8 (7.6-20.1)§
Massachusetts	8.5 (3.2-13.8)§	4.5 (0.50-8.4)¶
Michigan	17.9 (12.0-23.8)§	19.8 (15.1-24.5)§
Minnesota	11.8 (4.5-19.1)§	7.2 (−1.3-15.6)#
Mississippi	10.6 (5.5-15.8)§	13.2 (8.6-17.8)§
Missouri	15.0 (8.1-21.9)§	20.0 (11.9-28.1)§
Montana	12.3 (5.2-19.3)§	14.9 (8.9-20.9)§
Nebraska	2.9 (−2.8-8.7)	16.3 (10.6-22.0)§
Nevada	9.1 (−0.1-18.3)#	14.3 (4.8-23.8)§
New Hampshire	12.1 (5.6-18.6)§	18.4 (12.1-24.7)§

* BRFSS: Behavioral Risk Factor Surveillance System. Source: Centers for Disease Control and Prevention.[16]
† Each survey year (2002, 2004, 2006, 2008, 2010) took into account dental care utilization that occurred during that year and the previous year. Adults were 18 years or older. Regression-adjusted differences included year indicator variables and control variables for age, sex, marital status, ethnicity or race, employment status, education, self-reported health status, body mass index and number of children.
‡ CI: Confidence interval. All estimates are weighted, and standard errors account for the complex survey design of the BRFSS.
§ Significant at $P \leq .01$.
¶ Significant at $P \leq .05$.
# Significant at $P \leq .10$.

ABBREVIATION KEY. **ACA:** Affordable Care Act. **BMI:** Body mass index. **BRFSS:** Behavioral Risk Factor Surveillance System. **MEPS:** Medical Expenditure Panel Survey. **NHIS:** National Health Interview Survey.