

RESEARCH REPORT

# Poor Families Spend 10 Times More of their income on dental care than wealthier families

PART 1 of 3

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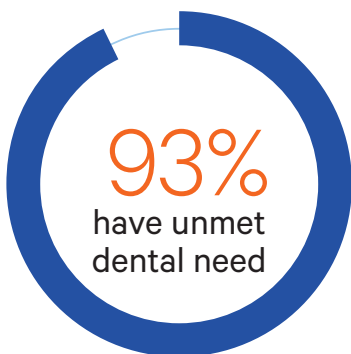
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## Methods:

To better understand the structure of unmet need for dental services, we used the National Health and Nutrition Examination Survey (NHANES) for 2015/2016 to estimate the average number of decayed teeth per capita by family income. We estimated the per user annual number of restorative sessions (derived from MEPS 2015) then used claims data to convert restoration sessions to number of teeth treated and estimate the per capita number of decayed teeth restored. Finally, we estimated the unmet need for restorative care by subtracting the per capita number of decayed teeth (derived from NHANES) from the per capita number of restored teeth (derived from MEPS), and divided the computed value by the per capita number of decayed teeth (derived from NHANES). We used MEPS to estimate the utilization and expenditures on dental care from 2011 through 2016. This database represents large-scale, national surveys of the civilian, noninstitutionalized families and individuals, medical providers, and their employers and is one of the most complete sources of data on cost and use of services and health insurance coverage. We estimated the utilization rate of dental services for individuals by family income, the overall and family OOP expenditure on dental services in families where at least one family member accessed dental care. The family income was categorized using the Federal poverty level (FPL): poor (<100% FPL), near poor (100-124.9% FPL), low (125-199.99% FPL), mid (200-300% FPL), and high (those at or above 400% FPL).

# Key Findings



**93% of individuals living in poverty have unmet dental needs** compared to 58% in high-income families.



Only **28% of individuals living in poverty utilized dental services** compared to 55% of high-income families.



**Those in poverty spend ten times more of their annual family income on dental services** compared to those living in high income families.



## Abstract

Families in poverty or low-incomes have greater unmet dental need and spend a significant portion of their available annual income on dental care. 28 percent of those in poverty, 30 percent of those near-poor, and 33 percent of low-income families utilized dental services compared to 39 percent of those in middle- and 55 percent of those in high-income families. Ninety-two percent of poor, near-poor, or low-income families have unmet dental needs, compared to 85 percent of those in middle- and 58 percent in high-income families. Those families in poverty who get any dental care spend 9.7 times more as a proportion of their annual family income on dental care than those with high-incomes and those who are near-poor, low- or middle-income (1.8 times, 2.2 times, and 4.0 times, respectively). Expansion of an adult dental benefit could increase access and reduce the associated out-of-pocket costs.





# Significant Barriers to Dental Care Are Common in the United States

The cost of dental care remains a significant barrier to access in the United States, despite state and federal legislative efforts (1). Patients often forgo dental care or routine dental visits due to the high cost associated with those visits (2). Children and adults with lower family incomes are less likely to visit a dentist and are more likely to have untreated dental needs than those with higher family incomes (3-4). Additionally, adult dental benefits in Medicaid are not federally mandated and only 19 states offer extensive dental coverage (5). Dental services are not covered by Medicare and are only available with some

Medicare Advantage plans, with 74% of low-income Medicare recipients not receiving any dental care (6-7). This lack of coverage and the benefit caps within existing plans could lead to a situation where those who need dental care most but can least afford it either forgo needed dental services or pay for only selected services that they can afford (8-11). Affordability and out-of-pocket expenditures for dental services are not typically evaluated in research on dental care costs. This report addresses this gap by assessing the distribution of out-of-pocket costs across family incomes.

# People in Poorer Families Have Greater Unmet Dental Needs

Combining data from the National Health and Nutrition Examination Survey (NHANES) and the Medical Expenditure Panel Survey (MEPS), we estimate the proportion of individuals with unmet dental needs for restorative care in 2015 (Table 1) (12-13). Ninety-two percent or more of individuals living in families that are poor, near-poor, or low-income have unmet dental needs, compared to 85% of those in middle-income families, and 58% of those of high incomes have unmet dental needs.

While the unmet need is highest among the poor, near-poor and those in low-income families, we found that only 28% of those in poverty, 30% of individual from near-poor families and 33% of those in low-income families utilized dental services compared to 39% of those in middle-income families and 55% of high-income families. These disparities are most likely due to lack of dental coverage especially for adults in poor, near-poor and low-income families.

**Table 1: Unmet Dental Need by Family Income in 2015 and 2016**

	Average number of decayed teeth*	Per capital teeth receiving restorative care**	Per capita untreated decayed teeth	% of unmet need for restorative care
Poor (<100%FPL)	0.83	0.06	0.77	93%
Near-Poor (100-124.99% FPL)	0.65	0.05	0.61	93%
Low-income (125-199.99% FPL)	0.75	0.06	0.69	92%
Middle-income (200-399.99% FPL)	0.49	0.07	0.41	85%
High-income (400%+ FPL)	0.24	0.10	0.14	58%

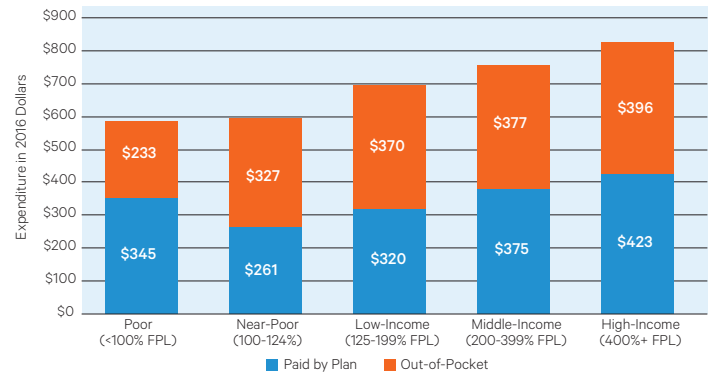
Sources: \*NHANES 2015/2016, \*\*MEPS 2015

# People in Poorer Families Spend More on Dental Services as a Proportion of Family Income

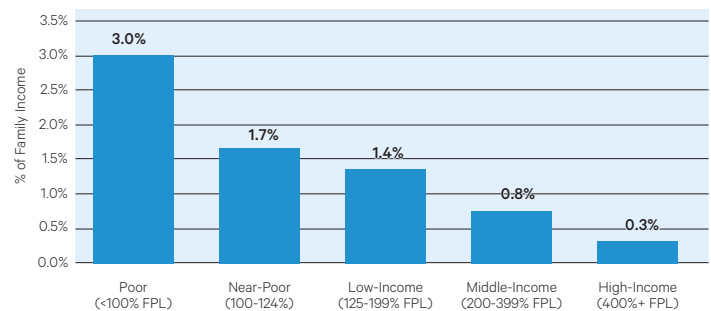
Using data from the Medical Expenditure Panel Survey, we estimate the average annual expenditures on dental services among families where at least one member utilized dental services from 2011 to 2016 (Figure 1, See Appendix 1 for expenses in each year). As family incomes increase, the average total expenses on dental care increases from \$694 among those at low incomes to \$816 among those at high incomes, with about half paid by a private or public dental plan and about half paid out-of-pocket. The poor and near poor spend the least on dental services, with average annual spending at \$606 and \$573, respectively. This dollar amount, however, does not consider the burden of these expenses as they may not reflect the family's ability to pay for dental care. Among those below the federal poverty level, 41% of expenses on dental services are paid out-of-pocket, while 55% of the dental expenses of the near-poor are paid out-of-pocket.

When out-of-pocket costs are calculated as a proportion of family income, the full burden of these expenses becomes clear. On average, from 2011 to 2016, the \$251 spent out-of-pocket on dental expense among those with family incomes below the poverty line represents 3% of their total income for the year (Figure 2, See Appendix 1 for proportions in each year). Those who are near-poor or with low incomes spend more than 1% of their average annual income on out-of-pocket dental services. Conversely, those at higher incomes spend relatively little on dental expenses only about 0.3% of the average annual income. In summary, those in poverty spend 10 times more as a proportion of their family income on dental care than those at high incomes, while those who are near-poor, low-income, and middle-income spend 5.6 times, 4.6 times, and 2.6 times more as a proportion of their family income on dental care. This spending only reviews national trends, and the burden might be higher in states that lacks comprehensive Medicaid adult dental benefits.

**Figure 1: Average Annual Per User Expenditure on Dental Services, by Family Income, 2011-2016**



**Figure 2: Average Annual Proportion of Family Income Spent on Dental Services, 2011-2016**





## Expanding Public Insurance Programs Could Reduce the Economic Burden and Increase the Access to Care for Poorer Families

The analysis demonstrates that those in poverty and with low incomes use fewer dental services, spend a significant portion of their annual income on dental care, and still have significant unmet dental needs. However, those at high incomes utilize more dental services, spend significantly less, as a proportion of income, on dental services and have fewer unmet dental needs than other income groups. These findings highlight the need to include out-of-pocket costs of those utilizing dental services as an access indicator, in addition to the per capita utilization and expenditures on dental services, in evaluations of the cost of dental care (14). Such out-of-pocket expenses may be associated with deferral of care, limited uptake of services, and have significant impacts on oral and overall health, as well as improved chance of employment (14).

These results highlight the disproportionate burden that paying for dental services places on the poorest families in our society. Research has found the expansion of an adult dental benefit in Medicaid increases access to dental care and would reduce out-of-pocket expenses among Medicare recipients (15-16). Expansion of an adult dental benefit to cover all adults in need, enrolled in both Medicaid and Medicare, would go far in reducing the burden of cost and dental disease in these patients. The most immediately available remedy would be to expand a Medicaid dental benefit in states with limited or no adult dental benefit. Two states, Delaware and New Hampshire, passed such legislation this year (17).



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# Appendix

## Appendix 1: Family Aggregate, Out of Pocket, and Proportion of Family Income Spent on Dental Services, 2011-2016.

	2011	2012	2013	2014	2015	2016	Average
<b>Panel A: Average family expenditure on dental services for a family with at least one member utilizing dental services</b>							
Poor (<100% FPL)	\$487	\$588	\$621	\$550	\$642	\$581	\$578
Near Poor (100-124%)	\$520	\$537	\$648	\$706	\$638	\$479	\$588
Low Income (125-199% FPL)	\$674	\$722	\$714	\$657	\$669	\$702	\$690
Middle Income (200-399% FPL)	\$767	\$706	\$775	\$735	\$817	\$712	\$752
High Income (400%+ FPL)	\$874	\$811	\$787	\$806	\$768	\$866	\$819
<b>Panel B: Average family OOP expenditure on dental services for a families with at least one member utilizing dental services</b>							
Poor (<100% FPL)	\$177	\$239	\$254	\$215	\$241	\$273	\$233
Near Poor (100-124%)	\$265	\$318	\$375	\$471	\$319	\$215	\$327
Low Income (125-199% FPL)	\$335	\$402	\$362	\$395	\$346	\$380	\$370
Middle Income (200-399% FPL)	\$410	\$379	\$352	\$365	\$426	\$328	\$377
High Income (400%+ FPL)	\$413	\$439	\$384	\$362	\$364	\$416	\$396
<b>Panel C: Average OOP expenditure on dental services as proportion of family income for a family with at least one member utilizing dental services</b>							
Poor (<100% FPL)	2.1%	2.8%	3.0%	2.4%	2.7%	3.4%	3.0%
Near Poor (100-124%)	1.4%	1.7%	1.9%	2.5%	1.7%	1.2%	1.7%
Low Income (125-199% FPL)	1.2%	1.4%	1.3%	1.4%	1.3%	1.4%	1.4%
Middle Income (200-399% FPL)	0.8%	0.7%	0.7%	0.7%	0.8%	0.7%	0.8%
High Income (400%+ FPL)	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%

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## CareQuest Institute for Oral Health

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