



Robert Wood Johnson
Foundation

Support for this research was provided by the Robert Wood Johnson Foundation. The views expressed here do not necessarily reflect the views of the Foundation.

Is a Dental Benefit Needed in Medicare?

Patterns of Dental Care Spending and Use

Adele Shartzter, Anuj Gangopadhyaya, John Holahan, Bowen Garrett, and Nikhil Rao

September 2021

The fiscal year 2022 budget resolution proposes to expand Medicare coverage to include dental, vision, and hearing services. To better understand the context around a new proposed dental benefit, we examine dental care utilization and spending overall and for the Medicare population using two national databases. We first show that dental care utilization and spending increase with age. The highest spending levels, aside from those in teenage years, occur at ages 65 to 79. Out-of-pocket spending is highest at the same ages. Traditional Medicare excludes dental coverage, but beneficiaries can access such coverage through employer plans, Medigap coverage, Medicaid, or Medicare Advantage (MA) plans. Still, only about 27 percent of Medicare enrollees' total dental expenditures are paid by an insurer. We also find substantial differences in dental utilization and spending by race and ethnicity and income. Black Medicare enrollees have lower expenditures than other racial and ethnic groups. People with incomes above 400 percent of the federal poverty level (FPL) have far greater expenditures than those with incomes below the FPL. Most enrollees who use any dental services use preventive services, but those with the highest expenditures have greater utilization of extensive procedures (e.g., fillings and extractions). These findings suggest Medicare enrollees could benefit substantially from policies that would expand dental coverage. Spending burdens would likely be lessened for those with significant spending now, and more enrollees would likely obtain needed dental care.

About US Health Reform—Monitoring and Impact

With support from the Robert Wood Johnson Foundation, the Urban Institute is undertaking a comprehensive monitoring and tracking project to examine the implementation and effects of health reform. Through the US Health Reform—Monitoring and Impact project, which began in May 2011, Urban researchers are using microsimulation modeling to project the cost and coverage implications of proposed health reforms, documenting the implementation of national and state health reforms, and providing technical assistance to states. More information and publications can be found at www.rwjf.org and www.urban.org.

Background

People eligible for Medicare in the US have high rates of oral diseases. A 2019 report from the Centers for Disease Control and Prevention’s Oral Health Division documented the widespread prevalence of dental caries, dental decay, and tooth loss among adults ages 65 and older, who constitute the largest share of the Medicare-eligible population (CDC 2019). The report showed that between 2011 and 2016 almost all adults ages 65 and older had dental caries (96.2 percent), and 17.3 percent had lost all of their natural teeth. Further, 15.9 percent of dentate adults (those with some or all of their natural teeth) ages 65 and older had untreated tooth decay, and this rate was higher among Black adults (29.1 percent), Mexican Americans (35.9 percent), elderly adults with low incomes (28.6 percent), and current smokers (33.9 percent). Less is known about the prevalence of oral diseases among nonelderly adults with disabilities, who also may be eligible for Medicare benefits. Adults with disabilities have poorer oral health than their nondisabled counterparts (Armour et al. 2008; Owens et al. 2006; Wilson et al. 2018). Poor oral health is also linked with adverse health outcomes in nonoral indicators, including cardiovascular diseases (DeStefano et al. 1993; Dietrich et al. 2013, 2017; Schenkein and Loos 2013; Tonetti and Van Dyke 2013), kidney diseases (Akar et al. 2011; Ruokonen et al. 2017), and mental health (Kisely 2016; Kisely et al. 2015). An analysis of the predictors of unmet dental health needs using 2018 Behavioral Risk Factor Surveillance System data found that men, elderly adults, adults with lower incomes, and adults with lower educational attainment were less likely to have seen a dentist within the past five years and more likely to have lost their permanent teeth (Gaskin et al. 2021).

Despite the burden of oral disease among Medicare beneficiaries, traditional Medicare does not cover dental care. Some beneficiaries have access to dental coverage outside traditional Medicare, such as through employer-sponsored retiree plans or supplemental dental benefit policies. MA plans can also offer dental benefits as a supplemental benefit to enrollees, sometimes charging an additional premium for the coverage. The various sources through which Medicare-eligible adults receive dental benefits create a patchwork of coverage for this population. As of 2019, 23.6 million Medicare beneficiaries (47 percent) lacked dental coverage (Freed et al. 2021).

For Medicare beneficiaries with supplemental dental coverage, dental benefits vary across plans. For the 29 percent of Medicare beneficiaries with access to dental benefits through MA plans in 2019, nearly all were in plans that covered most preventive services, such as cleanings and x-rays (Freed et al. 2021). A smaller share were in plans that covered services such as extractions (83 percent) or endodontics (63 percent). In addition to MA, 16 percent of Medicare enrollees had coverage for dental services through private plans, including employer-sponsored retiree coverage and individually purchased insurance. Dental coverage through Medicaid for eligible Medicare beneficiaries also varies by state; in 2019, 3 states provided no coverage for dental services, whereas 19 states provided more comprehensive dental benefits covering major procedures (CHCS 2019).

Given the lack of comprehensive dental coverage in traditional Medicare, several policymakers have introduced legislation in recent years to fill this gap. In August 2021, the Senate passed the fiscal year 2022 budget resolution, adding dental, vision, and hearing benefits to Medicare, among other initiatives.¹ In 2019, the US House of Representatives passed the Elijah E. Cummings Lower Drug Costs Now Act,² which included a provision adding dental benefits under Medicare Part B. In July 2021, Representative Lloyd Doggett (D-TX) introduced the Medicare Dental, Vision, and Hearing Benefit Act of 2021, which would cover the total cost of preventive dental services (i.e., require no cost sharing for beneficiaries) and phase in coverage for minor and major services up to 80 percent over four years.³ Many iterations of comprehensive single-payer coverage also include dental benefits, one of which the Urban Institute evaluated in 2019 (Blumberg et al. 2019).

To explore the context surrounding proposed legislation that would extend dental benefits to Medicare beneficiaries and guide development of an expanded dental benefit, we describe utilization of and spending on dental services among Medicare beneficiaries. Our brief augments previous recent work (Freed et al. 2021; Willink et al. 2020) by incorporating analysis of the Medical Expenditure Panel Survey (MEPS) alongside the Urban Institute's Medicare policy simulation model (MCARE-SIM) to portray a more complete picture of dental service utilization among Medicare beneficiaries.

Data and Methods

We use two data sources in this analysis. We first use data from the 2015–18 MEPS to assess dental use and spending across people of all ages.⁴ The MEPS is a nationally representative panel survey of households, clinicians, and employers administered by the Agency for Healthcare Research and Quality. Specifically, the MEPS provides information on respondents' use of dental care services, including whether they had any dental visits in the past year and the number of total dental visits they had in the past year. The MEPS further reports total dental expenditures and total out-of-pocket dental expenditures accrued over the past year. We present per capita averages of these outcomes by age group.

We use the Urban Institute's MCARE-SIM to investigate 2020 dental use and spending patterns among Medicare enrollees. MCARE-SIM uses data from the 2015 Medicare Current Beneficiary Survey (MCBS) and projects Medicare enrollment and spending estimates to 2020. The MCBS

provides nationwide information on demographic characteristics, medical expenditures, use of medical services, health status, access to health care, and sources of supplemental insurance coverage for Medicare enrollees. To project dental spending to 2020, we assume a growth rate that is the average of Parts A, B, and D growth rate projections from the 2019 Medicare Trustees report (Medicare Trustees 2019). We estimate 2020 dental care utilization and both total and out-of-pocket dental expenditures for Medicare beneficiaries overall. We further examine these outcomes by the following subgroups: Medicare coverage type (fee-for-service coverage versus MA plans), race and ethnicity (white, Black, Hispanic, or other non-Hispanic race),⁵ income group (below the FPL, between 100 and 200 percent of FPL, between 200 and 400 percent of FPL, and at or above 400 percent of FPL), and dual Medicaid enrollment status.⁶

Finally, about 57 percent of dental events reported in the 2015 MCBS provide information on the types of procedures beneficiaries undergo during their visits, including bonding, bridges, cleaning, crowns, exams, extractions, fillings, orthodontic care, periodontal care, root canals, surgery, x-rays, and other procedures. Among MCBS respondents who had any dental use and responded to the dental procedures question, we estimate the share who experienced each of these procedures.

Results

Dental care utilization increases with age. Table 1 and figure 1 show the share of people with at least one dental visit in the past year and the number of dental visits in the past year by age group. We find that both the number of dental visits and the share of people with any visit generally increase with age. The results show a spike in utilization for those ages 10 to 19 (56 percent), likely reflecting use of orthodontic services (Brown 2006), and a sharp decrease in utilization among adults ages 20 to 29 (33 percent). The share of people with at least one visit slowly increases through the adult years until it reaches 53 percent for those ages 70 to 74. At older ages, utilization declines again; at ages 80 to 84, the share of people with at least one dental visit is only about 40 percent.

The number of dental visits in the past year shows a similar pattern. Visits spike to 1.5 in the teenage years then decline to 0.6 for those ages 20 to 29. The number of dental visits increases with age, roughly doubling by age 60. Between ages 60 and 79, the number of visits ranges from 1.2 to 1.4. Like with the share of people with a dental visit, the number of visits declines at age 80. Across all ages, a substantial portion of the population has not had a dental visit in the past year, despite research suggesting at least annual cleanings for people with low and high risks for oral disease (Giannobile et al. 2013).

TABLE 1

Dental Care Use in the Past Year, by Age, 2015–18

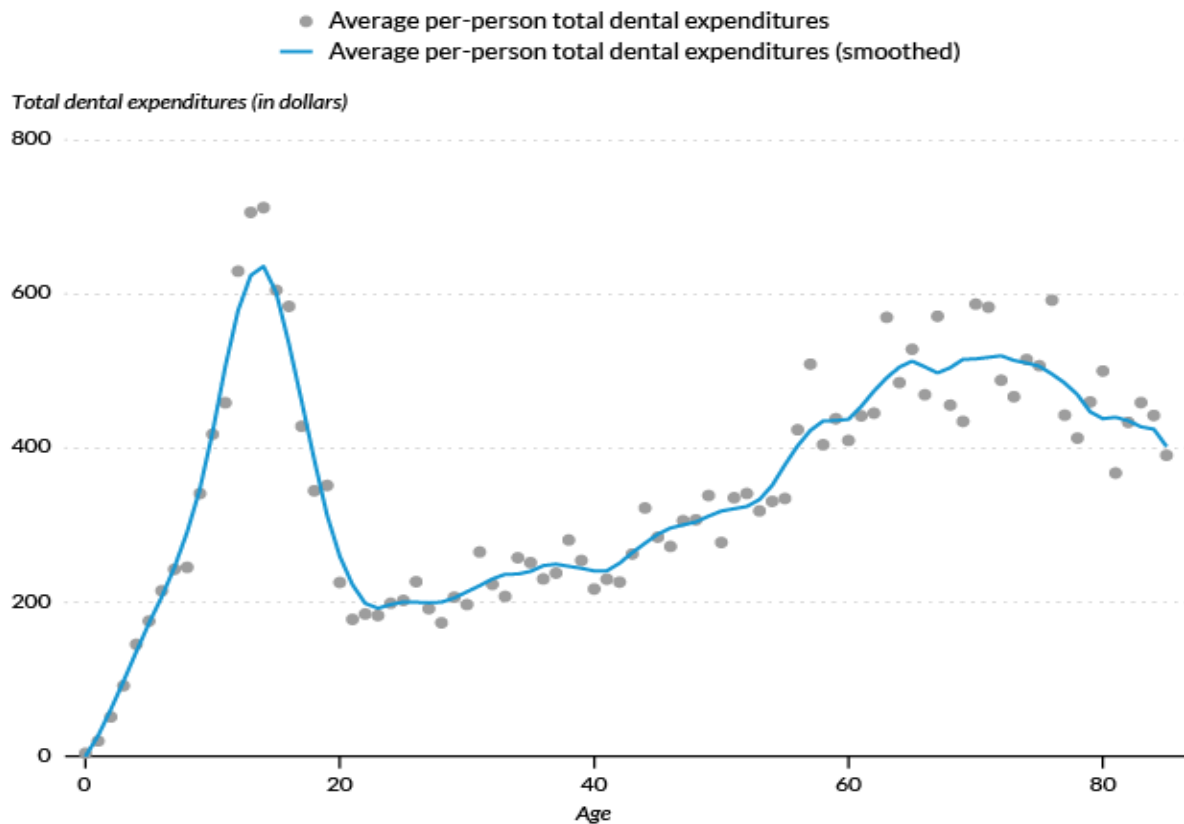
Age group	Any dental visits in the past year (%)	Number of dental visits in the past year
9 and younger	43	0.7
10–19	56	1.5
20–29	33	0.6
30–39	37	0.8
40–49	41	0.8
50–59	46	1.0
60–64	50	1.2
65–69	52	1.3
70–74	53	1.4
75–79	50	1.3
80–84	40	1.1
85 and older	42	1.1

Source: 2015–18 Medical Expenditure Panel Survey.

Note: Estimates are weighted using Medical Expenditure Panel Survey weights.

FIGURE 1

Average Total Dental Care Expenditures per Person, by Age, 2015–18



URBAN INSTITUTE

Source: 2015–18 Medical Expenditure Panel Survey.

Note: Estimates are weighted using Medical Expenditure Panel Survey weights and reflect dental services used in the past year.

Spending on dental care also increases with age. Expenditures by age follow a similar pattern, as shown in table 2. Expenditures are low for those ages 9 and younger then spike for those ages 10 to 19 (\$523), again likely because of the use of orthodontic services. Average dental spending for those ages 20 to 29 falls to \$198 and slowly increases with age, reaching \$469 for those ages 60 to 64. Spending remains high and peaks at \$532 on average for those ages 70 to 75. Spending falls off, as does utilization, for those ages 80 and older.

The share of dental expenditures borne out of pocket increases with age; that is, the value of insurance declines. Out-of-pocket expenditures increase more rapidly with age than do total dental expenditures. Thus, the ratio of out-of-pocket spending to total dental expenditures increases with age. That is, as overall dental spending increases, the share covered by third-party insurance declines. Consequently, the ratio of out-of-pocket dental spending to total dental expenditures averages below 40 percent for those under age 50 but ranges from 58 to 75 percent for those ages 65 and older. This implies that as need for dental care increases with age, the protection provided by insurance declines. The share of dental expenditures paid out of pocket contrasts with out-of-pocket spending for services covered under Medicare parts A, B, and D; a previous Urban Institute analysis found that 6.4 percent of total costs for Parts A, B, and D services were paid out of pocket by beneficiaries, whereas supplemental coverage covered 10.2 percent and Medicare covered 83.5 percent (Garrett et al. 2019).

TABLE 2
Spending on Dental Care in the Past Year, by Age, 2015–18

Age group	Dental expenditures (\$)	Out-of-pocket dental expenditures (\$)	Ratio of out-of-pocket to total dental expenditures (%)
9 and younger	155	33	21
10–19	523	204	39
20–29	198	78	39
30–39	240	91	38
40–49	277	109	39
50–59	372	155	42
60–64	469	237	51
65–69	493	284	58
70–74	532	319	60
75–79	488	342	70
80–84	440	293	67
85 and older	391	294	75

Source: 2015–18 Medical Expenditure Panel Survey.

Note: Estimates are weighted using Medical Expenditure Panel Survey weights.

More than half of Medicare enrollees have zero dental expenditures, but many others have high expenditures. Table 3 provides data on the distribution of total expenditures for dental services among Medicare enrollees in 2020. More than half of Medicare enrollees (52.6 percent) had no dental expenditures in 2020. At the other extreme, 12.5 percent had total dental expenditures of \$1,001 or

more, and slightly less than 5 percent had expenditures exceeding \$2,500. Of those with any dental encounters, 26.5 percent had total spending greater than \$1,000, and 9.7 percent had spending greater than \$2,500. Almost 17 percent of Medicare enrollees had dental spending between \$501 and \$1,000.

The bottom panel of table 3 shows similar patterns for out-of-pocket dental spending. An estimated 57.6 percent of Medicare enrollees had zero out-of-pocket expenditures. In contrast, 9.4 percent had out-of-pocket dental spending greater than \$1,000. Of those with any spending, about 22 percent had expenditures exceeding \$1,000, and 8.1 percent had spending exceeding \$2,500. Another 14.5 percent had spending between \$501 and \$1,000. Introducing a dental benefit could substantially reduce financial burdens for those with substantial dental spending.

TABLE 3
Spending Distributions for Dental Services among Medicare Enrollees, 2020
Percent

	Share of Medicare enrollees	Share of Medicare enrollees with any spending
Total dental expenditures		
\$0	52.6	n/a
\$1-100	4.2	8.9
\$101-250	11.0	23.3
\$251-500	11.6	24.6
\$501-1,000	7.9	16.8
\$1,001-2,500	7.9	16.8
> \$2,500	4.6	9.7
<i>Total</i>	100.0	100.0
Out-of-pocket dental expenditures		
\$0	57.6	n/a
\$1-100	6.1	14.4
\$101-250	10.9	25.8
\$251-500	9.8	23.1
\$501-1,000	6.1	14.5
\$1,001-2,500	6.0	14.2
> \$2,500	3.4	8.1
<i>Total</i>	100.0	100.0

Source: Urban Institute MCARE-SIM estimates for 2020 using the 2015 Medicare Current Beneficiary Survey.

Note: n/a = not applicable.

Spending is higher for fee-for-service enrollees than MA enrollees. Table 4 provides data on dental encounters and expenditures for all Medicare enrollees and then separately for fee-for service (FFS) and MA enrollees. As discussed above, FFS Medicare enrollees do not have a dental benefit through traditional Medicare, but many have dental coverage through employer-sponsored or retiree plans or may purchase Medigap plans that provide some dental benefits; other FFS enrollees are in Medicaid programs, which often provide dental coverage. MA plans typically provide at least minimal dental benefits, but the generosity of these plans varies (Freed et al. 2021).

In 2020, 66.9 million people were enrolled in Medicare. Average dental expenditures were \$486 across all enrollees, and out-of-pocket expenditures were \$357, or about 73 percent of the total. Among Medicare enrollees with any dental care encounters, total spending was \$1,026 on average, and out-of-pocket costs were \$754. The share these enrollees paid out of pocket was also about 73 percent.

Practically the same shares of FFS and MA enrollees had dental visits (48.3 and 47.5 percent), but average total expenditures were \$506 for FFS enrollees versus \$444 for MA enrollees. Out-of-pocket expenditures were \$372 for FFS enrollees and \$327 for MA enrollees. For both FFS and MA enrollees, out-of-pocket expenses were about 73 to 74 percent of total expenditures. The same ratio applies for average expenditures for enrollees with any encounter; their overall dental expenditures totaled \$1,067 and they paid \$783 out of pocket, or about 73 percent. MA benefits can vary widely across plans, and FFS beneficiaries may have supplemental dental coverage with a range of benefit packages; regardless of dental benefits, most Medicare enrollees have little protection against the costs of dental care.

TABLE 4
Spending on and Use of Dental Care among All Medicare Enrollees, Fee-for-Service Enrollees, and Medicare Advantage Enrollees, 2020

	All Medicare enrollees	Fee-for-service enrollees	Medicare Advantage enrollees
N (millions)	66.9	45.2	21.7
Share with any dental events	48.0%	48.3%	47.5%
Average dental expenditures	\$486	\$506	\$444
Average out-of-pocket dental expenditures	\$357	\$372	\$327
Average dental expenditures (if any)	\$1,026	\$1,067	\$942
Average out-of-pocket dental expenditures (if any)	\$754	\$783	\$693
Ratio of out-of-pocket to total dental expenditures	73%	73%	74%

Source: Urban Institute MCARE-SIM estimates for 2020 using the 2015 Medicare Current Beneficiary Survey.

Note: Enrollment estimates are estimates of people enrolled in Medicare at any point during the year.

Spending is higher for white Medicare enrollees than for enrollees of other racial and ethnic groups. Table 5 provides the shares of enrollees with dental events and average total and out-of-pocket dental expenditures by demographic group. White Medicare enrollees were more likely to have a dental encounter (52.2 percent) than enrollees in other racial and ethnic groups; the shares of Black enrollees, Hispanic enrollees, and enrollees of other races with any dental events range from 35 to 40 percent. Reflecting their higher utilization, average total expenditures and average out-of-pocket expenditures were also highest for white enrollees. Overall and out-of-pocket dental spending is much lower for Black enrollees than white enrollees.

TABLE 5

Spending on and Use of Dental Care among Medicare Enrollees, by Race or Ethnicity, Income Group, and Dual Medicaid Enrollment Status, 2020

	Medicare Enrollees		Dental Expenditures				
	N (millions)	Share with any dental events (%)	Average (\$)	Out-of- pocket average (\$)	Average, if any (\$)	Average out-of- pocket, if any (\$)	Ratio of out- of-pocket to total expenditures (%)
All Medicare enrollees	66.9	48.0	486	357	1,026	754	73.5
Race/ethnicity							
White	48.2	52.2	541	409	1,048	792	75.6
Black	6.6	35.0	227	130	669	383	57.2
Hispanic	7.2	37.8	403	283	1,082	759	70.1
Other race, non-Hispanic	4.9	39.8	418	266	1,086	690	63.5
Income							
Below the FPL	10.9	28.3	202	121	760	455	59.9
100–200% of FPL	18.4	32.4	278	212	873	664	76.1
200–400% of FPL	18.7	52.9	517	386	982	733	74.6
Above 400% of FPL	18.9	69.7	821	607	1,187	877	73.9
Dual status							
No Medicaid	53.5	53.9	570	426	1,065	796	74.7
Medicaid enrolled	13.4	24.4	151	83	663	363	54.8

Source: Urban Institute MCARE-SIM estimates for 2020 using the 2015 Medicare Current Beneficiary Survey.

Notes: FPL = federal poverty level. Enrollment estimates are estimates of people enrolled in Medicare at any point during the year.

Though they have similar shares with a dental visit, Black Medicare enrollees spend less on dental services on average (\$667) than do Hispanic enrollees and non-Hispanic enrollees of another race (about \$1,080 for both groups). Black Medicare enrollees have a higher percentage of dental spending covered by insurance; on average, Black enrollees pay 57.2 percent out of pocket, compared with 63 percent and higher for other racial and ethnic groups. The explanation for the difference in out-of-pocket burden is not clear; Black and Hispanic beneficiaries have similar income profiles and rates of dual enrollment in Medicaid (data not shown), which limits out-of-pocket spending. One potential explanation is that Black Medicare enrollees use a different volume of dental services or services covered to a greater extent by insurance, but further investigation is needed.

Though Hispanic enrollees have dental utilization levels similar to those of Black enrollees, total and out-of-pocket dental spending for Hispanic enrollees and enrollees of other races fall between such spending for white enrollees and Black enrollees. For both Hispanic enrollees and enrollees of other races, third-party payers pay a relatively low share of expenditures, unlike for Black enrollees.

Medicare enrollees with high incomes have much higher dental care spending than those with low incomes.

Dental care utilization varies considerably by income. In 2020, only 28.3 percent of Medicare enrollees with incomes below the FPL had a dental encounter in the past year. Conversely, 69.7 percent of enrollees with incomes above 400 percent of FPL had a dental encounter. Overall expenditures for those with incomes below the FPL were \$202 and out-of-pocket expenditures were \$121. For enrollees with incomes below the FPL who had had a dental care encounter, spending was \$760; of this, \$455 was spent out of pocket. The ratio of out-of-pocket to total spending for this income group was relatively low, 59.9 percent, possibly because Medicare enrollees in this income group are more likely to be dually enrolled in Medicaid.

Dental utilization and spending were higher among those with incomes above the FPL; the shares of enrollees with dental visits were 32.4 percent for those with incomes between 100 and 200 percent of FPL, 52.9 percent for those with incomes between 200 and 400 percent of FPL, and 69.7 percent for those with incomes above 400 percent of FPL. These rates are reflected in dental expenditures, which range from \$202 for those with incomes below the FPL to \$821 for those with incomes above 400 percent of FPL. Average spending for people with any dental encounter ranged from \$760 for those with incomes below the FPL to \$1,187 for those with incomes above 400 percent of FPL. The amount of dental care paid out of pocket by those with incomes above the FPL was also higher; enrollees with incomes between 100 to 200 percent of FPL paid the most out of pocket (76.1 percent of dental spending), and higher-income groups paid slightly lower shares out of pocket.

Spending is relatively low for Medicare enrollees dually enrolled in Medicaid, but Medicaid pays a higher share of their spending. The bottom rows of table 5 stratify results by whether a Medicare enrollee is dually enrolled in Medicaid. Of the 66.9 million Medicare enrollees in 2020, 13.4 million were also enrolled in Medicaid. The shares of Medicare beneficiaries with dental visits varied considerably by dual Medicaid enrollment status. Of those without Medicaid, 53.9 percent had a dental visit, whereas only 24.4 percent enrolled in Medicaid had a dental visit. This is reflected in spending that varies from \$151 for enrollees with Medicaid to \$570 for enrollees without Medicaid. For those dually enrolled in Medicare and Medicaid, however, both their out-of-pocket spending and ratio of out-of-pocket spending to total spending were relatively low; these beneficiaries paid for 54.8 percent of their expenditures, compared with 74.7 percent among Medicare enrollees who did not have Medicaid. Dual enrollees had somewhat better protection against out-of-pocket costs but had much lower spending. This could reflect a dental benefit that provided relatively little access to care but paid a high share of the cost of care received.

Medicare beneficiaries most commonly used preventive dental services such as exams, cleanings, and x-rays. In table 6, we examine the types of procedures used by Medicare beneficiaries who had any dental events in 2020. The second column shows that 73 percent of Medicare beneficiaries who used dental services had a cleaning, 62 percent had an exam, and 34 percent had x-rays. Considering the more extensive procedures, 16 percent of enrollees had fillings and 10 percent had extractions.

Medicare enrollees with high dental spending are more likely to have had procedures such as bridges, crowns, extractions, fillings, and root canals. The third column of table 6 shows use of

procedures by high spenders, or those with dental expenditures greater than the 90th percentile of expenditures. This group also had high utilization levels for preventive services; 59 percent of high dental spenders had cleanings and 65 percent had an exam. However, this group stands out for its greater use of extensive procedures: 43 percent had a crown, 18 percent had a root canal, and 8 percent had a bridge, compared with 9 percent, 4 percent, and 2 percent of the overall Medicare population using dental services. Moreover, 22 percent of high-expenditure enrollees had extractions, 20 percent had fillings, 18 percent had a root canal, and another 18 percent had other procedures. Thus, the typical services used by most Medicare beneficiaries are preventive, but enrollees with high expenditures have greater use of more extensive procedures in addition to preventive services.

TABLE 6

Share of Beneficiaries with a Dental Procedure, by Procedure Type, 2020

Percent

Procedure type	All beneficiaries with any dental events	All beneficiaries with dental expenditures greater than the 90th percentile
Preventive		
Cleaning	73	59
Exam	62	65
X-ray	34	40
Extensive		
Bridge	2	8
Crown	9	43
Extraction	10	22
Filling	16	20
Orthodontist	0	1
Other procedure	7	18
Root canal	4	18
Periodontal	2	3
Bonding	1	1
Surgery	1	4

Source: Urban Institute MCARE-SIM estimates for 2020 using the 2015 Medicare Current Beneficiary Survey.

Note: Sample restricted to respondents who reported dental events and had nonmissing information on dental procedures.

Discussion

The results presented above show why Congress is considering adding a dental benefit to Medicare. Dental spending is higher among Medicare enrollees than among younger adults, and Medicare enrollees pay a larger share of these expenditures out of pocket than do younger adults. The share of dental costs paid out of pocket increases as spending increases, suggesting insurance is less valuable at higher spending levels. The distribution of dental spending is skewed, as is other health care spending; more than 50 percent of Medicare beneficiaries have no dental use or spending, despite recommendations for regular cleanings and checkups to prevent oral disease. However, some Medicare beneficiaries incur high dental expenditures with more extensive procedures, such as

bridges and crowns, and nearly 10 percent of beneficiaries paid more than \$1,000 out of pocket for dental care.

Spending levels are somewhat higher for FFS enrollees than MA enrollees, perhaps reflecting the differences in the age, income, health, and geographic compositions of the two populations. Regardless, most dental spending is not covered by insurance; about 73 percent of expenditures are paid out of pocket by both enrollee groups.

Dental spending differences vary considerably by race. Consistent with other research (Zhang, Wu, and Wu 2019), we find that white enrollees are far more likely to have dental encounters and have higher expenditures than all other enrollee groups. Spending for Black enrollees is low not just compared with white enrollees but also compared with other racial and ethnic groups. This could reflect the greater likelihood of Black enrollees having Medicaid coverage, which covers more of the cost of dental services. However, this does not seem to result in greater access to or use of dental services. In addition, Hispanic enrollees are just as likely to be covered by Medicaid, so this cannot be the full explanation.⁷

Spending differences by income are also large. Those with incomes above 400 percent of FPL are far more likely to have a dental encounter and have much greater expenditures than those with lower incomes. Nearly 70 percent of Medicare enrollees with incomes above 400 percent of FPL had a dental visit in 2020, but only about 30 percent of the 29.3 million beneficiaries with income below 200 percent of FPL had a dental visit. If utilization and spending by the highest-income group reflect the group's actual needed utilization and spending, then populations with lower incomes may have significant unmet needs for dental care. In reality, lower-income groups may have a greater need for dental care because of their higher rates of untreated tooth decay and missing teeth (CDC 2019).

The most commonly used dental services are preventive services, such as exams, cleanings, and x-rays. However, those with higher dental expenditures have high use of procedures such as fillings, extractions, bridges, crowns, and root canals. This suggests that use of these services can drive high expenditures. Dental benefits that provide basic coverage for preventive services can benefit many Medicare beneficiaries who do not currently use dental care, but basic benefits will not provide relief for these high-cost dental procedures. If Medicare dental services are to be targeted to those with the greatest need, protection against the high cost of these extensive procedures seems essential.

Notes

- ¹ Emily Cochrane, “Senate Passes \$3.5 Trillion Budget Plan, Advancing Safety Net Expansion,” *New York Times*, August 20, 2021, <https://www.nytimes.com/2021/08/11/us/politics/senate-budget-plan.html>.
- ² *Elijah E. Cummings Lower Drug Costs Now Act*, H. R. 3, 116th Cong. (2019–20).
- ³ *Medicare Dental, Vision, and Hearing Benefit Act of 2021*, H. R. 4311, 117th Cong. (2021–22).
- ⁴ We use the IPUMS version of the MEPS in our analysis; see Blewett and colleagues (2019).
- ⁵ The racial and ethnic groups in this analysis are based on the terms used in our data sources, the Medicare Expenditure Panel Survey and Medicare Current Beneficiary Survey. For simplicity, we refer to non-Hispanic Black and non-Hispanic white populations as simply “Black” and “white.” We recognize that not all people in these groups identify with the terms we use, however, and remain committed to using respectful and inclusive language.
- ⁶ In our current analysis that uses the 2015 MCBS projected to 2020, we do not assess supplemental dental coverage. The Centers for Medicare & Medicaid Services reported a data issue that underreports rates of private dental coverage in and before 2016.
- ⁷ We estimate that about 35 percent of Black Medicare enrollees have dual Medicaid coverage, compared with 36 percent of Hispanic Medicare enrollees.

References

- Akar, Harun, Gulcan Coskun Akar, Juan Jesús Carrero, Peter Stenvinkel, and Bengt Lindholm. 2011. “Systemic Consequences of Poor Oral Health in Chronic Kidney Disease Patients.” *Clinical Journal of the American Society of Nephrology* 6 (1): 218–26. <https://doi.org/10.2215/CJN.05470610>.
- Armour, Brian S., Mark Swanson, H. Barry Waldman, and Steven P. Perlman. 2008. “A Profile of State-Level Differences in the Oral Health of People with and without Disabilities, in the U.S., in 2004.” *Public Health Reports* 123 (1): 67–75. <https://doi.org/10.1177/003335490812300110>.
- Blewett, Lynn A., Julia A. Rivera Drew, Risa Griffin, and Kari C. W. Williams. 2019. “IPUMS Health Surveys: Medical Expenditure Panel Survey, Version 1.1” [dataset]. Minneapolis: Integrated Public Use Microdata Series. <https://doi.org/10.18128/D071.V1.1>.
- Blumberg, Linda J., John Holahan, Matthew Buettgens, Anuj Gangopadhyaya, Bowen Garrett, Adele Shartzter, Michael Simpson, Robin Wang, Melissa Favreault, and Diane Arnos. 2019. *From Incremental to Comprehensive Health Reform: How Various Reform Options Compare on Coverage and Costs*. Washington, DC: Urban Institute.
- Brown, Erwin. 2006. “Children’s Dental Visits and Expenses, United States, 2003.” Rockville, MD: Agency for Healthcare Research and Quality.
- CDC (Centers for Disease Control and Prevention). 2019. *Oral Health Surveillance Report: Trends in Dental Caries and Sealants, Tooth Retention, and Edentulism, United States, 1999–2004 to 2011–2016*. Atlanta: Centers for Disease Control and Prevention.
- CHCS (Center for Health Care Strategies). 2019. “Medicaid Adult Benefits: An Overview.” Hamilton, NJ: Center for Health Care Strategies.
- DeStefano, F., R. F. Anda, H. S. Kahn, D. F. Williamson, and C. M. Russell. 1993. “Dental Disease and Risk of Coronary Heart Disease and Mortality.” *British Medical Journal* 306:688. <https://doi.org/10.1136/bmj.306.6879.688>.
- Dietrich, Thomas, Praveen Sharma, Clemens Walter, Paul Weston, and James Beck. 2013. “The Epidemiological Evidence behind the Association between Periodontitis and Incident Atherosclerotic Cardiovascular Disease.” *Journal of Clinical Periodontology* 40 (suppl. 14): S70–S84. <https://doi.org/10.1111/jcpe.12062>.

- Dietrich, T., I. Webb, L. Stenhouse, A. Pattni, D. Ready, K. L. Wanyonyi, S. White, and J. E. Gallagher. 2017. "Evidence Summary: The Relationship between Oral and Cardiovascular Disease." *British Dental Journal* 222:381–85. <https://doi.org/10.1038/sj.bdj.2017.224>.
- Freed, Meredith, Nancy Ochieng, Nolan Sroczynski, Anthony Damico, and Krutika Amin. 2021. "Medicare and Dental Coverage: A Closer Look." San Francisco: Kaiser Family Foundation.
- Garrett, Bowen, Anuj Gangopadhyaya, Adele Shartzter, and Diane Arnos. 2019. *A Unified Cost-Sharing Design for Medicare: Effects on Beneficiary and Program Spending*. Washington, DC: Urban Institute.
- Gaskin, D. J., H. Zare, R. McCleary, O. Kanwar, and A. L. Davis. 2021. "Predictors of Unmet Dental Health Needs in US Adults in 2018: A Cross-Sectional Analysis." *JDR Clinical & Translational Research*. <https://doi.org/10.1177%2F23800844211035669>.
- Giannobile, W. V., T. M. Braun, A. K. Caplis, L. Doucette-Stamm, G. W. Duff, and K. S. Kornman. 2013. "Patient Stratification for Preventive Care in Dentistry." *Journal of Dental Research* 92 (8): 694–701. <https://dx.doi.org/10.1177%2F0022034513492336>.
- Kisely, Steve. 2016. "No Mental Health without Oral Health." *Canadian Journal of Psychiatry* 61, no. 5. <https://doi.org/10.1177%2F0706743716632523>.
- Kisely, Steve, Hooman Baghaei, Ratilal Laloo, Dan Siskind, and Newell W. Johnson. 2015. "A Systematic Review and Meta-analysis of the Association between Poor Oral Health and Severe Mental Illness." *Psychosomatic Medicine* 77 (1): 83–92. <https://doi.org/10.1097/psy.000000000000135>.
- Medicare Trustees (Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds). 2019. *2019 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds*. Washington, DC: Medicare Trustees.
- Owens, Pamela L., Bonnie D. Kerker, Edward Zigler, and Sarah M. Horowitz. 2006. "Vision and Oral Health Needs of Individuals with Intellectual Disability." *Mental Retardation and Developmental Disabilities Research Reviews* 12:28–40. <https://doi.org/10.1002/mrdd.20096>.
- Ruokonen, Hellevi, Karita Nylund, Jussi Furuholm, Jukka H. Meurman, Timo Sorsa, Karoliina Kotaniemi, Fernanda Ortiz, and Ana Maria Heikkinen. 2017. "Oral Health and Mortality in Patients with Chronic Kidney Disease." *Journal of Periodontology* 88 (1): 26–33. <https://doi.org/10.1902/jop.2016.160215>.
- Schenkein, Harvey A., and Bruno G. Loos. 2013. "Inflammatory Mechanisms Linking Periodontal Diseases to Cardiovascular Diseases." *Journal of Clinical Periodontology* 40 (suppl. 14): S51–S69. <https://doi.org/10.1111/jcpe.12060>.
- Tonetti, Maurizio S., and Thomas E. Van Dyke. 2013. "Periodontitis and Atherosclerotic Cardiovascular Disease: Consensus Report of the Joint EFP/AAP Workshop on Periodontitis and Systemic Diseases." *Journal of Clinical Periodontology* 40 (suppl. 14): S24–S29. <https://doi.org/10.1111/jcpe.12089>.
- Willink, Amber, Nicholas S. Reed, Bonnielin Swenor, Leah Leinbach, Eva H. DuGoff, and Karen Davis. 2020. "Dental, Vision, And Hearing Services: Access, Spending, And Coverage For Medicare Beneficiaries." *Health Affairs* 39, no. 2. <https://doi.org/10.1377/hlthaff.2019.00451>.
- Wilson, Nathan J., Zhen Lin, Amy Villarosa, and Ajesh George. 2018. "Oral Health Status and Reported Oral Health Problems in People with Intellectual Disability: A Literature Review." *Journal of Intellectual & Developmental Disability* 44 (3): 292–304. <https://doi.org/10.3109/13668250.2017.1409596>.
- Zhang, Wei, Yan Yan Wu, and Bei Wu. 2019. "Racial/Ethnic Disparities in Dental Service Utilization for Foreign-Born and U.S.-Born Middle-Aged and Older Adults." *Research on Aging* 41 (9): 845–67. <https://dx.doi.org/10.1177%2F0164027519860268>.

About the Authors

Adele Shartzter is a senior research associate in the Health Policy Center at the Urban Institute, where her work focuses on health coverage, access to care, and the health care delivery system; her research has been published in notable health policy journals. Before joining Urban, she worked as a program analyst in the Office of Health Policy in the Office of the Assistant Secretary of Planning and Evaluation at the US Department of Health and Human Services. She has also worked in health policy at several nonprofits in the Washington, DC, area. Shartzter holds a bachelor's degree in bioethics from the University of Virginia and an MPH in health policy from George Washington University. She received her PhD in health services research from the Johns Hopkins Bloomberg School of Public Health.

Anuj Gangopadhyaya is a senior research associate in the Health Policy Center. His research focuses on the impact of safety net programs on health and well-being, family income, and education achievement outcomes for children in low-income families. He has focused on the impact of Medicaid eligibility expansion on children's education achievement, maternal and child health effects of the earned income tax credit program, and the impact of the Affordable Care Act Medicaid expansion on adult labor supply and fertility rates of women of reproductive age. He also helps lead Urban's Medicare simulation model (MCARE-SIM), estimating potential impacts of proposed policy changes on program spending, beneficiary spending, and use of services. Gangopadhyaya received his PhD in economics from the University of Illinois at Chicago.

John Holahan is an Institute fellow in the Health Policy Center, where he previously served as center director for over 30 years. His recent work focuses on health reform, the uninsured, and health expenditure growth, developing proposals for health system reform most recently in Massachusetts. He examines the coverage, costs, and economic impact of the Affordable Care Act (ACA), including the costs of Medicaid expansion as well as the macroeconomic effects of the law. He has also analyzed the health status of Medicaid and exchange enrollees, and the implications for costs and exchange premiums. Holahan has written on competition in insurer and provider markets and implications for premiums and government subsidy costs as well as on the cost-containment provisions of the ACA. Holahan has conducted significant work on Medicaid and Medicare reform, including analyses on the recent growth in Medicaid expenditures, implications of block grants and swap proposals on states and the federal government, and the effect of state decisions to expand Medicaid in the ACA on federal and state spending. Recent work on Medicare includes a paper on reforms that could both reduce budgetary impacts and improve the structure of the program. His work on the uninsured explores reasons for the growth in the uninsured over time and the effects of proposals to expand health insurance coverage on the number of uninsured and the cost to federal and state governments.

Bowen Garrett is an economist and senior fellow in the Health Policy Center. His research focuses on health reform and health policy topics, including health insurance and labor markets, Medicare's prospective payment systems, and evaluation of the Strong Start for Mothers and Newborns program.

He leads the development of the Urban Institute's Medicare policy simulation model (MCARE-SIM). Previously, Garrett was chief economist of the Center for US Health System Reform and McKinsey Advanced Health Analytics at McKinsey and Company. Garrett received his PhD in economics from Columbia University in 1996 and was a postdoctoral research fellow in the Robert Wood Johnson Foundation's Scholars in Health Policy Research Program at the University of California, Berkeley, from 1996 to 1998.

Nikhil Rao is a research assistant in the Health Policy Center. His current research spans a variety of topics, including Medicare policy, COVID-19, and health care quality. Rao graduated Phi Beta Kappa from the University of North Carolina at Chapel Hill with a BSPH in health policy and management and second major in psychology. He earned highest honors for his senior thesis in health policy and management, which investigated the availability of medication for opioid use disorder in Black and Hispanic communities in North Carolina.

Acknowledgments

This brief was funded by the Robert Wood Johnson Foundation. The views expressed do not necessarily reflect the views of the Foundation.

The views expressed are those of the authors and should not be attributed to the Urban Institute, its trustees, or its funders. Funders do not determine research findings or the insights and recommendations of Urban experts. Further information on the Urban Institute's funding principles is available at urban.org/fundingprinciples.

The authors thank Stephen Zuckerman for reviewing and providing feedback on the brief.



500 L'Enfant Plaza SW
Washington, DC 20024

www.urban.org

ABOUT THE URBAN INSTITUTE

The nonprofit Urban Institute is a leading research organization dedicated to developing evidence-based insights that improve people's lives and strengthen communities. For 50 years, Urban has been the trusted source for rigorous analysis of complex social and economic issues; strategic advice to policymakers, philanthropists, and practitioners; and new, promising ideas that expand opportunities for all. Our work inspires effective decisions that advance fairness and enhance the well-being of people and places.

Copyright © September 2021. Urban Institute. Permission is granted for reproduction of this file, with attribution to the Urban Institute.