



Estimating State-Specific Costs of Medicaid Adult Dental Coverage Expansion Using Comparative State Data

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CURRENT MEDICAID ADULT DENTAL BENEFITS

NO DENTAL BENEFITS (4 states): AL, AZ, DE, TN
EMERGENCY-ONLY (13 states): FL, GA, HI, ID, ME, MD, MS, NV, NH, OK, TX, UT, WV
LIMITED (capped <\$1000, <100 of 600 procedures covered) (18 states): AR, CO, DC, IL, IN, KS, KY, LA, MI, MN, MO, NE, PA, SC, SD, VT, VA, WY
EXTENSIVE (benefits capped >\$1000, >100 procedures) (16 states): AK, CA, CT, IA, MA, NJ, NM, NY, NC, ND, OH, OR, RI, WA, WI
Source: Center for Health Care Strategies, 2016

OBJECTIVE

Because Maryland is among the 13 states that only cover emergency dental benefits for adults, this research sought to estimate the cost to Maryland to expand Medicaid dental coverage for adults in order to cover a broader range of services.

PREVIOUS RESEARCH

Studies of coverage restrictions implemented in California and Oregon during the 2000s found that increases in emergency department (ED) utilization for dental services offset some of the savings from eliminating dental coverage.^{1,2,3} Analysis of claims in Oregon showed that, compared with the select Medicaid enrollees who retained dental benefits, those who lost benefits had larger increases in dental-related ED use and expenditures.³ The studies also found that the resources available in the ED are unable to treat the underlying dental conditions, resulting in many repeat visits.^{1,2}

METHODS

Using data from four other geographically dispersed states with Medicaid adult dental coverage, Hilltop applied the other states' utilization rates of individual Common Dental Terminology (CDT) codes to the Maryland adult Medicaid population, and estimated the payments to providers based on Maryland's dental fee schedule. Hilltop estimated the cost of three different levels of coverage: **basic** coverage for preventive and restorative care, **extensive** coverage for basic benefits and services such as periodontal and dental surgery, and **extensive benefits with an annual expenditure limit** of \$1,000.

FINDINGS

Frequency of dental services by CDT code among adults contributed to the calculation of use rates. Calculated use rates reflect program or access limitations in a given state, not actual service need.

Frequency of Services ÷ Covered Population = Use Rate

Time Period: Incurred Month	D0110	D0120	D0130	D0140	D0145	D0150	D0160	D0170	D0180	D0190	D0191	D0210
Jan 2013	10	11,138		9,785		11,999	3	5	11			2,883
Feb 2013	12	9,927	1	8,277		10,494	1	2	16			2,621
Mar 2013	9	10,492		8,740		10,479		2	3			2,625
Apr 2013	13	11,969	1	9,450	1	11,689	1	1	12			2,953
May 2013	9	11,297		9,039		10,853	1	2	5			2,647
Jun 2013	13	10,222		8,029		9,463		1	9	1		2,436

Single State Use Rates

D0110	D0120	D0130	D0140	D0145	D0150	D0160	D0170	D0180	D0190	D0191	D0210
1.07212E-05	0.011942	0	0.010491	0	0.012436	3.22E-06	5.36E-06	1.18E-05	0	0	0.003091
1.27784E-05	0.010571	1.06E-06	0.008814	0	0.011175	1.06E-06	2.13E-06	1.7E-05	0	0	0.002791
9.50781E-06	0.011083	0	0.009233	0	0.01107	0	2.11E-06	3.17E-06	0	0	0.002773
1.36371E-05	0.012556	1.05E-06	0.009913	1.05E-06	0.012262	1.05E-06	1.05E-06	1.26E-05	0	0	0.003098
9.41698E-06	0.01182	0	0.009458	0	0.011356	1.05E-06	2.09E-06	5.23E-06	0	0	0.002277
1.36033E-05	0.010697	0	0.008402	0	0.009839	0	1.05E-06	9.42E-06	1.05E-06	0	0.002552

$$\left(\sum_{i=1}^{\text{Number of services}} \text{Use Rate}_i * \text{Unit Price}_i \right) * \text{Maryland Medicaid Population} = \text{Projected Spending}$$

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Estimated Total Costs of Alternative Dental Benefit Packages for Maryland Medicaid in 2015 Based on Sample States' Utilization

	State 1**	State 2***	State 3****	State 4**
Basic Benefits				
Estimated PMPM	\$5.71	\$5.83	\$12.98	\$8.63
Total Estimated Cost	\$44,225,242	\$45,119,209	\$100,492,254	\$66,812,551
Extensive Benefits				
Estimated PMPM	\$9.36	\$11.19	\$21.13	\$14.14
Total Estimated Cost	\$72,467,328	\$86,652,029	\$163,625,446	\$109,461,508
Extensive Benefits with \$1,000 Fixed Annual Cap				
Estimated PMPM	\$6.36	\$7.61	\$21.13	\$9.61
Total Estimated Cost	\$49,256,043	\$58,897,384	\$163,625,446	\$74,400,987

*Basic dental services include diagnostic, preventive, and restorative dental services (D0100-D2999).
**Extensive dental services includes all dental service categories except Orthodontics and Dentofacial Orthopedics (D8000 - D8999).
***Based on CY 2014 data from state.
****Based on CY 2013 data from state.
*****State estimates include effects of a \$1,000 annual benefit cap in all scenarios.

CONCLUSIONS

Projecting the precise cost of a new standardized package of dental benefits for adults in the Maryland Medicaid program is complicated by many factors. Factors intrinsic to each state and unlikely to be directly affected, in the short term, by a new or expanded benefit in Maryland include the following:

- Population-based prevalence of dental conditions, which are in turn related to socio-economic and environmental factors
- Factors involving policy choices that can influence the relative utilization of services

References

¹ Singhal, A., Caplan, D. J., Jones, M. P., Momany, E. T., Kutty, R. A., Buresh, C. T., & Damiano, P. C. (2015). Eliminating Medicaid adult dental coverage in California led to increased dental emergency visits and associated costs. *Health Affairs*, 34(5), 749-756. doi: 10.1377/hlthaff.2014.1358
² Sun, B. C., Chiu, D. L., Schwarz, E., Milgrom, P., Yaggen, A., Malveau, S., Chen, Z., Chan, B., Danner, S., Owen, E., Morton, V., & Lowe, R. (2015). Emergency department visits for nontraumatic dental problems: A mixed-methods study. *American Journal of Public Health*, 105(5), 947-955. doi: 10.2105/AJPH.2014.302398
³ Wallace, N. T., Carlson, M. J., Mosen, D. M., Snyder, J. J., & Wright, B. J. (2011). The individual and program impacts of eliminating Medicaid dental benefits in the Oregon Health Plan. *American Journal of Public Health*, 101(11), 2144-2150. doi: 10.2105/AJPH.2010.300031