Cost Sharing In Medicaid And CHIP: How Does It Affect Out-Of-Pocket Spending?

Although increased cost sharing can achieve budgetary savings, its potential impact on poor families needs to be carefully considered.

by Thomas M. Selden, Genevieve M. Kenney, Matthew S. Pantell, and Joel Ruhter

ABSTRACT: Rapidly rising spending has prompted debate about increasing cost sharing in Medicaid and the Children's Health Insurance Program (CHIP). In this paper we assess the role of cost sharing in Medicaid and the CHIP and its potential financial burden on low-income families with children. We find that many families would face high health spending burdens even with minimal cost sharing for their publicly insured children. Adding even modest cost sharing for such children could greatly increase high financial burdens. Our results also suggest that implementing income-based caps on family spending can help address the burden of high spending for low-income families. [Health Affairs 28, no. 4 (2009): w607–w619 (published online 2 June 2009; 10.1377/hlthaff.28.4.w607)]

IN RECENT YEARS, INCREASING ATTENTION HAS been paid to cost-sharing arrangements in Medicaid and the Children's Health Insurance Program (CHIP). Although the focus has been on premiums and copayments, some states have proposed imposing deductibles or setting up health savings accounts (HSAs) for Medicaid enrollees. On the one hand, higher cost sharing has been promoted as a way of ensuring the sustainability of Medicaid and CHIP, by sharing the financing burden with families and by reducing "unnecessary" service use and the crowding out of employer-sponsored coverage. On the other hand, there is concern that higher cost sharing will increase uninsurance rates and reduce "necessary" service use and adherence to recommended treatments among children.

In this paper we examine another dimension of Medicaid/CHIP cost sharing for children: its potential financial impact on families. We used data from the Medical Expenditure Panel Survey (MEPS) to assess how premiums and copayments for

Thomas Selden (tselden@ahrq.gov) is an economist at the Center for Financing, Access, and Cost Trends, Agency for Healthcare Research and Quality, in Rockville, Maryland. Genevieve Kenney is a senior fellow at the Health Policy Center, Urban Institute, in Washington, D.C. Matthew Pantell is a graduate student in the Joint Medical Program, University of California (UC), Berkeley, and UC San Francisco. Joel Ruhter is a research associate at the Health Policy Center, Urban Institute.

children can affect the prevalence of high out-of-pocket financial burden, and how caps on family spending can alter the trade-off between budgetary savings and high burden. The findings have important implications for policymakers contemplating increased cost sharing in public plans for children.

Cost Sharing In Children's Public Coverage

Cost sharing was restricted in Medicaid from its inception. For children enrolled in Medicaid with family incomes below 150 percent of the federal poverty level, cost sharing was limited to "nominal" amounts. Cost sharing was not imposed on emergency department (ED) use, family planning, hospice care, or preventive visits; some states have allowed other exemptions in cases of hardship.⁵ The Deficit Reduction Act (DRA) of 2005 gave states the ability to increase cost sharing for certain optional populations and services in Medicaid, and it permitted states to enforce cost-sharing requirements for the first time.⁶

Under the original CHIP statute (when it was known as SCHIP), states were permitted to charge cost sharing up to 5 percent of family income. More recently, a 2007 directive from the Centers for Medicare and Medicaid Services (CMS) imposed new cost-sharing requirements for publicly insured children in families above 250 percent of poverty.

The share of states that charged premiums and the median premium charged both increased with income in 2007 (Exhibit 1). Approximately one in five states charged premiums for children in families at 101 percent of poverty, and the median monthly premium for one child was \$10. At 151 percent of poverty, nearly half of all states charged premiums, and the median monthly premium for one child was \$19. Above 300 percent of poverty, twelve states had coverage plans, and ten of them charged premiums; the median monthly premium for a single child was \$51.

In contrast to premiums, the percentage of states charging copayments did not vary much across income groups (Exhibit 2). Also, copayment amounts varied less with income than did premiums. For example, median copayments for nonpreventive visits were the same (\$5) for children at 101 percent and above 300 percent of poverty. The largest income-related differences were for appropriate ED use, where median copayments increased from \$5 at 101 percent of poverty to \$25 above 300 percent of poverty.

Although CHIP and many state Medicaid programs cap families' out-of-pocket spending on care for children, no systematic information is available to assess how states track whether families reach the spending limits. States that only charge premiums can easily observe both out-of-pocket spending and the family income on which eligibility was based. Even in this case, however, income fluctuations can complicate efforts to cap spending, and administering caps becomes even more problematic when states charge copayments. A survey of state Web sites and subsequent discussions with selected state Medicaid and CHIP officials indicate that many states rely on families to monitor their out-of-pocket spending levels

w608 2 June 2009

EXHIBIT 1
Cost-Sharing Policies In Medicaid And The Children's Health Insurance Program
(CHIP): Premiums By Number Of Children And Selected Family Poverty Levels, 2007

Median monthly premiums, with min. and max. in parentheses^a (2007 dollars) **Family income** as percent No. of states No. of states of poverty with plans with premiums 1 child 2 children 3 children 0-100 51 0 101 51 11 \$10 \$14 \$15 (\$5-\$24)(\$4-\$24)(\$5-\$30)151 51 24 19 20 20 (4-108)(6-216)(6-324)201 25 17 35 50 60 (9-210) (27-218)(18-210)251 18 15 56 75 80 (15-210)(25-282)(30-282)>300 12 10 70 82 51 (15-125) (25-125)(30-180)

SOURCE: Authors' survey of state (and District of Columbia) Medicaid and CHIP plans as of 2007.

NOTE: Only up to three children is shown because most states cap premiums for families with more than three children.

EXHIBIT 2
Cost-Sharing Policies In Medicaid And The Children's Health Insurance Program (CHIP): Copayments By Type Of Service And Selected Family Poverty Levels, 2007

Family income as percent of poverty	No. of states with plans	No. of states with copays	Median copayments on services, with min. and max. in parentheses (2007 dollars)							
			Nonpre- ventive office visit	Rx fills		ED use				
				Generic	Brand	Appro- priate	Inappro- priate	Inpatient	Nonpre- ventive dental	Mental health
0-100	51	0	_b	_b	_b	_b	_b	_b	_b	_b
101	51	13	\$5 (\$2 - \$5)	\$4 (\$1-\$5)	\$5 (\$2 - \$5)	\$5 (\$2 - \$5)	\$5 (\$2-\$5)	\$5 (\$2-\$100)	\$5 (\$2-\$5)	\$5 (\$2-\$5)
151	51	21	5 (2-20)	3 (1–10)	5 (1–20)	10 (5-75)	18 (5-75)	18 (5-100)	5 (5-10)	5 (3-25)
201	25	10	5 (5-20)	5 (1-15)	5 (5-25)	13 (5-25)	25 (10-50)	5 (5-25)	5 (5-10)	5 (5-25)
251	18	7	5 (5–15)	4 (1-6)	6 (5-25)	18 (5-25)	25 (10-50)	5 (5-5)	5 (5-5)	5 (5-10)
>300	12	5	5 (5–10)	3 (1-6)	6 (5–25)	25 (10-50)	25 (10-50)	5 (5-5)	5 (5-5)	5 (5-10)

SOURCE: Authors' survey of state (and District of Columbia) Medicaid and CHIP plans as of January 2007.

NOTE: ED is emergency department.

^a Medians, minimums, and maximums were calculated using states with positive premiums.

^b Not applicable; no states charge premiums at this income level.

^a Medians, minimums, and maximums were calculated excluding zero copays.

^b Not applicable; no states charge copays at this income level.

(using the so-called shoebox method) and notify the state once the cap has been hit. States then issue new cards indicating that no additional copayments should be charged. A handful of states appear to have management information systems (MIS) that allow them to track out-of-pocket spending levels and to notify providers when no additional copayments should be charged. Our analysis highlights the importance of accurately administering caps if states with cost sharing are to limit families' financial exposure and preserve the affordability of children's care.

Study Data And Methods

Data are from the MEPS Household Component (MEPS-HC), a nationally representative survey of the U.S. civilian, noninstitutionalized population sponsored by the Agency for Healthcare Research and Quality (AHRQ) and the National Center for Health Statistics (NCHS). Data from 2003–2004 were pooled to enhance precision. All dollar amounts were adjusted to 2004 dollars, using the All-Goods Consumer Price Index (CPI). Our main estimates focused on the 7,885 annual observations on children who were publicly insured throughout the year. All analyses used sample weights, and standard errors accounted for MEPS survey design. On the property of the property

- **Measuring burden.** Our focus is on the out-of-pocket spending and incomes of families with publicly insured children. We defined *families* using "health insurance eligibility units," which typically consist of an adult, his/her spouse, and their children through age eighteen (full-time students through age twenty-three). High-burden families are those with out-of-pocket spending on care and health insurance premiums (private and public) exceeding 10 percent of family income, where income and spending are adjusted for all taxes, transfers, and tax subsidies. ¹²
- Cost-sharing scenarios. We began by calculating burden in the absence of cost sharing for children's care, setting to zero all Medicaid/CHIP premiums and copayments for children. Next, we examined four cost-sharing scenarios selected to approximately bracket the median cost-sharing rules at 201 percent of poverty (Exhibits 1 and 2).

In the first premium scenario (P1), monthly premiums are \$10 for one child, \$15 for two children, and \$20 for three or more children. Monthly premiums are twice as high in the second premium scenario (P2). The first copayment scenario (C1) is \$5 per nonpreventive ambulatory visit, \$3 per generic prescription filled, \$5 per brand-name prescription filled, \$5 per appropriate ED visit, and \$10 per other ED visit. The second copayment scenario (C2) is \$10 per nonpreventive ambulatory visit, \$5 per generic prescription filled, \$20 per brand-name prescription filled, \$10 per appropriate ED visit, and \$50 per other ED visit. The second copayment scenario also includes a \$100 copayment per inpatient hospital stay. The two premium and two copayment scenarios yield four possible combinations: P1/C1, P2/C1, P1/C2, and P2/C2.

For each scenario, we simultaneously changed cost sharing for all publicly en-

w610 2 June 2009

rolled children in the family, with and without family-level caps on cost sharing set at 5 percent of family income. We assumed throughout that all cost sharing is actually charged to and paid by families. Importantly, we held all coverage and medical care use constant throughout the analysis. The analysis therefore is best viewed as a first-order approximation of cost-sharing effects.¹³ The objective is to identify families for whom increased cost sharing would impose choices between suffering financial hardship and making changes in their children's enrollment and use of services.

Study Results

■ Components of burden. Exhibit 3 presents estimates of mean family income and mean family health care spending for children in public coverage. Absent cost sharing for children's coverage, out-of-pocket spending on premiums averaged \$338, and out-of-pocket spending on care averaged \$536. Thus, even without cost sharing for publicly enrolled children, other family health care spending—predominantly on parents' premiums and medical care—averaged 3.9 percent of average disposable income.

Exhibit 3 also shows how cost sharing for children's care would increase aver-

EXHIBIT 3
Components Of Family Burden Resulting From Cost Sharing, For Families With Publicly Insured Children, 2003–2004

		Pop. (millions)	Family income (\$)	Scenario						
	N			Family out-of-pocket spending on premiums (\$)			Family out-of-pocket spending on copays (\$)			
				Zero premium	P1	P2	Zero copay	P1	P2	
All children	7,885	19.3 (0.7)	22,161 (619)	338 (23)	523*** (23)	709*** (23)	536 (28)	566*** (28)	639*** (29)	
Family income as percent of poverty ^a										
<100	4,663	9.9 (0.4)	10,546 (256)	150 (21)	340*** (22)	531*** (22)	381 (30)	411*** (30)	489*** (33)	
100-149	1,632	3.8 (0.2)	24,644 (328)	379 (58)	570*** (59)	761*** (60)	668 (69)	698*** (70)	767*** (71)	
150-199	791	2.4 (0.2)	30,035 (481)	485 (60)	661*** (61)	838*** (62)	581 (75)	609*** (75)	677*** (76)	
200+	799	3.2 (0.2)	49,391 (2,169)	765 (67)	933***	1,104*** (66)	824 (67)	856*** (67)	925*** (69)	

SOURCE: Authors' calculations using pooled data from Medical Expenditure Panel Surveys, 2003 and 2004. All results were person-weighted for children ages 0-18 with full-year public coverage. Standard errors (in parentheses) were adjusted for the complex design of MEPS. All dollar amounts were adjusted to 2004 U.S. dollars. All estimates were computed in the absence of cost-sharing caps and were net of any preferential tax subsidies for medical care spending.

NOTE: Significance denotes difference from zero cost sharing (premium or copay) scenario.

^a Poverty level was computed based on narrow family definition (in contrast to broader family definition used for official poverty statistics).

^{***}p < 0.01

"Burden is fundamentally a family-level concept, which makes it critical to consider spending for the entire family."

age family spending on premiums from \$338 in the zero-premium scenario to \$523 in scenario P1 and \$709 in scenario P2. The copayments we consider have less effect, raising mean family spending from \$536 with zero copayments to \$566 in scenario C1 and to \$639 in scenario C2. Altogether, scenario P2/C2 raises average family spending by \$474.

Because we imposed cost sharing uniformly across income groups, changes in mean family spending are approximately the same for all income levels. As a share of income, however, the poor face higher out-of-pocket spending than higher-income families, even in the zero-cost-sharing scenario—and the addition of cost sharing for children's care widens this difference. Among the poor, average spending as a share of average income rises from 5.0 percent in the zero-cost-sharing scenario to 7.1 percent in P1/C1 and 9.7 percent in P2/C2 (calculated from means in Exhibit 3). In contrast, among families at 200 percent of poverty or more, the corresponding percentages are 3.2 percent and 4.1 percent.

Changes in mean spending, however, tell only part of the story. Medical spending is, in general, highly concentrated among a small subset of any population. In the overall civilian, noninstitutionalized population, those in the top 10 percent of the 2002 spending distribution accounted for 64 percent of total spending. Spending was even more concentrated among the publicly insured children in our analysis: the top decile of the spending distribution accounted for 73 percent of all spending.

The skewed distribution of utilization suggests that the share of children in families with high burdens may be of greater policy relevance than estimates of average cost sharing for subgroups of children. Moreover, burden is fundamentally a family-level concept, which makes it critical to consider spending for the entire family. Even children with little medical care use might be in high-burden families because of cost sharing for siblings. Similarly, even low monthly premiums for children might prove burdensome if parents face large medical bills of their own.

■ Prevalence of high burden. Exhibit 4 presents the frequency with which children would be in families with out-of-pocket spending burdens that exceed 10 percent under a range of cost-sharing scenarios. Even if all cost sharing for children were zero, 12.7 percent of publicly insured children would be in families with burdens of 10 percent. The prevalence of high burden is largest among children in families below 100 percent of poverty (classified as poor), among whom 16.3 percent would face 10 percent burdens, compared to 5.6 percent of children in families above 200 percent of poverty.

Even the lowest premium and copayment scenarios we examined for children's public coverage would greatly increase the prevalence of high burden. In the P1/C1

w612 2 June 2009

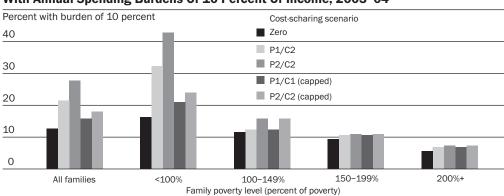


EXHIBIT 4

Effects Of Cost Sharing On The Percentage Of Publicly Insured Children In Families With Annual Spending Burdens Of 10 Percent Of Income, 2003–04

SOURCE: Authors' calculations using pooled data from the Medical Expenditure Panel Surveys, 2003 and 2004. **NOTES:** All results are person-weighted for children ages 0–18 with full-year public coverage. Standard errors are available in an online Technical Appendix, at http://content.healthaffairs.org/cgi/content/full/hlthaff.28.4.w607/DC2. The zero-cost-sharing scenario sets public premiums and copayments to zero for all children in the family. Scenario P1/C1 (P2/C2) combines the lower (higher) premiums and copayments, as described in the text. The two capped scenarios limit family spending on cost sharing for children to 5 percent of family income.

scenario, the share of children in families with 10 percent burdens rises from 12.7 percent to 21.5 percent. This translates into an additional 1.68 million publicly insured children in families with 10 percent burdens (and very likely more, given that we excluded part-year enrollees and given growth in Medicaid/CHIP enrollment since 2003–2004). Among publicly insured children in families below 100 percent of poverty, scenario Pl/C1 nearly doubles the frequency of 10 percent burdens from 16.3 percent to 32.3 percent.

Higher premiums and copayments (P2/C2) further increase the frequency of 10 percent burdens to 27.7 percent overall and to 42.8 percent among children in poor families. Much of this increase is attributable to higher premiums: the difference between P1/C1 and P1/C2 is much smaller than that between P1/C1 and P2/C1.¹⁶

To provide additional context, note that the 10 percent burden threshold is \$2,216 for a family with average income (among families of publicly insured children; see Exhibit 3). For a poor family with average income for that group, the 10 percent threshold is \$1,055. However, because many high-burden families spend more than 10 percent of income, their average spending on premiums and copayments in the scenario with zero child cost sharing would be \$3,189 overall and \$2,183 for families below 100 percent of poverty. In scenarios PI/C1 and P2/C2, average spending among high-burden families is not quite as high: \$2,280 overall and \$1,422 among the poor in P1/C1 and \$2,258 overall and \$1,521 among the poor in P2/C2. These spending averages are lower, because many of the additional high-burden cases have spending closer to the 10 percent threshold.

As these spending estimates suggest, high burden is prevalent even if one raises the threshold to 20 percent of family income.¹⁸ In the zero-cost-sharing scenario,

9.7 percent of publicly insured children would be in families with 20 percent annual burdens, and this rate rises to 16.2 percent among the poor. In scenario P2/C2, frequencies of 20 percent burdens would be 14.8 percent overall and 26.0 percent among children in poor families.

Effect of cost sharing at higher income levels. The results in Exhibit 4 suggest that cost-sharing scenarios PI/C1 and P2/C2 would lead to large increases in high burden frequency among children in families up to 150 percent of poverty. In contrast, we observed only relatively small increases in the prevalence of high burden among children in families with higher incomes. To explore this further, we increased premiums to \$60 for a single child, \$80 for two children, and \$84 for three or more children (P3/C2)—levels closer to the upper end of the observed range. Pelative to scenario P2/C2, the frequency of 10 percent burdens rises from 10.9 percent to 15.4 percent in the group at 150–199 of poverty and from 7.3 percent to 12.3 percent in the group at 200 percent of poverty or more.

Next, we considered premiums equal to 5 percent of family income (P4), regardless of the number of children, setting all copayments to zero. Premiums this high are permitted in separate (that is, non-Medicaid) state CHIP programs for children in families above 150 percent of poverty, and National Governors Association recommendations would allow premiums up to 7.5 percent of income.²⁰ In scenario P4, the prevalence of 10 percent annual burdens rises dramatically to 22.7 percent in the group at 150–199 percent of poverty and 23.7 percent in the group at 200 percent or more.

- **The impact of caps.** As discussed above, out-of-pocket spending for publicly insured children is currently limited by law to 5 percent of family income. The enforcement of a 5 percent cap on child cost sharing greatly reduces the impact of higher cost sharing on burdens, particularly for poor families (Exhibit 4). For instance, in scenario PI/CI, the overall frequency of 10 percent burdens declines from 21.5 percent with no caps to 15.7 percent with caps. Among poor children, caps reduce the prevalence of 10 percent burdens from 32.3 percent to 21.0 percent.
- Quarterly burden. Not only is health care spending concentrated within a small subset of the population, but it is also temporally concentrated within the year, with a high percentage of family out-of-pocket spending on care occurring in a single month or quarter. Among families with publicly insured children, the peak month on average accounted for 43.3 percent of all family out-of-pocket spending on medical care, and the peak quarter accounted for 57.6 percent (results not shown). This within-year concentration, coupled with income fluctuations and low asset holdings for smoothing health spending shocks, highlights the importance of measuring the burden for families of publicly insured children over time frames shorter than a year.²²

Even if there were no cost sharing for publicly insured children, 15.3 percent of those children would be in families with 20 percent burdens during at least one quarter.²³ Among the poor, this rate is 21.5 percent. Cost sharing for children fur-

w614 2 June 2009

ther increases these rates. In scenario P2/C2, the overall percentage with 20 percent quarterly burdens rises to 29.2 percent, and the corresponding percentage for poor children is 46.1 percent. Once again, however, income-based caps greatly diminish this impact, dropping the share of poor children facing 20 percent quarterly burdens to 25.6 percent.

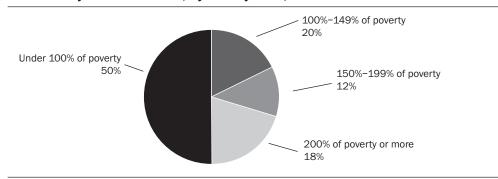
- Families with Special Health Care Needs (SHCN) children. A group of particular policy importance is children in families with children having special health care needs. ²⁴ Increased cost sharing raises concerns not only about access to and use of care for the children themselves, but also about the vulnerability of families with such children to increased financial burdens. Even with zero cost sharing for children, families with SHCN children spent \$141 more on premiums and \$432 more on medical care out of pocket than did families with no SHCN children. Ten percent annual burden rates would be 17.3 percent in SHCN families versus 10.5 percent in non-SHCN families. ²⁵ Cost sharing for children further increases the prevalence of high burdens in SHCN families. In scenario P2/C2, 34.3 percent of children in SHCN families would be in a family with a 10 percent annual burden, although capped cost sharing would reduce this rate to 23.6 percent (comparable changes were found for quarterly burden rates).
- **Persistence of high burden.** When high burdens persist over time, the result may be additional financial pressures on families. We therefore expanded the analysis to include data from the 2002-2004 MEPS, focusing on children in this threeyear period who were publicly insured for the entire two-year period in which they were in MEPS. In the zero-cost-sharing scenario, 34.8 percent of children in families with 10 percent annual burdens in the first year also face 10 percent annual burdens in the second year (results not shown). In contrast, only 7.1 percent of children have 10 percent burdens in the second year if they did not have 10 percent burdens in the first year. Burdens were even more persistent with increased cost sharing. In the P2/C2 scenario, the 10 percent burden rate is 52.1 percent in year two among children with 10 percent burdens in year one, versus 14.6 percent in year two for children who did not face high year-one burdens. Caps only modestly reduce this persistence; corresponding rates are 41.7 percent versus 10.4 percent in the capped P2/C2 scenario. Thus, high burdens are often persistent for families of publicly insured children—and this persistence rises with the levels of cost sharing for publicly insured children.
- **Budgetary savings.** By summing cost sharing across the children in our analysis, one can generate insights into a key objective of cost sharing: reducing public spending. These "budgetary savings" estimates should be interpreted with caution, however, insofar as our analysis holds enrollment and service use constant. Actual budgetary savings might be larger to the extent that enrollment and use decline, or smaller to the extent that cost sharing reduces the use of cost-effective preventive care. Despite this caveat, useful insights can be gained by comparing hypothetical budgetary savings across scenarios and across income groups.

Our estimates suggest that cost sharing has the potential to yield substantial budgetary savings. If scenario P2/C2 were applied to all publicly enrolled children, including those in poor and near-poor families (all of those below 200 percent of poverty), public spending (state and federal) would decline relative to the zero-cost-sharing scenario by a total of \$4.42 billion annually (2004 dollars, ignoring administrative costs). This represents 23.3 percent of (nonadministrative) Medicaid/CHIP expenditures in our sample of full-year publicly insured children. Budgetary savings in scenario P1/C1 are smaller (\$2.0 billion).

Importantly, income-based caps reduce these budgetary savings only modestly. Whereas caps reduce the prevalence of 10 percent burdens in scenario P2/C2 from 27.2 percent to 18.0 percent, aggregate budgetary savings decline only from \$4.42 billion to \$3.79 billion. Our results suggest, therefore, that caps on family spending may yield relatively large reductions in the prevalence of high burden without large reductions in potential budgetary savings.

Exhibit 5 presents the share of budgetary savings that would be paid by each income group under scenario P2/C2. Half of all cost-sharing payments would come from poor families, another fifth would come from families in the group at 100–149 of poverty, and only 20 percent would come from families with incomes above 150 percent of poverty. Capping child cost sharing at 5 percent of family income alters its incidence only modestly, with 42 percent of the budgetary savings coming from poor families in capped scenario P2/C2 and 23 percent coming from families at 100–149 percent of poverty. Therefore, whether cost sharing is capped or not, the majority of the budgetary savings would be achieved by imposing cost sharing for publicly enrolled children whose families have incomes below 150 percent of poverty. These results highlight the trade-off between achieving substantial budgetary savings versus protecting low-income children by exempting their families

EXHIBIT 5
Shares Of Aggregate Budgetary Savings In Cost-Sharing Scenario P2/C2 For Families With Publicly Insured Children, By Poverty Level, 2003–04



SOURCE: Authors' calculations using pooled data from the Medical Expenditure Panel Surveys, 2003 and 2004. **NOTES:** All results are person-weighted for children ages 0–18 with full-year public coverage. Standard errors are available in an online Technical Appendix, at http://content.healthaffairs.org/cgi/content/full/hlthaff.28.4.w607/DC2. Scenario P2/C2 combines higher premiums and copayments, as described in the text.

w616 2 June 2009

"Our analysis highlights key tensions facing public officials designing cost-sharing rules for children's coverage."

from cost sharing. Of course, one strategy would be to exempt children in families below 150 percent of poverty while raising premiums for higher-income children above those in scenario P2. Limiting cost sharing to children above 150 percent of poverty and applying scenarios P3/C2 and P4 (defined above) would yield budget-ary savings of \$3.03 billion and \$6.62 billion, respectively. Clearly, this would offset the budgetary impact of exempting low-income children; however, at these premium levels, even higher-income families with children would experience sharply increased prevalence of high burden, which in turn could adversely affect these children's enrollment and access to care.

Discussion And Policy Implications

Our survey of state policies reveals that a growing number of states are using cost sharing in the form of premiums or copayments, or both, for services in their public coverage programs for children. Premiums and copayments vary greatly across states and generally increase with family income level. Most states have provisions that specify caps on family spending—generally at 5 percent of family income—and premiums are capped in most states for families with more than three children. Yet our analysis of state policies suggests that systems to track family spending and to ensure free access once caps have been reached are generally not well developed.

We found that many families with publicly insured children would face high financial burdens even if cost sharing for children were zero, primarily because of spending for parents' coverage and care. This is true especially among poor children and among children at all income levels in families with SHCN children.

Moreover, cost sharing for publicly insured children has the potential to greatly increase both average out-of-pocket spending and the prevalence of high burden. Absent caps on family spending, the higher of our two main cost-sharing scenarios approximately doubles the frequency of high burden, with the largest increases concentrated among children in families that are poor, have SHCN children, or have a history of high burden. It is important to bear in mind that our analysis held enrollment and use constant. Nevertheless, our results show how cost sharing has the potential to confront many families with a choice between financial hardship and reductions in their children's enrollment and use of services.

Our analysis also highlights key tensions facing public officials designing costsharing rules for children's coverage. Higher cost sharing in public programs may reduce public spending. However, half of all publicly insured children in our analysis were poor, and even modest cost sharing can be burdensome for many poor families. Exempting poor children reduces budgetary savings unless much larger cost-sharing burdens are imposed on the remaining families. Optimal targeting of cost sharing is difficult, moreover, when family incomes fluctuate from month to month and when health needs, such as the presence of a an SHCN child or a parent in poor health, vary so widely across families.

Finally, our results show that the adverse impacts of cost sharing on high spending burden can be greatly reduced through the use of caps on spending—and that such caps do not greatly reduce potential budgetary savings. The logistical challenge, however, is for states to implement caps so that cost sharing is eliminated once the cap is reached, which may prove difficult, given the limitations in current systems for tracking families' incomes and their spending on medical care.

A previous version of this paper was presented at the AcademyHealth Annual Research Meeting, June 2008, in Washington, D.C., and at the Agency for Healthcare Research and Quality's (AHRQ's) Annual Research Conference, September 2008, in Rockville, Maryland. This research was generously funded in part by the David and Lucile Packard Foundation. The authors are greatly indebted to Kathleen McMillan of Social and Scientific Systems for her expert programming assistance. The paper has also benefited from the helpful comments of Jessica Banthin, Didem Bernard, Joel Cohen, Steven Hill, Samuel Zuvekas, and two anonymous referees. All remaining errors are their own. The paper represents the views of the authors, and no official endorsement by the David and Lucile Packard Foundation, the Urban Institute, the Agency for Healthcare Research and Quality, or the U.S. Department of Health and Human Services is intended or should be inferred.

NOTES

- S. Artiga and C. Mann, "New Directions for Medicaid Section 1115 Waivers: Policy Implications of Recent Waiver Activity," Policy Brief, March 2005, http://www.kff.org/medicaid/loader.cfm?url=/commonspot/ security/getfile.cfm&PageID=52128 (accessed 6 March 2008); and Government Accountability Office, Medicaid and SCHIP: States' Premium and Cost Sharing Requirements for Beneficiaries, Pub. no. GAO-04-491, March 2004), http://www.gao.gov/new.items/d04491.pdf (accessed 6 March 2008).
- 2. U.S. Department of Health and Human Services, "HHS Approves Medicaid Waiver to Create New Indiana Health Plan for Uninsured Hoosiers," Press Release, 14 December 2007, http://www.hhs.gov/news/press/2007pres/12/20071214a.html (accessed 26 May 2009); and Families USA, "South Carolina Healthy Connections Proposal," January 2006, http://www.familiesusa.org/assets/pdfs/state-medicaid-waivers/South-Carolina-waiver.pdf (accessed 6 March 2008).
- National Governors Association, "Medicaid Reform: A Preliminary Report," June 2005, http://www.nga.org/Files/pdf/0506medicaid.pdf (accessed 6 March 2008); and NGA, "Short-Run Medicaid Reform," (August 2005, http://www.nga.org/Files/pdf/0508MEDICAIDREFORM.PDF (accessed 6 March 2008).
- 4. S. Artiga and M. O'Malley, "Increasing Premiums and Cost Sharing in Medicaid and SCHIP: Recent State Experiences," Issue Paper, May 2005, http://www.kff.org/medicaid/upload/Increasing-Premiums-and-Cost-Sharing-in-Medicaid-and-SCHIP-Recent-State-Experiences-Issue-Paper.pdf (accessed 6 March 2008); L. Ku, "Charging the Poor More for Health Care: Cost-Sharing in Medicaid," May 2003, http://www.cbpp.org/5-7-03health.pdf (accessed 6 March 2008); and J. Guyer and C. Mann, "Cost Sharing in Medicaid: Issues Raised by the National Governors Association's Preliminary Recommendations," 2005, http://ccf.georgetown.edu/index/cms-filesystem-action?file=ccf publications/federal medicaid policy/cost sharing nga.pdf (accessed 13 May 2009).
- E.J. Herz, "Medicaid Cost-Sharing under the Deficit Reduction Act of 2005 (DRA)," 25 January 2007, http://assets.opencrs.com/rpts/RS22578_20070125.pdf (accessed 13 May 2009).
- 6. Ibid
- 7. Social Security Administration, "Coverage Requirements for Children's Health Insurance, Title 21 of Social Security Act," http://www.ssa.gov/OP_Home/ssact/title21/2103.htm (accessed 13 May 2009).
- Centers for Medicare and Medicaid Services, Letter to State Health Officials, 17 August 2007, http://www.cms.hhs.gov/smdl/downloads/SHO081707.pdf (accessed 13 May 2009); Tricia Brooks, NH Healthy Kids

w618 2 June 2009

- Corporation, "Uninsured Children: Missed Opportunities for Moving Forward," Testimony before the House Energy and Commerce Subcommittee on Health, 29 January 2008, http://energycommerce.house.gov/images/stories/Documents/Hearings/PDF/110-he-hrg.012908.Brooks-testimony.pdf (accessed 13 May 2009); and A. Wolke, "SCHIP Steers through Turbulent Waters" *State Health Notes* 29, no. 509 (2008), http://www.ncsl.org/programs/health/shn/2008/sn509a.htm (accessed 6 March 2008).
- J.W. Cohen et al., "The Medical Expenditure Panel Survey: A National Health Information Resource," Inquiry 33, no. 4 (1996/97): 373–389; and S.B. Cohen, Sample Design of the 1996 Medical Expenditure Panel Survey Household Component, MEPS Methodology Report no. 2, Pub. no. 97-0027 (Rockville, Md.: Agency for Healthcare Policy and Research, 1997).
- 10. Additional technical details and estimates are available in an online Technical Appendix, available at http://content.healthaffairs.org/cgi/content/full/hlthaff.28.4.w607/DC2.
- 11. MEPS burden estimates for the broader population can be found in J.S. Banthin, P. Cunningham, and D.M. Bernard, "Financial Burden of Health Care, 2001–2004," *Health Affairs* 27, no. 1 (2008): 188–195; as well as the references cited therein. For spending burden in low-income families with children, see J.S. Banthin and T.M. Selden, "The ABCs of Children's Health Care: How the Medicaid Expansions Affected Access, Burdens, and Coverage between 1987 and 1996," *Inquiry* 40, no. 2 (2003): 133–145.
- 12. T.M. Selden, "The Effect of Tax Subsidies on High Health Care Expenditure Burdens in the United States," *International Journal of Health Care Finance and Economics* 8, no. 3 (2008): 209–223; and J.S. Banthin and T.M. Selden, "Income Measurement in the Medical Expenditure Panel Survey," AHRQ Working Paper no. 06005, July 2006, http://www.meps.ahrq.gov/mepsweb/data_files/publications/workingpapers/wp_06005.pdf (accessed 13 May 2009).
- 13. From economic theory (Roy's Identity), evaluating the effect of price changes at observed consumption levels yields valid measures of changes in well-being when such changes are small but may overstate welfare losses from larger cost sharing changes by ignoring behavioral responses. See, for instance, T.M. Selden and M.J. Wasylenko, "Measuring the Distributional Effects of Public Education in Peru," in *Public Spending and the Poor: Theory and Evidence*, ed. D. van de Walle and K. Nead (Baltimore and London: Johns Hopkins University Press, 1995), 154–186.
- 14. L.J. Conwell and J.W. Cohen, "Characteristics of Persons with High Medical Expenditures in the U.S. Civilian Noninstitutionalized Population, 2002," Statistical Brief no. 73, March 2005, http://www.meps.ahrq.gov/mepsweb/data_files/publications/st73/stat73.pdf (accessed 2 August 2008).
- 15. G. Kenney, J. Ruhter, and T.M. Selden, "The Concentration of Spending among Medicaid/SCHIP Children: Implications for Program Design" (Unpublished paper, Urban Institute, 2009).
- 16. See the online Technical Appendix, as in Note 10.
- 17. Ibid.
- 18. Ibid.
- 19. Ibid.
- 20. Guyer and Mann, "Cost Sharing."
- 21. T.M. Selden, "The Within-Year Concentration of Medical Utilization: Implications for Family Out-of-Pocket Expenditure Burdens," *Health Services Research* (forthcoming).
- 22. Ibid.
- 23. See the online Technical Appendix, as in Note 10.
- 24. C.D. Bethell et al., "Identifying Children with Special Health Care Needs: Development and Evaluation of a Short Screening Instrument," Ambulatory Pediatrics 2, no. 1 (2002): 38–48. See also AHRQ, MEPS HC-089: 2004 Full Year Consolidated Data File, October 2006, http://www.meps.ahrq.gov/mepsweb/data_stats/download_data/pufs/h89/h89doc.pdf (accessed 13 May 2009).
- 25. See the online Technical Appendix, as in Note 10.
- 26. G. Kenney et al., "Assessing Potential Enrollment and Budgetary Effects of SCHIP Premiums: Findings from Arizona and Kentucky," *Health Services Research* 42, no. 6, Part 2 (2007): 2354–2372.
- 27. Ibid.