



medicaid and the uninsured

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Premiums and Cost-Sharing in Medicaid: A Review of Research Findings

Executive Summary

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Medicaid, the nation's public health insurance program for low-income people, now covers over 60 million Americans, including many working families, low-income elderly, and individuals with disabilities. Because the population covered by Medicaid is low-income, federal law limits the extent to which states can charge premiums and cost-sharing amounts, particularly for pregnant women, children and adults with incomes below poverty. There is renewed interest in the use of premiums and cost-sharing in Medicaid given the continued focus on costcontainment due to ongoing state budget pressures as well as recently proposed changes to federal regulations on premiums and cost-sharing in Medicaid programs. States are also likely to evaluate changes to current policies on premiums and cost-sharing as they make decisions going forward related to the transition between coverage under Medicaid and the Exchange.

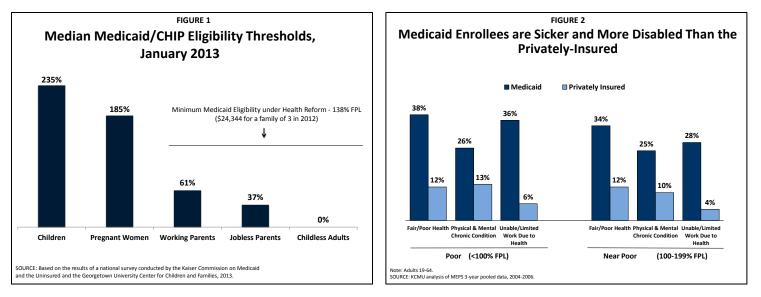
In light of this renewed interest, this brief provides an overview of the effects of cost-sharing and premiums on populations with low income and significant health care needs based on published research. The brief is broken out into three sections that summarized below; following each section are tables summarizing the research cited throughout.

- 1. Premiums and enrollment fees have been shown to act as barriers to obtaining and maintaining coverage for low-income groups. Premiums and enrollment fees present a financial cost at the point of enrolling in coverage. For individuals with low income, such as those served by the Medicaid program, this financial cost can prevent individuals from enrolling in coverage or later being able to maintain coverage. With limited availability of other affordable coverage options, surveys of low income populations affected by premium increases show that many individuals who lost coverage due to cost often became uninsured and reported an increased likelihood of having unmet health care needs. (Table 1)
- 2. For individuals with low income and significant health care needs, cost-sharing can act as a barrier to accessing care, including effective and essential services, which can lead to adverse health outcomes. Medicaid cost-sharing has been used to limit state program costs, encourage more personal responsibility over health care choices and to better align public coverage with private coverage where states have expanded coverage. While studies have shown that cost-sharing does reduce the use of less-essential services, these studies have also shown that individuals are just as likely to reduce the use of essential and effective services. Cost-sharing can act as a financial barrier to accessing care, particularly for those with low income and significant health care needs. Such individuals often end up either delaying care or not seeking needed care that in some research has shown to result in adverse health outcomes. (Table 2)
- 3. State savings from cost-sharing and premiums may accrue due to declines in coverage and utilization more so than from increases in revenues. These changes can add additional strain the health care safety-net and effectively reduce reimbursement for providers serving the Medicaid program. Research shows that premiums and cost-sharing can result in declines in coverage and utilization which can generate some savings for states in Medicaid. Any new revenues may be offset by additional administrative costs to implement the policies. As a result of premiums and cost-sharing, Medicaid beneficiaries may rely more on an already strained safety net. Medicaid providers frequently report difficulty collecting cost-sharing, effectively lowering provider reimbursement. (Table 3)

Introduction

Medicaid provides health coverage and long-term care services and supports to over 60 million low-income individuals, including children, parents, the elderly and disabled. This includes many working families, as well as many of the poorest and most fragile individuals in our society.

To be eligible for Medicaid today, individuals must meet income and resource requirements and must also fall into one of the categories of eligible populations. While states have expanded eligibility levels for children through Medicaid and CHIP, Medicaid coverage for parents is more limited. (Figure 1) Given these income eligibility levels, it is not surprising to find that in 2011, over half of all Medicaid beneficiaries have incomes below the poverty level (\$22,350 for a family of four).ⁱ Medicaid beneficiaries tend to be poorer and sicker than those enrolled in private insurance. (Figure 2) Medicaid enrollees with low income and greater health care needs generally do not have access to employer-based or other affordable private coverage.



Due to the limited income of beneficiaries and few other options for affordable coverage, federal law limits the amounts states can charge cost-sharing and premiums, particularly for pregnant women, children, and adults with income below the poverty level. In January 2013, the Department of Health and Human Services released a proposed rule that would streamline Medicaid regulations on premiums and cost-sharing as well as give states additional flexibility (see the following <u>brief</u> for more details on the current and proposed rules as well as the current use of premiums and cost-sharing.) As states review this proposed new flexibility as well as plan ahead for the implementation of health reform, this brief reviews research findings of the effects of premiums and cost-sharing on populations served by the Medicaid program.

There is a rich body of research on the various effects of premiums and cost-sharing; this review focused on studies relevant for understanding the effect of premiums and cost-sharing on the population served by the Medicaid program, providers that serve the Medicaid program, and the administrative costs and difficulties of instituting such policies. Each section is followed by a table of relevant studies that are cited throughout this brief, organized in reverse chronological order. There is also a brief overview of the RAND Health Insurance Experiment study and findings in the Appendix; this study conducted in the 1970s is still considered the seminal study on the effects of cost-sharing on individual behavior.

I. The Effect of Premiums on Individuals with Low Income and Significant Health Care Needs

Premiums and enrollment fees present a financial cost at the point of enrolling in coverage. For individuals with low income, such as those served by the Medicaid program, this financial cost can prevent individuals from enrolling in coverage. With few if any other affordable coverage options available to those with low income, many individuals end up uninsured and with unmet health care needs. This section highlights research findings related to the effect of premiums on individuals. Cited frequently throughout this section are findings from studies of changes made in two Medicaid programs, Oregon (2, 4, 6, 9) and Utah (7). In 2003, both states made significant changes, including increased premiums and cost-sharing, to their Medicaid waiver programs that served nondisabled adults with low income, the OHP Standard program (Oregon) and the Primary Care Network program (Utah).

Premiums and enrollment fees have been shown to act as barriers to obtaining and maintaining coverage for low-income populations. A number of studies over the past decade examining changes in public programs have shown significant declines in enrollment after the implementation of new or increased premiums. (2, 7, 8, 9, 11) Surveys conducted with those losing coverage have found that individuals often cite increased costs and premiums as a significant factor in losing coverage, particularly for those with very low incomes. For example, surveys conducted after Oregon made several changes to its OHP Standard plan showed nearly half of disenrollees surveyed reported increased costs as contributing to disenrollment was significantly higher for those with incomes below ten percent of the poverty level. (4) Surveys of disenrollees from programs with higher incomes, such as CHIP programs, saw a smaller but still significant share of disenrollees reporting increased costs as a barrier to obtaining or maintaining coverage. (1, 3, 5, 10)

The share of income charged for premiums has also been shown to effect decisions to participate in public programs. A seminal study conducted by the Urban Institute in the 1990s found that charging premiums even as small as one percent of family income was associated with a 16 percent drop in participation rates for Medicaid expansion and state coverage programs. (11)

With limited availability of other affordable coverage options, these same surveys show that many individuals who lost coverage due to cost often became uninsured. Over 75 percent of surveyed disenrollees that indicated financial barriers to renewing coverage in Utah's Primary Care Network reported being uninsured after exiting the program. (7) Oregon also saw a significant number of those that were disenrolled from its OHP Standard plan become uninsured. Within the first six months of implementation, two-thirds of disenrollees surveyed reported being uninsured; nearly a third remained uninsured when surveyed two years later. (2, 4)

Many individuals who lost coverage due to cost also often reported an increased likelihood of having unmet health care needs. Surveys of those that disenrolled from Utah's Primary Care Network program showed that about half of all respondents to this survey regardless of reason for disenrollment indicated not having seen a health care provider in the previous twelve months. Respondents indicated significant unmet needs particularly for dental care, mental health care, and substance abuse treatment. (7) Surveys of those that lost coverage in Oregon also showed low income individuals who lost coverage were more likely to have visited an emergency department than those who retained coverage, particularly for those with low incomes and chronic conditions. Over 40 percent of those in the lowest income group who lost coverage reported having visited an emergency department in the past six months compared to 35 percent of those who retained coverage. Among people with a chronic illness, almost half of those in the lowest income group who lost coverage reported an emergency department visit compared to 34 percent of those in the lowest income group who maintained coverage. (4)

Table 1: Research on the Effect of Premiums on Individuals with Low Incomes and Significant Health Care Need		
Citation	Population / Focus	Major Findings
1. Hendryx, Michael, et al. "Effects of a Cost-Sharing Policy on Disenrollment from a State Health Insurance Program." Social Work in Public Health; Vol. 27 (No. 7): 671-686, 2012.	The effect of a cost- sharing and premium change on low-income adults enrolled in Washington's Basic Health Plan (2003-2004).	 About 5% of enrollees left the program. Of those that left the program, 17% cited cost-sharing and premium changes as a reason for leaving. However, 34% of those that were still eligible but left the program did so at least partly due to premium and cost-sharing changes. Of those that left, 37% had no health insurance when surveyed. Compared to those that remained in Basic Health, those that left the program were significantly more likely to not get needed care, to go without office or clinic visits, to spend \$500 or more out of pocket for health care, to have children not covered by public health insurance, and to be at risk of losing coverage for themselves or children if children's premiums rose by \$5 to \$10/month. Even among those that stayed in the program, 20% went without needed care over a 5-6 month period, 28% reported they would drop their own coverage if premiums for their children rose only slightly, and 33% had to skip or cut back on other bills.
2. Wright, Bill J. et al. "Raising Premiums and Other Costs for Oregon Health Plan Enrollees Drove Many to Drop Out." Health Affairs. Vol. 29(12): 2311-2316, December 2010.	Low-income adult Medicaid recipients in Oregon; incomes under 100% FPL.	 Only 33% of OHP Standard plan enrollees remained continuously enrolled in the plan during the policy change period compared to 69% of OHP Plus enrollees. At the end of the study, 32% of those who had left OHP Standard had become uninsured compared to 8% of those who had left OHP Plus. Nearly twice as many individuals who left OHP Standard cited cost as a reason for leaving as those that left OHP Plus in the period after the policy change. OHP Standard enrollees were nearly twice as likely to have unmet health care needs; cost was a more significant driver of unmet need for Standard enrollees than Plus enrollees. OHP Standard enrollees were less likely to have had a primary care or ER visit than Plus members, but were 68% more likely to have indicated financial strain due to medical costs.
3. Kenney, Genevieve et al. "The Effects of Premium Increases on Enrollment in SCHIP Programs: Findings from Three States." Inquiry, Vol. 43 (4): 378-92, Winter 2006-2007.	Premium paying CHIP caseloads (150-200% FPL) in Kentucky, Kansas and New Hampshire.	 Substantial drop-offs in enrollment occurred after premiums increased/started in all states. The policy change had a negative effect on affected caseloads in all states. There were negative effects on new enrollment in KS (-10.1%) and NH (-17.7%) but not in KY. Premium increases were associated with increased likelihood of disenrollment in KY and NH. The first and second recertification periods were associated with higher disenrollment rates.
4. Carlson, Matthew J. and Bill Wright. The Impact of Program Changes on Enrollment, Access, and Utilization in the Oregon Health Plan Standard Population. Prepared for the Office for Oregon Health Policy and Research, March 2005.	Low-income adult Medicaid recipients in Oregon; incomes under 100% FPL.	 Nearly half (44%) of OHP Standard disenrollees reported that increased costs – premiums, copays, and back-owed premiums - contributed to disenrollment; more than half of OHP Standard disenrollees with income below 10% FPL were significantly more likely to list cost related reasons for losing coverage compared to those with higher incomes. Two-thirds of OHP Standard disenrollees became uninsured. Disenrollees with the very low incomes were more likely to have an emergency room visit than those still covered (43% vs. 35%); the effect was larger for those with chronic conditions.
5. Maryland Children's Health Insurance Program: Assessment of the Impact of Premiums. Department of Health and Mental Hygiene, 2004.	Children disenrolled from CHIP; premiums applied to those with incomes between 185-200% FPL.	 Enrollment data showed about one-quarter of families subject to new premiums disenrolled. In surveys conducted with parents, the most common reason given was gaining other coverage (41%), though 20% cited a premium related reason for disenrollment.
6. LeCouteur, Gene et al. The Impact of Medicaid Reductions in Oregon: Focus Group Insights. Kaiser Commission on Medicaid and the Uninsured, 2004.	Low-income adult Medicaid disenrollees in Oregon; incomes under 100% FPL.	 New premiums and stricter payment policies led many to face difficult decisions such as paying other bills late or skipping meals. For many, the new premiums and the stricter payment policies led to loss of coverage, which led to significant problems accessing care. Many respondents indicated that the copayments were difficult to afford and impeded access to needed care and prescription drugs. Others noted that the small copayments added up quickly when ongoing care or multiple medications were needed.
7. Utah Primary Care Network Disenrollment Report. Utah Department of Health Center for Health Data, Office of Health Care Statistics, August 2004.	Low-income adult Medicaid disenrollees in Utah; income sunder 150% FPL.	 During July-September 2003 (renewal period after first year), 27% were disenrolled. Survey of disenrollees found that 63% were uninsured at the time of the survey. Nearly half of disenrollees surveyed indicated that they were still eligible for the PCN program. Nearly 30 percent of survey respondents indicated financial barriers to reenrollment – mostly the \$50 reenrollment fee (63% of those reporting financial barriers) but also the copays (26%). Over 75 percent of these respondents reported being uninsured after exiting the program. Of those that indicated not reenrolling because the program did not meet their health needs, 20% reported copays were too high to use services. About half of all respondents to this survey regardless of reason for disenrollment indicated not having seen a health care provider in the previous twelve months. Many survey respondents (disenrollees) that needed care reported difficulty in accessing such care, particularly mental health care, alcohol/drug treatment, and dental services.

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Table 1: Research on the Effect of Premiums on Individuals with Low Incomes and Significant Health Care Needs		
Citation	Population / Focus	Major Findings
 8. Gardner, Mark and Janet Varon. Moving Immigrants from a Medicaid Look-Alike Program to Basic Health in Washington State: Early Observations. Kaiser Family Foundation, May 2004. 9. McConnell, John and Neal Wallace. Impact of Premium Changes in the Oregon Health Plan. Prepared for the Office for Oregon Health Policy & 	Low-income immigrant children and parents who lost Medicaid look-alike coverage and became eligible for the state- funded Basic Health program. Low-income adult Medicaid disenrollees in Oregon; incomes under 100% FPL.	 About half (48%) of families in the transition population (those eligible to move from the look-alike Medicaid program to Basic Health) did not make the transition and lost their insurance coverage during the first few months of the transition. Premiums were a significant barrier to families' obtaining and maintaining Basic Health coverage; 35.9% of those from the transition group disenrolled from Basic Health in the first 11 months were disenrolled because they did not pay premiums. Most (61%) of the transition group relied on assistance from third parties to pay premiums. Families who transitioned to Basic Health also reported difficulties affording copayments. Providers saw a substantial increase in the demand for charity care, emergency services. The program overall experienced a nearly 50% drop in enrollment, with the largest declines experienced by those with no income (58% drop in October 2003 from 2002 levels). Of those that left between May and October, 47% were disqualified for not paying premiums. Potential premium revenues fell from approximately \$800,000 per month to \$500,000 per
Research, February 2004. 10. Gavin, Norma, et al. Evaluation of the BadgerCare Medicaid Demonstration. Prepared by RTI International and MayaTech Corp. for CMS, December 2003.	Families disenrolled from Medicaid (BadgerCare); premiums applied to families with incomes over 150% FPL.	 month in late 2003. Premium paying families were less likely to remain enrolled over time, but the difference from families not subject to premiums was small. Premiums delayed reenrollment of families. Of those disenrolled, 26% listed a problem with paying premiums as a reason for leaving BadgerCare; it was the most common main reason for leaving the program.
11. Ku, Leighton and T. Coughlin. "Sliding-Scale Premium Health Insurance Programs: Four States' Experiences." Inquiry Vol. 36(4), Winter 1999/2000.	The relationship between participation rates in and the amount charged for premiums.	 Participation in public health programs fell from 57 percent when premiums were equal to 1 percent of family income to 35 percent when premiums grew to 3 percent of family income. Participation continued to fall to 18 percent when premiums rose to 5 percent of family income.

II. The Effect of Cost-Sharing on Individuals with Low Incomes and Significant Health Care Needs

Medicaid cost-sharing has been used to limit state program costs, encourage more personal responsibility over health care choices and to better align public coverage with private coverage where states have expanded coverage. While studies have shown that cost-sharing does reduce the use of less-essential services, these studies have also shown that individuals are just as likely to reduce the use of essential and effective services. Costsharing can act as a barrier to accessing care, particularly for those with low incomes and significant health care needs. Such individuals often end up either delaying care or not seeking needed care that in some research has shown to result in adverse health outcomes.

Cost-sharing has been shown to lead to significant reductions in the utilization of services, including effective and essential services. A number of studies of the effects on cost-sharing going back to the RAND HIE have shown a reduction in the use of services after cost-sharing increased, regardless of income. More recent research focused on those with low income has also found reductions in the use of services. After copayments were increased in Alabama's CHIP program, the use of many services (inpatient care, physician visits, brand-name medication and emergency room visits) declined. (1) Adults that remained in Oregon's Standard Health program were less likely to have had a primary care or emergency department visit than Oregon Medicaid enrollees in the Plus Program that did not face the changes in copayments or premiums. This was despite the fact that Oregon Standard Health program enrollees were significantly and substantially more likely to report financial strain due to medical costs. (5) Analysis of utilization data for those remaining in the Utah Primary Care Network plan after both copayment and premium increases showed that utilization of services declined. (13, 17)

Analysis of the RAND HIE data showed that individuals were just as likely to reduce appropriate and highlyeffective care as they were to reduce inappropriate and less-effective care. The study also indicated that lowincome children and adults regardless of income in cost-sharing plans were significantly less likely to receive highly-effective outpatient care for acute conditions relative to those on plans without cost-sharing. (RAND) These findings were later supported in a study of elderly individuals and welfare recipients in Canada; the use of essential prescription drugs dropped for both groups after cost-sharing was introduced for these populations. (18) Additional research has also shown significant declines in the utilization of preventive services after the introduction of or increase in cost-sharing, even among higher income groups. (4, 11, 19, RAND)

Cost-sharing introduces a financial barrier to accessing care, especially for those with low income and significant health needs. Given the limited resources of those served by the Medicaid program, even small increases in the cost of health care coverage can pose significant financial strain. Survey results from those enrolled in Washington's state-funded Basic Health Plan indicated that one-third of respondents that remained enrolled after increases in premiums and cost-sharing had to skip or cut back on other bills to pay for health care. (2) A survey of those that remained in Utah's Primary Care Network program, a Medicaid waiver program, after copayments were increased found that over 40 percent of respondents indicated that the copayments presented problems for them to afford despite the fact that the amounts being charged were relatively small. (17) Some disenrollees from Utah's Primary Care Network program also indicated that copayments were too high to use the services. (14) After the implementation of premium and cost-sharing changes in Oregon's Medicaid waiver program (OHP Standard), enrollees were two-thirds more likely to indicate financial strain due to medical costs when compared to Medicaid enrollees that did not face the cost-sharing and premium changes in the OHP Plus program. OHP Standard Plan enrollees were nearly twice as likely to have unmet health care needs compared to those in the OHP Plus program; these same OHP Standard enrollees indicated that cost was a more significant driver of unmet need than it was for OHP Plus plan enrollees. (5)

These findings raise additional concerns for individuals with low income and chronic conditions or other significant health care needs. A different survey of OHP Standard enrollees noted that the small copayments added up quickly when ongoing care or multiple medications were needed. (16) Even among those with chronic conditions and higher income, some studies have indicated that utilization of services related to treating or

managing their conditions declines after cost-sharing is increased. A study of employer plans that used disease management programs showed that decreasing copayments was associated with a seven to fourteen percent reduction in non-adherence for select drug classes. (10) A different study of employer based plans focused on those with chronic conditions also found significant declines in utilization of select drug classes after copayments were doubled. Generally, the study found that individuals decreased their use of other drug classes before decreasing their use of drug classes needed to treat their specific condition. One exception was diabetics; individuals diagnosed with diabetes reduced their use of anti-diabetes medications by 23 percent. (15)

Delaying or not seeking care, particularly highly-effective health care services, can lead to unmet health care needs and ultimately have a negative impact on health. While research on the effect of cost-sharing on health outcomes has been limited, findings have indicated negative effects on health outcomes for low-income populations with significant health care needs. Studies using the RAND HIE data have noted that while cost-sharing "had little or no net adverse effect on health for the average person... [h]ealth among the sick poor...was adversely affected." (RAND) Essential drug use significantly decreased for low-income individuals and the elderly after prescription drug cost-sharing was implemented in Quebec, Canada. The decreases in essential drug use were the primary cause of significantly higher rates of serious adverse events and greater emergency room use. (18) A recent study of Medicaid enrollees diagnosed with cancer found that beneficiaries reduced the number of prescription days after copayments were increased compared to increases in the number of prescription days after copayments were increase copayments. These same beneficiaries saw an increase in the probability of an emergency room visit after copayments were increased while the probability of an emergency room visit after copayments were increase dwhile the probability of an emergency room visit after copayments were increase that did not increase copayments. (3)

Some evidence has shown that increased cost-sharing can result in changed patterns of care, with some individuals substituting less expensive effective care for more expensive care. A common concern about cost-sharing is its potential to unintentionally incent individuals to substitute cost-effective forms of care that have cost-sharing for more expensive forms of care that do not have cost-sharing. There have been a limited number of studies that have examined the potential for this substitution effect; however, some recent studies focused on the elderly have noted this substitution effect. A recent study Medicare managed care plans found that plans charging cost-sharing for ambulatory care had significant increases in annual inpatient days, annual inpatient admissions and the probability for enrollees to have any inpatient care use, particularly for those living in low-income areas as well as those with select chronic conditions. (9) A different study of Medicare beneficiaries found that savings from increasing copayments for physician services and prescription drugs led to additional costs from increased hospitalizations. For those in the worst health, the additional costs from increased hospitalizations were larger than the savings accrued from the increased copays for physician services and prescription drugs, with hospital spending increasing by nearly \$2 for every \$1 saved on other spending. (8) Another study of private employer-based plans estimated savings of \$1 billion annually from adjusting cost-sharing to increase compliance with cholesterol-lowering therapy. (12)

Research on the potential use of cost-sharing to limit non-emergent use of the emergency department has been mixed. An area of interest in cost-sharing for Medicaid programs is its potential to reduce non-emergent use of the emergency department (ED), though research is limited and mixed. ED use among those enrolled in Oregon's Medicaid expansion program, OHP Standard, did in fact decline after premiums and copayments, including a \$50 copayment for ED use, were implemented. The authors did note that ED use resulting in inpatient admissions fell at about the same rate as overall ED use; this suggested to the authors that enrollees may have been discouraged from using the ED for emergencies as well as for less serious conditions. (7) Published within months of this Oregon study, another study found no significant difference in non-emergent use of the ED in states that had increased cost-sharing for non-emergent use of ED compared to states that had not. (6) Such findings are important to consider as states review the new proposed changes for this particular form of cost-sharing.

		e Effect of Cost-Sharing on Individuals nd Significant Health Care Needs
Citation	Population / Focus	Major Findings
1. Bisakha, Sen. et al. "Did Copayment Changes Reduce Health Service Utilization among CHIP Enrollees? Evidence from Alabama." Health Services Research; Vol. 47 (No. 4): 1303-1620, September 2012.	The effect of cost-sharing changes on service utilization. The study used claims data (1999-2009) managed by Blue Cross Blue Shield of Alabama for children enrolled in Alabama's CHIP program, ALL Kids. ALL Kids serves families not eligible for Medicaid up to 200% FPL.	 Overall, study noted significant declines in utilization for inpatient care, physician visits, brand-name medications, and emergency department visits following the copayment increases. Given that the copayment increases were mostly \$3-\$5, the study shows that even smal increases in copayments may have significant effects on service utilization.
2. Hendryx, Michael, et al. "Effects of a Cost-Sharing Policy on Disenrollment from a State Health Insurance Program." Social Work in Public Health; Vol. 27 (No. 7): 671-686, 2012.	The effect of a cost-sharing and premium change on low-income adults enrolled in Washington's Basic Health Plan (2003- 2004).	 About 5% of enrollees left the program. Of those that left the program, 17% cited cost-sharing and premium changes as a reason for leaving. However, 34% of those that were still eligible but left the program did so at least partly due to premium and cost-sharing changes. Of those that left, 37% had no health insurance when surveyed. Compared to those that remained in Basic Health, those that left the program were significantly more likely to not get needed care, to go without office or clinic visits, to spend \$500 or more out of pocket for health care, to have children not covered by public health insurance, and to be at risk of losing coverage for themselves or children if children's premiums rose by \$5 to \$10/month. Even among those that stayed in the program, 20% went without needed care over a 5-6 month period, 28% reported they would drop their own coverage if premiums for their children rose only slightly, and 33% had to skip or cut back on other bills.
3. Subramanian, Sujha. "Impact of Medicaid Copayments on Patients with Cancer." Medical Care; Vol. 49 (No. 9): 842-847, September 2011.	The effect of increased cost-sharing on low-income adult Medicaid beneficiaries diagnosed with cancer. Medicaid administrative data from 1999 to 2004 for Georgia (intervention state), South Carolina (control B) and Texas (control A) were compared. Analysis focused on the effect of increased cost-sharing on the number of prescription days, the probability of having an emergency room visit, and the total Medicaid cost.	 After the implementation of copay changes in Georgia (intervention state) the number of prescription days decreased by 16% while prescription days increased in control states. The probability of having an emergency room visit also increased in the intervention state while the probability did not change in either of the control states. Total costs increased in all states, but the increase was largest in the intervention state. Those with multiple comorbidities reduced their prescription use the most when compared to those with a single comorbidity and those with no comorbidities, while patients with multiple comorbidities increased their prescription use in control states. Copayment increase of \$2 to \$3 for prescription drugs in South Carolina did not have a significant impact on utilization in South Carolina, suggesting that increasing copays from what Medicaid beneficiaries already consider high may not further alter behavior.
4. Guy, Gery P. Jr. "The Effects of Cost Sharing on Access to Care among Childless Adults." Health Services Research; Vol. 45 (6 Pt. 1): 1720-1739, December 2010.	Analysis compared access to care and use of preventive services among childless adults eligible for Medicaid expansion programs with traditional cost-sharing and increased cost-sharing compared to childless adults in those states that were near eligible (incomes below 300% FPL) using BRFSS data 1997–2007.	 Childless adults eligible for expansions with traditional cost-sharing had a 3.9 percentage point increase in the probability of being insured while childless adults eligible for expansions with increased cost-sharing had a 2.1 percentage point increase in the probability of being insured. There was not a statistically significant difference for childless adults eligible for either expansion (traditional cost sharing vs. increased cost-sharing) in the probability of having a personal doctor. Childless adults eligible for expansions with traditional cost-sharing saw statistically significant higher probabilities of utilizing preventive health services. There was no statistically significant difference in the utilization of preventive services for childless adults eligible for expansions with increased cost-sharing and those eligible for expansions with traditional cost-sharing.
5. Wright, Bill J. et al. "Raising Premiums and Other Costs for Oregon Health Plan Enrollees Drove Many to Drop Out." Health Affairs. Vol. 29(12): 2311-2316, December 2010.	Low-income adult Medicaid recipients in Oregon (incomes at or below the poverty level.) Survey data from individuals both enrolled in the OHP Standard plan (experienced several policy changes, including premium and cost-sharing increases) and the OHP Plus plan (did not experience these changes). Data from disenrollees and enrollees was included.	 Only 33% of OHP Standard plan enrollees remained continuously enrolled in the plan during the policy change period compared to 69% of OHP Plus enrollees. At the end of the study, 32% of those who had left the standard plan had become uninsured compared to 8% of those who had left the Plus plan. Nearly twice as many individuals who left the Standard plan cited cost as a reason for leaving as those that left the Plus plan in the period after the policy change. OHP Standard enrollees were nearly twice as likely to have unmet health care needs; cost was a more significant driver of unmet need for Standard than Plus enrollees. OHP Standard enrollees were less likely to have had a primary care or ER visit than Plus members, but were 68% more likely to indicate financial strain due to medical costs.
6. Mortensen, Karoline. "Copayments Did Not Reduce Medicaid Enrollees' Nonemergency Use of Emergency Departments." Health Affairs, Vol. 29 (9): 1643-1650, September 2010.	The effect of cost-sharing on non- emergency use of the ER among low- income Medicaid beneficiaries. The study used MEPS data (2001-2006) to analyze the utilization among Medicaid recipients in states that changed their copays and states that did not.	 The study found that nonemergency use of the emergency department did not decrease for beneficiaries in states that had changed their copay (increased or implemented a new copay) compared to those in states that did not change copays. There was no effect of nonemergency copay changes on emergency visits, despite financial incentives for physicians to code visits as emergency visits. The author notes that this study was completed before changes made under the DRA allowed for states to make copays enforceable.

Table 2: Research on the Effect of Cost-Sharing on Individuals with Low Income and Significant Health Care Needs		
Citation	Population / Focus	Major Findings
7. Lowe, Robert A. et al. "Impact of Policy Changes on Emergency Department Use by Medicaid Enrollees in Oregon." Medical Care, Vol. 48 (7): 619-627, July 2010.	The effect of premium and cost-sharing changes on ER utilization in Oregon's Medicaid program. The study used administrative data (2001-2004) from the OHP Standard Plan (policy changes) and from the OHP Plus Plan to compare the ER utilization changes between members on the two plans.	 ER utilization among OHP Standard enrollees dropped 18% compared to OHP Plus enrollees after the policy changes. OHP Standard enrollees also decreased ER use that resulted in hospital admission (-24% and injury-related emergency department use (-15%). No further change in ER use among OHP Standard enrollees compared to OHP Plus enrollees after a partial restoration of benefits and removal of cost-sharing. The authors interpreted the decrease in ER use that led to hospitalizations to suggest OHP Standard enrollees deferred necessary care as much as optional care.
8. Chandra, Amitabh et al. "Patient Cost-Sharing and Hospitalization Offsets in the Elderly." American Economic Review. Vol. 100 (1): 193- 213, Mar 2010.	Effects of increasing cost-sharing for select services on hospitalizations for elderly patients. The study used medical utilization data from CaIPERS plans (January 2000-September 2003).	 The institution of a \$10 copay for office visits led to a 17.5% decline in visits. When the quarter immediately before and immediately after were removed, the decline was not as substantial, but still significant. Cost-sharing negatively impacted the average number of prescriptions filled. Utilization of drug classes used to treat acute and chronic conditions as well as drug classes used that would not result in an adverse health event if not taken declined substantially. There was an increase in hospital utilization of 6% in 2002. There was also an increase of 5.4% in hospitalization expenditures, which offsets 20% of the savings from higher copays for physicians and prescription drugs. Among the sickest, hospital expenditures rose by \$2 for every \$1 in savings.
9. Trivedi, Amal et al. "Increased Ambulatory Care Copayments and Hospitalizations among the Elderly." New England Journal of Medicine. Vol. 362(4), Jan 2010.	Effect of increasing ambulatory cost- sharing on ambulatory and inpatient services among Medicare managed care plans. Medicare HEDIS data (2001-2006) were used to compare the use of ambulatory and inpatient services for plans that increased copayments for ambulatory care to plans that had not.	 Compared to the plans that did not raise ambulatory copays: outpatient visits decreased (19.8 fewer visits per 100 enrollees), hospital admissions rose (2.2 more per 100 enrollees), inpatient days rose (13.4 more inpatient days per 100 enrollees) the proportion of enrollees with hospitalizations rose The effects were magnified for those in lower-income areas and enrollees with hypertension, diabetes, and a history of heart attacks.
10. Chernew, Michael et al. "Impact of Decreasing Copayments on Medication Adherence Within a Disease Management Environment." Health Affairs. Vol. 27(1), January 2008.	Effect of reduced cost-sharing for prescriptions in a private disease management program. The study used 2004-2005 claims data from two private employer plans with the same disease management program were compared; one plan had decreased cost-sharing.	 The decrease in copays was associated with a 7-14% reduction in non-adherence for four of the five classes examined (there was a positive but insignificant effect on steroid adherence).
11. Trivedi, Amal N. et al. "Effect of Cost Sharing on Screening Mammography in Medicare Health Plans." The New England Journal of Medicine. Vol. 358(4), January 2008.	Effect of cost-sharing on mammogram utilization among Medicare beneficiaries. The study compared the use of mammography services for plans that had increased or instituted new copays to plans that had not.	 Biennial screening rates were 8.3 percentage points lower in cost-sharing plans than in those with full coverage – screening rates in cost-sharing plans decreased by 5.5 percentage points while screening rates increased by 3.4 percentage points in full coverage plans. The effect was magnified for women residing in lower income areas.
12. Goldman, Dana P. et al. "Varying Pharmacy Benefits with Clinical Status: The Case of Cholesterol-lowering Therapy." American Journal of Managed Care. Vol. 12(1), January 2006.	Effect of cost-sharing on compliance with cholesterol-lowering therapy and subsequent use of emergency and inpatient services. The study compared data between private employer plans that increased pharmacy copays and plans that did not.	 Full compliance with the therapy fell by 6-10 percentage points when copays increased from \$10 to \$20. Full compliance with therapy was associated with significantly fewer hospitalizations and ER visits. The effect differed between high and low risk patients, though hospitalizations and ER visits did decrease for both groups. Authors estimate that removing copays for high and medium risk individuals but increasing the copays for those at low-risk would result in \$1B in annual savings.
13. Ku, Leighton et al. "The Effects of Copayments on the Use of Medical Services and Prescription Drugs in Utah's Medicaid Program." Center on Budget and Policy Priorities, November 2004.	Low-income adult Medicaid beneficiaries in Utah; incomes under 150% FPL. Re- examination of an earlier analysis by the Utah Department of Health; new model assumed either a flat or positive trend absent policy changes to determine if copays significantly effected utilization.	 The re-estimation showed that copays resulted in significant reductions in utilization for the services that the earlier Utah Department of Health study had shown no significant changes – namely physician and inpatient services.

		e Effect of Cost-Sharing on Individuals Ind Significant Health Care Needs
Citation	Population / Focus	Major Findings
14. "Utah Primary Care Network Disenrollment Report." Utah Department of Health Center for Health Data, Office of Health Care Statistics, August 2004.	Low-income adult Medicaid disenrollees in Utah; incomes under 150% FPL. The study used both enrollment data from the Primary Care Network 1115 waiver program (July and September 2003) as well as surveys from disenrolled adults.	 During July-September 2003 (reenrollment period after first year of coverage), 27% of PCN enrollees were disenrolled, 63% of whom were uninsured at the time of the survey. 29% of all survey respondents indicated financial barriers to reenrollment. Of those reporting financial barriers, 63% cited the \$50 reenrollment fee, 26% cited copayments. Of those that indicated that they did not reenroll because the program did not meet their health needs (26% of the disenrollee respondents), 20% reported that copays were too high to use the services. About half of all respondents to this survey regardless of reason for disenrollment indicated not having seen a health care provider in the previous twelve months. Many survey respondents that needed care reported difficulty in accessing care, particularly mental health care, alcohol/drug treatment, and dental services.
15. Goldman, Dana P. et al. "Pharmacy Benefits and the Use of Drugs by the Chronically III." Journal of the American Medical Association, Vol. 291 (19), May 2004.	Effect of cost-sharing on the use of the common drug classes among privately insured and chronically ill patients. Pharmacy claims data linked with health plan benefit designs for privately insured nonelderly individuals.	 Doubling copays was associated with reductions in use of 8 therapeutic classes; the largest occurred for nonsteroidal anti-inflammatory drugs (NSAIDs) (45%) and antihistamines (44%). Reductions in overall days supplied of antihyperlipidemics (34%), antiulcerants (33%), antiasthmatics (32%), antihypertensives (26%), antidepressants (26%), and antidiabetics (25%) were also observed. Among patients diagnosed as having a chronic illness and receiving ongoing care, use was less responsive to copayment changes. Those with chronic conditions tended to reduce their use of other drugs more before reducing their use of drugs needed to treat their conditions. Exception was noted for patients with diabetes; diabetics reduced their use of antidiabetes drugs by 23%.
16. LeCouteur, Gene et al. The Impact of Medicaid Reductions in Oregon: Focus Group Insights. Kaiser Commission on Medicaid and the Uninsured, 2004.	Low-income adult Medicaid disenrollees in Oregon; incomes under 100% FPL.	 New premiums and stricter payment policies led many to face difficult decisions such as paying other bills late or skipping meals. For many, the new premiums and the stricter payment policies lead to loss of coverage, which led to significant problems accessing care. Many respondents indicated that the copayments were difficult to afford and impeded access to needed care and prescription drugs. Others noted that the small copayments added up quickly when ongoing care or multiple medications were needed.
17. Williams, Scott D. 2003 Utah Public Health Outcome Measures Report: Medicaid Benefits Change Impact Study. Utah Department of Health, December 2003.	Low-income adult Medicaid beneficiaries in Utah; incomes under 150% FPL. The study used both Utilization data for Medicaid recipients after program changes, including increased copays (using intervention analysis) as well as survey data from enrollees.	 Analysis of the utilization data did not show a decrease after copays were instituted for all services examined, with the exception of prescription drugs and outpatient services for non-traditional Medicaid beneficiaries. The analysis showed statistically insignificant increases in utilization after institution of copays, contrary to expectation. Small percentages of enrollees reported not getting needed prescriptions (13%) and physician services (11%). 42% reported that while the copays are small, they present a problem.
18. Tamblyn R, et al. "Adverse Events Associated With Prescription Drug Cost- Sharing Among Poor and Elderly Persons." Journal of the American Medical Association. Vol. 285(4), Jan 2001.	Effect of prescription cost-sharing on adverse events and ER use for elderly persons and low-income adult welfare recipients in Canada. The study compared utilization rates before and after the policy change.	 The use of "essential" drugs decreased by 14.4% for poor and 9.1% for elderly populations after cost- sharing policies went into effect, leading to higher rates of serious adverse events and greater emergency room use. The study also found significant reductions in less essential drug use in both groups with no significant impact on adverse events or emergency room use.
19. Solanki, Geetesh, et al. "The Direct and Indirect Effects of Cost-Sharing on the Use of Preventive Services." Health Services Research. Vol. 34(6), Feb 2000.	The direct and indirect effects of different forms of cost-sharing on the utilization of preventive services. The study analyzed the effect of cost-sharing on mammograms, cervical cancer screening, blood pressure screening and preventive counseling for non-elderly participants in large group employer plans.	 Both forms of cost-sharing in both plan types had negative and significant indirect effects on preventive counseling (from -1% to -7%). The direct effect of cost-sharing was negative for preventive counseling (-5% to -9%) and Pap smears (from -3% to -9%) in both HMOs and PPOs, and for mammography only in PPOs (-3% to -9%). The results of the effects on blood pressure screening were inconclusive.
20. Stuart B, Zacker C. "Who Bears the Burden of Medicaid Drug Co-payment Policies?" Health Affairs. Vol. 18(2): 201-212, March/April 1999.	The effect of cost-sharing on prescription drug use among low-income individuals eligible for Medicare and Medicaid. The study compared data for those living in states with a copay policy (52%) were compared with data for those living in states without copays.	 Elderly and disabled Medicaid beneficiaries in copay states had lower rates of prescription use than their counterparts in non-copay states. The disparity was due primarily to a reduced likelihood of filling any prescription rather than a reduction in the number of prescriptions. The reduction in prescriptions was greatest for beneficiaries in fair or poor health in copay states compared to their counterparts in non-copay states. Pharmacists failed to collect copays for almost 30% of prescriptions with reduced collections in an additional 6-10% of prescriptions in copay states.

III. The Effect of Cost-Sharing and Premiums on Medicaid Programs, Providers and the Safety-Net

State savings from cost-sharing and premiums may accrue due to declines in coverage and utilization more so than from increases in revenues. Any new revenues may be offset by additional administrative costs to implement the policies (such as new systems to collect and track the new payments). As a result of premiums and cost-sharing, Medicaid beneficiaries may rely more on safety-net providers. Medicaid providers frequently report difficulty collecting cost-sharing, effectively lowering provider reimbursement.

Accounting for savings from increases in cost-sharing and premiums can be difficult; they may accrue more from reduced coverage and utilization rather than increased revenue.ⁱⁱ One of the reasons states implement or increase premiums and cost-sharing in Medicaid is to achieve budgetary savings. However, accounting for savings from these changes can be difficult. Given the vulnerable population Medicaid serves, federal law limits the amount of premiums and cost-sharing states can charge with particularly strong limits on the premiums and cost-sharing that can be applied to children, pregnant women and adults with incomes below poverty. Therefore, some state studies have noted that only a small portion of their Medicaid populations could be subject to premiums and copayments, particularly states with lower eligibility levels. (1, 3) For premiums, any estimated revenue would be offset, at least in part, by declines in coverage discussed earlier. (4, 6) Predicting how many individuals will drop coverage is difficult. In fact, Oregon saw a net decline in premium revenue due largely to the decline in enrollment experienced in the program; potential premium revenue fell to 65 percent of what the state had collected before program changes. (6)

Additional offsetting costs include administrative costs such as those related to tracking copayments and premiums to ensure that total cost-sharing charged to a family does not exceed the five percent of family income as required by federal law. (1,3) States also face administrative costs including those related to churning, such as extra paperwork, system updates, as well as researching and reconciling billing problems related to churning, when individuals lose and regain coverage over a short period of time.ⁱⁱⁱ Churning also leads to additional costs related to disruptions in care if they are assigned to different plans or providers, making managing care and measuring quality difficult. (4) Given these offsetting costs, it is likely that savings from the implementation of premiums and cost-sharing are derived at least in part from the declines in coverage and utilization noted in earlier sections. Some states studies have called into question the possibility of true savings from the implementation of cost-sharing. (3, 4)

Changes in cost-sharing and premiums can result in increased demand and additional pressure on safety-net providers. As Medicaid beneficiaries cannot afford to access needed care due to cost-sharing or even lose coverage because they cannot afford premiums or other costs, they may rely more on safety-net providers. After premium and cost-sharing changes in Oregon's Medicaid expansion program, OHP Standard, and Washington's state-funded Basic Health program, safety-net providers such as Federally Qualified Health Centers (FQHCs), clinics, and emergency rooms saw increased demand for services and assistance. (2, 5, 8) After premium and cost-sharing changes in Oregon's OHP Standard program, emergency departments in Oregon noted an abrupt 20 percent increase in ER utilization by uninsured individuals, particularly for behavioral health conditions. This abrupt increase occurred at the same time that emergency department use declined across all other payers, including those that remained in the Oregon's Medicaid program. (2)

Cost-sharing can result in lower reimbursement rates for providers. Providers frequently report difficulties in collecting cost-sharing from patients. (7, 9) For example, Oklahoma Medicaid providers reported collecting only 29 percent of copayment amounts from Medicaid beneficiaries. Until recently, providers could not deny providing services to Medicaid beneficiaries if they did not pay their copayments; few states have since adopted this option.^{iv,v} Yet, states often take into account the collection of copayments when determining payment rates for providers, effectively reducing their reimbursement.

Citation	Population / Focus	Major Findings
1. "Estimated Medicaid Savings and Program Impacts of Service Limitations, Copayments, and Premiums." Maryland Department of Health and Mental Hygiene, December 2010.	2009 Maryland Medicaid data were analyzed to estimate potential cost- savings from various policy proposals, including cost-sharing.	 After excluding exempt populations, only 21% of Maryland's Medicaid population would be eligible for higher levels of cost-sharing. The maximum gross impact of increasing cost-sharing to its highest levels would be \$8.5M in state funds; however, the study emphasizes that this is not likely as the study did not account for behavioral changes in response to the copays, state administrative costs, and copays were not capped at 5% of family income.
 Lowe, Robert A. "Impact of Medicaid Cutbacks on Emergency Department Use: The Oregon Experience." Annals of Emergency Medicine, Vol. 52 (6): 626-534, December 2008. "Co-pays for Nonemergent Use of Hospital Emergency Rooms." Prepared for the Texas Health and 	The effect of premium and cost-sharing changes on ER utilization in Oregon's Medicaid program. Data on Emergency Department claims were provided from Emergency Departments in Oregon. Cost-effectiveness analysis of implementing enforceable non- emergency ER copays using data from	 There was an abrupt 20% increase in ER utilization by uninsured individuals after the OHP policy changes while emergency department utilization by OHP enrollees decreased during this time frame. The magnitude of the increase in ER use for behavioral health conditions by the uninsured after the OHP policy changes was significantly higher. Overall, emergency department use decreased during this time across all payers. The savings that would likely be obtained from diversion from and avoidance of the emergency room would likely be less than the cost of administering the policy. The copay could be applied to a small portion of the Texas Medicaid population
Human Services Commission, May 2008. 4. "Fiscal Impact of Implementing Cost Sharing and Benchmark Benefit Provisions of the Federal Deficit Reduction Act of 2005." Arizona Health Care Cost	Texas health system and experiences from other states. Examines the fiscal impact of: implementing the maximum amount of cost-sharing, cost-sharing for non- preferred prescription drugs, cost- sharing for non-emergent use of the ED,	 given their low eligibility levels for adults. Implementation would present challenges for both providers and the state. The maximum amount that could be captured from premiums and cost-sharing after accounting for the federal share would be significantly less than administrative costs. Imposing additional cost-sharing on ALTCS members may have an adverse fisca impact on the state; members unable to pay cost-sharing may need to forego necessary medical services while others may choose to move into nursing facilities.
Containment System, December 13, 2006. 5. Gardner, Mark and Janet Varon. Moving Immigrants from a Medicaid Look-Alike Program to Basic Health in Washington State: Early Observations. Kaiser Family	and cost-sharing for an alternative benefit package. Low-income immigrant children and parents who lost Medicaid look-alike coverage and became eligible for the state-funded Basic Health program.	 New premiums may increase disenrollment, resulting in more uninsured citizens and more uncompensated care for the state's hospitals. Premiums can lead to high member turnover, making care management difficult. About (48%) of families in the transition population (those eligible to move from the look-alike Medicaid program to Basic Health) did not make the transition and lost their insurance coverage during the first few months of the transition. Premiums were a significant barrier to families' obtaining and maintaining Basic Health coverage; 35.9% of those from the transition group disenrolled from Basic
Foundation, May 2004. 6. McConnell, John and Neal Wallace. Impact of Premium Changes in the Oregon Health Plan. Prepared for the Office for Oregon Health Policy & Research, February	Low-income adult Medicaid recipients in Oregon; incomes under 100% FPL.	 Health in the first 11 months were disenrolled because they did not pay premiums. Most (61%) of the transition group relied on third party assistance to pay premiums. Families who transitioned to Basic Health reported difficulties affording copayments. Providers saw substantial increases in demand for charity care, emergency services. The program overall experienced a nearly 50% drop in enrollment, with the largest declines experienced by those with no income. 47% of disenrollees (May to October 2003) were disqualified for not paying premiums. Potential premium revenues fell from approximately \$800,000 per month to
2004. 7. Crawford, Steven. "It's Health Care, Not Welfare: Appropriate Rate Structure for Services Rendered and Estimated Percent of Co-Pays Collected Under the Medicaid Program." Oklahoma Health Care Authority, January 2004.	Estimated percent of copays collected by providers in Oklahoma's Medicaid program. Results from a survey of Oklahoma Health Care providers.	 \$500,000 per month in late 2003. Provider reported collecting only 29% of the copay amounts from Medicaid recipients. Low reimbursement combined with difficulty collecting even nominal co-pays from patients, contributed to frustration and dissatisfaction.
8. Hanes, Pamela, et al. "Assessing the Early Impacts of OHP2: A Pilot Study of Federally Qualified Health Centers Impact in Multnomah and Washington Counties." Prepared for Office for Oregon Health Policy & Research, December 2003.	Health center administrators and physicians in the Portland, OR metropolitan area.	 Administrators and providers for the clinics reported increased administrative burden, use of pharmaceutical assistance programs, and difficulty absorbing additional demand for mental health/substance abuse services due to OHP Standard changes. These interviews also expressed concern that confusion among beneficiaries and providers about copayments was leading to fewer follow-up appointments and fewer providers outside of the FQHC accepting OHP Standard beneficiaries.
9. Stuart B, Zacker C. "Who Bears the Burden of Medicaid Drug Co- payment Policies?" Health Affairs. Vol. 18(2): 201-212, March/April 1999.	The effect of cost-sharing on prescription drug use among low- income individuals eligible for Medicare and Medicaid. The study compared those living in states with copays (52%) to those living in states without copays.	 Elderly and disabled beneficiaries in copay states had lower rates of prescription use than their counterparts in non-copay states. The disparity was due to a reduced chance of filling any prescription instead of a drop in the number of prescriptions. The reduction in prescriptions was greatest for beneficiaries in fair or poor health. Pharmacists failed to collect copays for almost 30% of prescriptions with reduced collections in an additional 6-10% of prescriptions in copay states.

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Conclusion

Under current law, states have flexibility to charge premiums and cost-sharing in their Medicaid programs. Given the low-income population the Medicaid program serves, federal law does limit the extent to which states can charge premiums and cost-sharing, particularly for pregnant women, children and adults with incomes below poverty. CMS has issued proposed changes to cost-sharing would provide states with increased flexibility to impose cost-sharing in Medicaid. In states that expand Medicaid, these rules will affect the level of cost-sharing faced by many adults who gain eligibility for Medicaid under the ACA. As states evaluate changes in current policy as well as decisions going forward related to the transition between coverage under Medicaid and the Exchange, they will need to carefully consider the research that shows potential savings to states related to these measures, but also the potential risk of increased barriers to access care, increased unmet needs, worse health outcomes, substitution of more expensive care for more efficient care, increased burdens for safety-net providers and increased administrative costs.

This brief was prepared by Laura Snyder and Robin Rudowitz of the Kaiser Commission on Medicaid and the Uninsured.

Appendix – Summary of the RAND Health Insurance Experiment^{vi}

The RAND Health Insurance Experiment (HIE), funded by the Department of Health and Human Services, began in 1971 and ran through 1982. Approximately 7,700 non-elderly individuals in 2,750 families in six different locations (Dayton, Ohio; Seattle, Washington; Fitchburg and Leominster, Massachusetts; Franklin County, Massachusetts; Charleston, South Carolina; and Georgetown County, South Carolina) were recruited to participate. Families who enrolled in the HIE were randomly assigned to plans with widely varying co-insurance and maximum out-of-pocket dollar expenditure amounts. Four co-insurance arrangements were used:

1) No co-insurance	2) 25% co-insurance
3) 50% co-insurance	4) 95% co-insurance

For the plans with co-insurance, the maximum out-of-pocket amount varied between 5%, 10%, and 15% of income, with a maximum of \$1,000. All medical services were covered, although in some cases co-insurance rates were varied by service. Individuals were followed for up to five years.

The key feature of this experiment was that individuals were randomly assigned to the various health insurance plans with differing co-insurance and maximum out-of-pocket amounts. As with medical trials, randomization assures that individuals are, on average, the same across each of the different plans. This means that differences in utilization and health across the plans reflect differences in patient costs, not differences in patient characteristics. A randomized trial such as this is considered the gold standard of research studies.

The experiment lead to several findings which cannot be detailed in their entirety here; however, those of importance for this study were:

- The more families had to pay out of pocket, the fewer medical services they used.
- All types of services fell with cost-sharing. There were no significant differences among services (physician visits, hospital admissions, prescriptions, and dental visits) with two exceptions – hospital admissions for children and a partial exception for mental health services.
- Ambulatory services were more responsive to cost-sharing for the poor than for the well-to-do; the opposite was true for hospital services.
- The reduced service use under the cost-sharing plans had little or no net adverse effect on health for the average person. However, among the "sick poor," health was adversely affected.

http://www.statehealthfacts.org/comparebar.jsp?ind=156&cat=3.

¹ Urban Institute and Kaiser Commission on Medicaid and the Uninsured estimates based on the Census Bureau's March 2010 and 2011 Current Population Survey (CPS: Annual Social and Economic Supplements),

ⁱⁱ Artiga, Samantha and Molly O'Malley. "Increasing Premiums and Cost Sharing in Medicaid and SCHIP: Recent State Experiences." Kaiser Commission on Medicaid and the Uninsured, May 2005. <u>http://www.kff.org/medicaid/7322.cfm</u>.

^{III} Summer, L. and C. Mann. "Instability of Public Health Insurance Coverage for Children and their Families: Causes, consequences, and Remedies." *The Commonwealth Fund*, pub. No. 935, June 2006.

^{iv} The Deficit Reduction Act of 2005 gave states the option of making copayments enforceable, meaning providers could choose to deny service if beneficiaries did pay their copayments. *Premiums and Cost-Sharing in Medicaid*. Kaiser Commission on Medicaid and the Uninsured, February 2013. <u>http://www.kff.org/medciaid/8416.cfm</u>.

^v Smith, V. et al. *Medicaid Today; Preparing for Tomorrow: A Look at State Medicaid Program Spending, Enrollment and Policy Trends*. Kaiser Commission on Medicaid the Uninsured, October 2012. <u>http://www.kff.org/medicaid/8380.cfm</u>

^{vi} Newhouse, Joseph P. and the Insurance Experiment Group. *Free For All? Lessons from the RAND Health Insurance Experiment*. RAND, 1993.

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      1330 G STREET NW, WASHINGTON, DC 20005

      PHONE: (202) 347-5270, FAX: (202) 347-5274

      WEBSITE: WWW.KFF.ORG/KCMU
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