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The Effects of Premiums and Cost Sharing on Low-Income Populations: Updated Review of Research Findings

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The three tables below support the Kaiser Family Foundation Issue Brief titled, "*The Effects of Premiums and Cost Sharing on Low-Income Populations: Updated Review of Research Findings*." The tables highlight findings from 65 studies published between 2000 and March 2017, including peer-reviewed studies and freestanding reports, government reports, and white papers by research and policy organizations on the effects of premiums and cost sharing on low-income populations in Medicaid and CHIP. Each table corresponds to one of three sections in the brief: (1) effects of premiums; (2) effects of cost sharing; and (3) effects on state budgets and providers. The table lists studies in reverse chronological order, with the most recent studies first, and groups the studies by nationwide and state-specific studies. Studies that apply to multiple sections are included in more than one table but list only the relevant findings for that section.

Table 1: Effects of Premiums			
Citation	**Data**	**Study Population(s)**	**Study Focus and Major Findings**
National Studies			
Gery P Guy, et. al., "The Role of Public and Private Insurance Expansions and Premiums for Low-Income Parents: Lessons from State Experiences," *Medical Care* 55, 3 (March 2017):236-243.	2000-2013 Current Population Survey (CPS) and Medical Expenditure Panel Survey (MEPS) data	Nonelderly parents with incomes at or below 300% FPL	• Estimates effects of different types of coverage expansions and premiums on parent coverage. • Higher public premiums were associated with a reduction in public insurance, and increased the likelihood of private insurance or being uninsured. A $500 increase in annual public premiums decreased the probability of public insurance by 1.9 percentage points, increased the probability of private insurance by 1.2 percentage points, and increased the probability of being uninsured by 0.6 percentage points. • Public premiums were a significant deterrent to coverage for parents in non-worker households and had effects on public coverage that were over 10 times as large as the effects among families with a worker. Among parents without a worker in the household, a $500 increase in annual public premiums decreased the probability of public insurance by 9.8 percentage points, increased the probability of private insurance by 2.9 percentage points, and increased the probability of being uninsured by 6.9 percentage points. Among parents with a worker in the household, both public and private premiums had a significant impact on insurance status.
Salam Abdus, et. al., "Children's Health Insurance Program Premiums Adversely Affect Enrollment, Especially Among Lower-Income Children," *Health Affairs* 33, 8 (August 2014): 1353-1360.	1999-2010 Medical Expenditure Panel Surveys (MEPS) data	Children eligible for Medicaid or CHIP with incomes above 100% FPL	• Simulates the relationship between premiums and coverage by income level and by parental access to employer coverage. • Among eligible children in families with incomes between 101-150% of poverty, a $10 increase in monthly premiums is associated with a 6.7 percentage point reduction in having Medicaid or CHIP coverage and a 3.3 percentage point increase in being uninsured. The increase in likelihood of being uninsured is larger among children whose parents lack offers of employer coverage. • Among eligible children in families with incomes above 150% of poverty, a $10 increase in monthly premiums is associated with a 1.6 percentage point reduction in Medicaid or CHIP coverage. In this income range, the increase in being uninsured may be higher among children whose parents lack an offer of employer sponsored coverage than among those whose parents have an offer.
Silviya Nikolova and Sally Stearns, "The Impact of CHIP Premium Increases on Insurance Outcomes among CHIP Eligible Children," *BMC Health Services Research* 14 (March 2014):101-107.	2003 Medical Expenditure Panel Surveys (MEPS) data in 19 states	Children assumed eligible for CHIP in the income range subject to premiums	• Simulates the effect of premium differences for children in states that have a tiered premium structure for CHIP, in which families at higher incomes pay higher premiums than families in a lower income group. • A $1 increase in premium for those in the higher income group was associated with a 1.7 to 2.2 percentage point increase in the likelihood of being privately insured. • Premium increases were not associated with uninsurance rates.

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Citation	**Data**	**Study Population(s)**	**Study Focus and Major Findings**
Carole R Gresenz, Sarah E Edgington, Miriam J Laugesen and Jose J Escarce, "Income Eligibility Thresholds, Premium Contributions, and Children's Coverage Outcomes: A Study of CHIP Expansions," *Health Services Research* 48:2, Part II (April 2013):884-902.	2002-2009 Current Population Survey data	Children with family incomes 200%- 400% FPL	• Simulates effects of varying premium schedules (no, low, medium, and high premiums) for individuals with incomes between 200-400% FPL. • Across the examined income levels, premiums decrease enrollment in public coverage and increase enrollment in private coverage, with greater effects as premium contributions increase. Changes in uninsured rates are less sensitive to premiums at these income levels, particularly among those with incomes at 300% and 400% FPL, likely reflecting the greater availability of employer coverage at these income levels.
Gery P Guy, Jr., E. Kathleen Adams, and Adam Atherly, "Public and Private Health Insurance Premiums: How do they Affect Health Insurance Status of Low-Income Childless Adults?," *Inquiry* 49 (Spring 2012):52-64.	2000-2008 Current Population Survey data	Low-income childless adults (age 19-64) eligible for public coverage expansions or premium assistance programs in 16 states and DC	• Estimates effects of public and private health insurance premiums on insurance status of low-income childless adults eligible for public coverage or premium assistance programs. • Higher public premiums are associated with a decrease in the probability of having public insurance and an increase in the probability of being uninsured. A $1,000 increase in annual public premiums was associated with a 14.2 percentage-point reduction in the probability of public insurance and an 8.2 percentage point increase in the probability of being uninsured. • Increased private premiums decrease the probability of having private insurance. A $1,000 increase in annual private premiums was associated with a 3.3 percentage point reduction in the probability of private insurance. • Eligibility for premium assistance programs and increased subsidy levels are associated with lower uninsured rates. A $1,000 increase in the annual subsidy level for premium assistance was associated with a 3.4 percentage point reduction in the likelihood of being uninsured.
Jack Hadley, et. al., "Insurance Premiums and Insurance Coverage of Near-Poor Children," *Inquiry* 43, 4 (Winter 2006/2007).	1996-2003 Community Tracking Study Household Survey data	Children in families with incomes between 100%-300% FPL	• Estimates the effects of premiums on children's coverage. • Higher public premiums are significantly associated with a lower probability of public coverage and higher probabilities of private coverage and being uninsured. An increase in the public premium that leads to a 1% decrease in public coverage increases the probability of private coverage by .62%, while the probability of being uninsured increases by .38%. • Higher private premiums are significantly related to a lower probability of private coverage and higher probabilities of public coverage and being uninsured. If the probability of private coverage decreases by 1%, the probability of public coverage will increase by .55% and the probability of being uninsured will increase by .45%.

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Citation	**Data**	**Study Population(s)**	**Study Focus and Major Findings**
Genevieve Kenney, Jack Hadley, and Fredric Blavin, "Effects of Public Premiums on Children's Health Insurance Coverage: Evidence from 1999 to 2003," *Inquiry* 43 (Winter 2006/ 2007):345-361.	2000-2004 Current Population Survey data	Children with family incomes between 100% to 300% FPL and who meet the eligibility requirements for either Medicaid or CHIP coverage	• Simulates the effects of premiums on children's coverage. • Raising public premiums reduces enrollment in public programs, and increases the odds of having private coverage or being uninsured relative to having Medicaid or CHIP coverage. Public premiums have larger effects on lower income families. • For children with family incomes between 100%-300% FPL, increasing per-child public premiums by an average of $120 annually reduces public coverage by 1.4 percentage points, increases private coverage by 1.1 percentage points, and increases uninsured rates by .3 percentage points. • Larger reductions in public coverage were found among lower income eligible children whose family incomes are between 100%-200% FPL. For these children, a $120 annual increase in public premiums would result in a 4.2 percentage point reduction in public coverage, a 3.2 percentage point increase in private coverage, and a 1.0 percentage point increase in the share uninsured. • Data also suggest that increases in public premiums may have more pronounced effects on uninsured rates when applied to Black or Hispanic children, whose families have lower levels of educational attainment. • A 10% increase in private coverage costs would lower private coverage by 1.4 percentage points, raise public coverage by .6 percentage points, and increase the share uninsured by .8 percentage points.
State Studies			
The Lewin Group, *Healthy Indiana Plan 2.0: POWER Account Contribution Assessment*, Prepared for Indiana Family and Social Services Administration (FSSA), (Washington, DC: Lewin Group, March 2017).	December 2016-January 2017 Surveys of enrolled, disenrolled, and not enrolled individuals, February 2015-December 2016 Indiana Family and Social Services Administration (FSSA) enrollment data and administrative data, and January-September 2016 data from 3 managed care entities (MCE)	**Indiana:** Medicaid expansion enrollees with incomes between 0-138% FPL	• Assesses the affordability of the Healthy Indiana Plan (HIP) 2.0's POWER Account Contribution (PAC) policy, which contains contributions that range from $1-$100 per month, depending on income. • Between February 1, 2015 and November 30, 2016, 55% of the 590,315 individuals eligible to pay PAC either never made a first payment or missed a payment during their enrollment. Individuals with incomes at or below poverty were more likely to not make a payment that those with incomes above poverty. • 15% of survey respondents reported that they are always or usually worried about having enough money to pay their PAC. • 44% of those who missed a payment cited not being able to afford to pay the contribution as the main reason for nonpayment and 17% indicated confusion regarding the payment process. Among those who never made a payment, 22% cited not being able to afford the contribution and 22% cited being confused about the payment process. • Individuals who disenrolled due to nonpayment or those who never enrolled because they did not make their first payment were less likely than those enrolled in HIP to report making appointments for both routine and specialty care. They were also less likely to report filling a prescription in the past six months or since leaving HIP. • 47% of those who disenrolled due to nonpayment and 41% of those who never enrollment because they did not make their first payment reported that they had insurance coverage, which was most commonly employer sponsored coverage.

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MaryBeth Musumeci, et. al., *An Early Look at Medicaid Expansion Waiver Implementation in Michigan and Indiana*, (Washington, DC: Kaiser Family Foundation, January 2017), http://kff.org/report-section/an-early-look-at-medicaid-expansion-waiver-implementation-in-michigan-and-indiana-key-findings/.	State administrative data	**Michigan and Indiana:** Adults enrolled in the Medicaid expansion waiver programs	• Examines early implementation experiences of Michigan and Indiana Section 1115 Medicaid expansion waivers to low-income adults. • State data show that premium costs may deter eligible adults from enrolling in coverage. Particularly for very low-income adults, even very low premiums may be unaffordable. • In Michigan, from October 2014-July 2016, about 38% of beneficiaries who owed premiums had paid them. As of July 2016, over 112,000 Michigan beneficiaries owed past due premiums or copayments; about 44,200 (less than 40%) of these were in "consistent failure to pay" status, subjecting them to garnishment of their state income tax refunds. • 37% of Healthy Indiana Plan (HIP) 2.0 enrollees with incomes below poverty were not paying monthly premiums and, therefore, were enrolled in HIP Basic, the more limited benefit package with point-of-service copayments, as of October 2016. To date, a limited number of Indiana beneficiaries with incomes above poverty have been locked out of coverage for failure to pay monthly premiums. Between August and October 2016, 4,621 HIP 2.0 beneficiaries were disenrolled and locked out of coverage for 6 months for failing to pay premiums.
James Marton et. al., "Estimating Premium Sensitivity for Children's Public Health Insurance Coverage: Selection but No Death Spiral," *Health Services Research* 50, 2 (April 2015): 579-598.	State administrative data, 2003-2006	**Georgia:** Children enrolled in PeachCare, Georgia's CHIP program	• Estimates the effects of premium increases on the probability that near-poor and moderate income children disenroll from public coverage. • A $1 increase in per child premium is associated with a 7.7-7.83% increase in the probability of a child disenrolling from CHIP. • The data suggest that families with children in poor health do not respond much differently than families with children in medium or good health to premium increases, despite having a lower baseline probability of disenrolling from coverage.
Laura Dague, "The Effect of Medicaid Premiums on Enrollment: A Regression Discontinuity Approach," *Journal of Health Economics* 37 (May 2014): 1-12.	State administrative data, 2008-2010	**Wisconsin:** Children and parents enrolled in BadgerPlus, Wisconsin's Medicaid and CHIP program	• Estimates the effects that premiums in Medicaid have on the length of enrollment. • A monthly premium increase from $0 to $10 results in 1.4 fewer months of continuous enrollment for both adults and children and increases the probability of disenrollment by 12-15 percentage points. • No or relatively small effects are found for other large discrete changes in premiums, suggesting that the premium requirement itself, more than the specific dollar amount, discourages enrollment.

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Citation	**Data**	**Study Population(s)**	**Study Focus and Major Findings**
Michael Hendryx, et al., "Effects of a Cost-Sharing Policy on Disenrollment from a State Health Insurance Program," *Social Work in Public Health* 27, 7 (2012):671-686.	Survey of adults who stayed enrolled and disenrolled following premium changes.	**Washington State:** Low-income adults in Washington's Basic Health Plan	• Examines the effects of increased premiums and cost sharing in Washington's state-funded coverage program for adults on enrollment and possible health care consequences of disenrollment. Effective January 2004, Washington made policy changes that increased average monthly premiums for adults from $27 to $35 and average monthly out-of-pocket costs from $29 to $52. • About 5% of enrollees disenrolled after the policy changes. Disenrollees were more likely to be younger adults, male, and have fewer children. Among all disenrollees, 39% indicated that they left because they obtained other coverage, 35% reported that they were no longer eligible, while 21% indicated that they left the program because they could not afford it. Middle-income enrollees were the most likely to have left because they had trouble paying for coverage. • 63% of disenrollees were aware of the changes in premiums and cost sharing. Among all disenrollees who were aware of the changes, 26% cited the changes as a reason for disenrolling. Among disenrollees who were aware of the changes and left voluntarily, 34% cited the changes as a reason for disenrolling. Among those citing the changes as a disenrollment reason, the increase in the monthly premium was the most important change that affected their decision. • Overall, 37% of disenrollees had no health insurance when surveyed. Disenrollees reported less access to care, greater subsequent out-of-pocket costs, and more difficulty providing coverage for children than people who stayed enrolled.
Michael M Morrisey, et.al., "The Effects of Premium Changes on ALL Kids, Alabama's CHIP Program," *Medicare & Medicaid Research Review* 2,3 (2012):E1-E17.	State administrative data, 1999 and 2009	**Alabama:** Children enrolled in ALL Kids, Alabama's CHIP program	• Examines the effects of an annual premium increase as well as increases in copayments on enrollment and renewal in Alabama's CHIP program, ALL Kids. In October 2003, premiums for individual coverage increased by $50 per year and copays by $1-$3 per visit. • The increases in premiums and copays are estimated to have reduced renewals that are completed within 12 months by 6.1% annually. This reduction is over one-third larger—up to 8.3%—if only immediate renewals are considered. • Families with a child who has a chronic condition were more likely to renew coverage overall. However, those with chronic conditions, African Americans, and those with lower family incomes were more sensitive to the premium increase.
Bill J Wright, et. al., "Raising Premiums and Other Costs for Oregon Health Plan Enrollees Drove Many to Drop Out," *Health Affairs* 29, 12 (December 2010):2311-2316.	State administrative data and a mail survey, November 2003, 2004, and 2005	**Oregon:** Adults enrolled in Medicaid with income below 100% FPL	• Examines effects of premium and cost sharing increases for poor adults enrolled in Oregon's Medicaid program. In 2003, Oregon made a range of policy changes to its Medicaid program, the Oregon Health Plan (OHP), which included benefit reductions, increased premiums and cost sharing and stricter premium payment policies for adults enrolled in its OHP Standard program. Enrollees in OHP Plus continued to receive benefits similar to the original OHP. • During the study period between 2003 and2005, only 33% of OHP Standard plan enrollees remained continuously enrolled following the policy changes, compared to 69% of OHP Plus enrollees. Most disenrollment occurred in the first six months following the changes, when 44% of OHP Standard enrollees left the program. • Premium increases and rigid premium payment deadlines were a major reason why members reported disenrolled from the OHP Standard plan, accounting for nearly half of the disenrollment over the first six months. • 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.

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Citation	**Data**	**Study Population(s)**	**Study Focus and Major Findings**
Michael R Cousineau, Kai-Ya Tsai, and Howard A Kahn, "Two Responses to a Premium Hike in a Program for Uninsured Kids: 4 in 5 Families Stay In as Enrollment Shrinks by a Fifth," *Health Affairs* 31, 2 (February 2012):360-366.	L.A. Care Health Plan enrollment data, 2009-2011	**California:** Children enrolled a health insurance program for low-income immigrant children in Los Angeles County and those whose income exceeded 250% FPL	• Examines the effects of premium increases on disenrollment from a health insurance program for low-income immigrant children in Los Angeles County. In July 2010, L.A. Care Health Plan increased premiums for older children (age 6-18) to $15 per month for each child, with a maximum of $45 per family. Premium increases did not apply to younger children (ages 0-5). • After premiums increased, the retention rate among older children dropped by nearly five percentage points from an average of 98.1% to 93.8%. Much of the decline occurred in the first two months after the premium increase. As a result, monthly enrollment among older children declined by 39% after the premium increase. In contrast, the average retention rate for younger children did not change over the period. • At the end of the study period, 59% of the older children subject to the premiums were still enrolled. Without the premium increase, it was expected that 80% of the children in this group would still be enrolled. As such, it is estimated that the increase resulted in an enrollment decline of 20%.
James Marton, Patricia G Ketsche, and Mei Zhou, "SCHIP Premiums, Enrollment, and Expenditures: A Two State, Competing Risk Analysis," *Health Economics* 19 (2010):772-791.	State administrative data for Kentucky, 2001-2004 and Georgia, 2003-2005	**Kentucky and Georgia**: Children enrolled in Medicaid and CHIP in Kentucky and Georgia	• Compares the effects of introducing new premiums and increasing premiums for children enrolled in CHIP in two states on enrollment in public coverage through CHIP or Medicaid. Kentucky introduced a $20 monthly premium for children in CHIP for the first time in 2003. In mid-2004, Georgia increased existing premiums in its CHIP program from $10 per family to sliding scale premiums ranging from $20-$40 for one child and $35-$70 for two or more children. • In both states, premium increases lead to increases in children leaving CHIP and having no public health insurance in the two months immediately following the premium changes. In both states, data also show increases in the probability of children moving to lower income eligibility categories of CHIP that have lower premiums following the premium increase. In Kentucky, there also was an increase in the likelihood of children moving to Medicaid in the two months following the increase; however, this was not observed in Georgia. • Not all changes persisted over the longer term. However, in Kentucky, children continued to be more likely to exit to no public health insurance in the remaining seven months of the study period.
James Marton and Jeffery C Talbert, "CHIP Premiums, Health Status, and the Insurance Coverage of Children," *Inquiry* 47, 3 (Fall 2010):199-214.	State administrative data 2001-2005 and a survey of families that disenrolled from CHIP due to premium nonpayment	**Kentucky:** Children enrolled in CHIP	• Examines whether the effects of new premiums in Kentucky's CHIP program on enrollment varied by children's health status and the extent to which children find alternative coverage after disenrolling due to premium nonpayment. In late 2003, Kentucky introduced a $20 per family per month premium for children in CHIP with family incomes between 151%-200% FPL. • Overall, the data show that children with a chronic condition are significantly less likely to disenroll from CHIP than children without a chronic condition. • The data suggest that introduction of the premium reduces the duration of CHIP coverage for the average child. However, the data suggest little differential impact of the premium increase by health status of children. • Survey results find 56% of families report alternative private or public health coverage for their children after losing CHIP coverage, while 44% had no insurance for their children following disenrollment.

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Citation	**Data**	**Study Population(s)**	**Study Focus and Major Findings**
Stephen Zuckerman, Dawn M Miller, and Emily Shelton Page, "Missouri's 2005 Medicaid Cuts: How Did they Affect Enrollees and Providers?," *Health Affairs* 28, 2, (2009):w335-w345.	State administrative data; Current Population Survey (CPS) data, 2005-2007; provider utilization and financial reports; and structured interviews	**Missouri:** Nonelderly adults and children in Medicaid and CHIP	• Examines the effects of a broad range of policy changes in Missouri Medicaid and CHIP coverage, including new monthly premiums for CHIP. In 2005, Missouri adopted large policy changes to Medicaid and CHIP, including new monthly premiums of 1-5% of family income for children in CHIP with incomes above 150% FPL. • CHIP enrollment fell 30% between June 2004 and June 2006. In contrast, nationally, CHIP enrollment rose 3.4% over the same time period. • The share of low-income children in Missouri with Medicaid or CHIP coverage fell from 50.2% in 2004 to 40.5% in 2006, but increases in other types of insurance coverage prevented an increase in the share that were uninsured.
Jill B Herndon, W Bruce Vogel, Richard L Bucciarelli and Elizabeth A Shenkman, "The Effect of Premium Changes on SCHIP Enrollment Duration," *Health Services Research* 43, 2 (April 2008):458-477.	State administrative data, 2002-2004	**Florida**: Children enrolled in CHIP	• Examines the impact of premium changes in Florida's CHIP program on enrollment duration. Florida increased CHIP premiums for enrollees with incomes between 101-200% FPL by $5 per family per month in July 2002. These increases were reversed in October 2003 for those with incomes between 101-150% FPL, but maintained for those with incomes above 150% FPL. • Enrollment lengths decreased significantly immediately following the premiums increase, and the decrease was larger among lower income children (61%) than higher income children (55%). Enrollment lengths partially recovered in the longer term for both the temporary and permanent policy changes. • Children with significant acute or chronic health conditions had longer enrollment lengths and were less sensitive to premium changes than healthy children. Among lower income children, healthy children experienced a 61% decline in enrollment within the first three months compared to a 39% decline for children with significant acute conditions.
James Marton, "The Impact of the Introduction of Premiums into a SCHIP Program," *Journal of Policy Analysis and Management* 26 (2007):237-255.	State administrative data, 2001-2004	**Kentucky:** Children enrolled in CHIP	• Examines the impact of new premiums on enrollment duration for CHIP children in Kentucky. Kentucky introduced a $20 premium for children in CHIP with family incomes between 151-200% FPL in December 2003. • Results suggest that a premium reduces the length of enrollment, with the impact concentrated in the first three months after the introduction of the premium.
Genevieve Kenney, et. al., "Assessing Potential Enrollment and Budgetary Effects of SCHIP Premiums: Findings from Arizona and Kentucky," *Health Services Research* 42, 6 Part 2 (2007):2354-2372.	State administrative data, 2001 to 2004/2005	**Arizona and Kentucky:** Children enrolled in CHIP with family incomes between 101-150% FPL in Arizona and 151-200% FPL in Kentucky.	• Assesses whether new premiums in CHIP affect rates of disenrollment and reenrollment in CHIP and whether they have spillover enrollment effects on Medicaid. In July 2004, Arizona introduced CHIP premiums ranging from $10-$15 per month for families with incomes between 101-150% FPL. In December 2003, Kentucky introduced a premium of $20 per month per family for children in CHIP with family incomes between 151-200% FPL. • In both states, the premiums increased the rate of disenrollment among children subject to the premiums. The rate of disenrollment increased by 52% in Kentucky and by 38% in Arizona. All of the increases in disenrollment occurred during the first two or three months after introduction of the premium. Almost all the disenrollment is caused by children leaving public insurance rather than moving to Medicaid or other non-premium paying categories of CHIP. Findings also indicate a relatively small reduction in the rate of re-enrollment in both states. • In both states, the premiums were associated with a decline in overall enrollment among children subject to the premiums. The premium reduced enrollment in the premium paying group by 18% in Kentucky and by 5% in Arizona, with some of the children leaving public coverage all together. Unlike the impacts on disenrollment, these effects are not limited to the first 2-3 months following the introduction of the premium, suggesting that the premium may have dampened new enrollment into the premium-paying category over a longer period of time.

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Citation	**Data**	**Study Population(s)**	**Study Focus and Major Findings**
Gina A Livermore, et. al., "Premium Increases in State Health Insurance Programs: Lessons from a Case Study of the Massachusetts Medicaid Buy-in Program," *Inquiry* 44 (Winter 2007):428-442.	2002-2003 Medicaid Management Information System (MMIS) and administrative data	**Massachusetts:** Enrollees in the Massachusetts CommonHealth-Working (CH-W) Medicaid buy-in program for people with disabilities	• Evaluates the impact of premium increases on disenrollment from a state-funded Medicaid buy-in program for people with disabilities in Massachusetts. In 2003, monthly premiums for the Massachusetts CommonHealth-Working (CH-W) program increased from $37 to $51. • After a period of steady growth, CH-W enrollment decreased marginally (.5% decrease) in the months surrounding the premium change (February-August 2003) compared with 12.4% increase during the same period in the previous year. • The premium increase increased the likelihood of enrollees leaving Medicaid (MassHealth) altogether, but had no effect on the likelihood of moving to another Medicaid (MassHealth) eligibility category. Although statistically significant, the effect is rather modest. All else held constant, a $10 increase in the premium would increase the odds of leaving Medicaid (MassHealth) by 3%. • The analysis suggests that the premium changes had a relatively small impact on disenrollment and alone cannot explain the decline observed between February and August 2003. Authors suggest that several aspects of the program may contribute to the limited impact on disenrollment, including it being a longstanding program, the changes increasing existing premiums rather than introducing new premiums, the exemption of enrollees with incomes under 150% FPL from premiums, the analysis accounting for the movement of enrollees to other categories of Medicaid coverage, and administrative procedures, including processes designed to minimize disenrollment due to nonpayment. Further, people with disabilities may be less price-sensitive to premiums given their significant health care needs.
Genevieve Kenney, et. al., "The Effects of Premium Increases on Enrollment in SCHIP Programs: Findings from Three States," *Inquiry* 43, 4 (Winter 2006-2007):378-92.	State administrative data, 2001-2004/2005.	**Kansas, Kentucky, and New Hampshire:** Children enrolled in CHIP with incomes between 150-200% FPL in Kansas and Kentucky and with family incomes between 185-300% FPL in New Hampshire.	• Examines the effects of new and higher premiums on CHIP enrollment in Kansas, Kentucky, and New Hampshire. In 2013, Kansas and Kentucky increased premium levels, while Kentucky introduced new premiums. Kansas increased premiums from $10 to $30 per family per month for families with incomes between 151-175% FPL and from $15 to $45 per family per month for those with incomes between 176-200% FPL. New Hampshire increased premiums for families with incomes between 185% to 249% FPL from $20 to $25 per child per month and from $40 to $45 for families with incomes between 250-300% FPL. Kentucky introduced a $20 premium per family per month for 151-200% FPL. • In all three states, caseload growth rates in the six months prior to the premium increase were consistently higher than those in the six months after the increase. In Kentucky, the caseload of children subject to premiums decreased by 16.4% following the premium's introduction. The caseload stabilized after several months but did not return to pre-premium levels nine months after the premium was introduced. In Kansas and New Hampshire, small declines in the caseload occurred immediately following the premium increase. The caseload resumed growing three to five months after the premium increase, though at lower rates than before the increase. In contrast, caseloads among other categories of public coverage without premiums grew over the period. • Premiums were found to reduce new enrollment by 10.1% and 17.7% in Kansas and New Hampshire, respectively. They also led to faster disenrollment in Kentucky and New Hampshire. • In Kentucky, larger disenrollment effects were found for nonwhite children relative to white children while in New Hampshire, disenrollment effects were concentrated among children at the lower end of the income group subject to premiums.

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Citation	**Data**	**Study Population(s)**	**Study Focus and Major Findings**
Tricia J Johnson, Mary Rimsza, and William G Johnson, "The Effects of Cost-Shifting in the State Children's Health Insurance Program," *American Journal of Public Health* 96, 4 (April 2006):709-715.	Yuma HealthQuery (YHQ) community health data, 2001	**Arizona:** Children in Yuma County, Arizona who received non-traumatic care at an emergency room who were enrolled in CHIP or uninsured	• Simulates the effects of increasing CHIP premiums on health care use and public costs using data for children in Yuma, Arizona. • Estimates that a $10 increase in monthly premiums for CHIP would induce 10% of CHIP children to disenroll.
Bill J Wright et. al., "The Impact of Increased Cost Sharing on Medicaid Enrollees," *Health Affairs* 24, no. 4 (Jul/Aug 2005):1106-1116.	Survey of enrollees, 2003 and analysis of Medicaid eligibility files	**Oregon**: Adults enrolled in Medicaid	• Examines longitudinal effects on enrollees of a range of policy changes that were made in Oregon's Medicaid program. In 2003, Oregon made a range of policy changes to its Medicaid program, the Oregon Health Plan (OHP), which included benefit reductions, increased premiums and cost sharing and stricter premium payment policies for adults enrolled in its OHP Standard program. Enrollees in OHP Plus continued to receive benefits similar to the original OHP. • Nearly half (44%) of the OHP Standard members disenrolled in the six months after the program changes were implemented. • The increased premiums and cost sharing disproportionately affected the most economically vulnerable OHP members; for the vast majority of those who disenrolled, leaving OHP meant becoming uninsured. This was particularly true for those who left because of the increased costs. • Those who left OHP because of cost were more likely than those who left for other reasons not to have received needed care in the previous six months. Similarly, those who left because of cost were more likely to have skipped buying prescription medicines because of cost and were significantly less likely than those who left for other reasons to have a usual source of care. • Those who left because of cost were significantly less likely than those who left for other reasons to have had a least one primary care visit in the past six months and significantly more likely to have had at least one emergency department visit in those same six months. • Those who left OHP because of cost were significantly more likely to owe $500 or more in medical debt than those who left for other reasons. The increased debt burden may have negatively affected their access to care.
Matthew J Carlson 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, *Sociology Faculty Publications and Presentations,* Paper 14 (March 2005).	Survey conducted between November 2003 and February 2004	**Oregon:** Adult Medicaid enrollees with incomes below 100% FPL	• Assesses the impact of policy changes made to Oregon's Medicaid program on enrollment, health care access, and use. In 2003, Oregon made a range of policy changes to its Medicaid program, the Oregon Health Plan (OHP), which included benefit reductions, increased premiums and cost sharing and stricter premium payment policies for adults enrolled in its OHP Standard program. Enrollees in OHP Plus continued to receive benefits similar to the original OHP. • 44% of individuals who disenrolled from OHP Standard following the changes reported that increased costs, including premiums, copays, and back-owed premiums, contributed to disenrollment; OHP Standard disenrollees with incomes between 0-10% FPL were significantly more likely to report difficulty paying premiums and copays than those with higher incomes. • Two-thirds of OHP Standard disenrollees became uninsured. • Disenrollees with very low incomes (43%) were more likely to have an emergency department visit than those still covered (35%); the difference was larger for those with chronic conditions.

Table 1: Effects of Premiums			
Citation	**Data**	**Study Population(s)**	**Study Focus and Major Findings**
Rachel Solotaroff, et. al., "Medicaid Programme Changes and the Chronically Ill: Early Results from a Prospective Cohort Study of the Oregon Health Plan," *Chronic Illness* 1, (2005): 191-205.	Mail survey of OHP beneficiaries, October 2003	**Oregon:** Nonelderly adults enrolled in Medicaid	• Assess the impacts of policy changes in Oregon's Medicaid program on individuals living with chronic illness. In 2003, Oregon made a range of policy changes to its Medicaid program, the Oregon Health Plan (OHP), which included benefit reductions, increased premiums and cost sharing and stricter premium payment policies for adults enrolled in its OHP Standard program. Enrollees in OHP Plus continued to receive benefits similar to the original OHP. • Nearly half (46.3%) of OHP Standard beneficiaries disenrolled in the 10 months after the policy changes. Rates of disenrollment were lower among the chronically ill (42.8%) than those without chronic illness (49.6%). However, 68% of the chronically ill that did disenroll remained uninsured at the time of the survey. • When asked why they disenrolled, 45% of the chronically ill and 43% of those without a chronic illness identified a reason related to the increase in cost sharing, such as inability to afford the new premiums or copays and/or owing premiums. • Increased costs disproportionately affected enrollment for those with lower incomes. Among those who lost coverage, 68.2% of those with zero income indicated cost sharing as the major reason for their loss, compared to 38.7% of those with incomes between 26%-100% FPL and 23.9% of those with income above 100% FPL. • Chronically ill persons who became uninsured after leaving OHP fared worse in terms of access to care, use of care, and financial burden than those who became uninsured but did not have a chronic illness.
Gene LeCouteur, Michael Perry, Samantha Artiga and David Rousseau, *The Impact of Medicaid Reductions in Oregon: Focus Group Insights,* (Washington, DC: Kaiser Commission on Medicaid and the Uninsured, December 2004).	Focus groups, 2004	**Oregon:** Medicaid adults with incomes under 100% FPL.	• Assesses the impact of policy changes made to Oregon's Medicaid program on poor adults who were subject to benefit reductions and premium and cost sharing increases. In 2003, Oregon made a range of policy changes to its Medicaid program, the Oregon Health Plan (OHP), which included benefit reductions, increased premiums and cost sharing and stricter premium payment policies for adults enrolled in its OHP Standard program. Enrollees in OHP Plus continued to receive benefits similar to the original OHP. • Increased 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, and they had significant problems accessing care after losing coverage.
Utah Department of Health Center for Health Data, *Utah Primary Care Network Disenrollment Report*, (Salt Lake City, UT: Utah Department of Health Center for Health Data, Office of Health Care Statistics, August 2004).	State administrative and survey data, July and September 2003	**Utah:** Adults with incomes below 150% FPL who disenrolled from Medicaid	• Examines the effect of an enrollment fee and cost sharing on adults enrolled in a Medicaid limited benefit waiver program in Utah. In 2003, Utah implemented an annual enrollment fee and cost sharing in its Primary Care Network (PCN) waiver program for low-income adults. • During July-September 2003 (renewal period after first year), 27% were disenrolled. A survey of disenrollees found that 63% were uninsured at the time of the survey. Nearly half of surveyed disenrollees indicated that they were still eligible for the PCN program. • Nearly 30% of survey respondents indicated financial barriers to reenrollment. Most of those reporting financial barriers cited the $50 reenrollment fee as the barrier (63%) and 26% cited the copays. Over 75% of respondents who reported financial barriers to reenrollment reported being uninsured after exiting the program. • Of those indicating they did not reenroll because the program did not meet their health needs, 20% reported copays were too high to use services. • About half of all respondents who disenrolled, regardless of reason for disenrollment, indicated not having seen a health care provider in the previous 12 months. Many disenrollees reported difficulty accessing needed care, particularly mental health care, alcohol/drug treatment, and dental services.

Table 1: Effects of Premiums			
Citation	**Data**	**Study Population(s)**	**Study Focus and Major Findings**
Mark Gardner and Janet Varon, *Moving Immigrants from a Medicaid Look-Alike Program to Basic Health in Washington State: Early Observations*, (Washington, DC: Kaiser Family Foundation, May 2004).	State administrative data, key informant interviews, a focus group, and interviews, September 2002-September 2003	**Washington State:** Immigrant families moved from Medicaid to Basic Health in Washington State	• Assesses the impact of changes in coverage options for low-income immigrants in Washington State. In 2002, Washington State eliminated three state-funded programs for individuals whose immigration status prevented them from qualifying for Medicaid. Instead, "slots" were set aside for them in the state's Basic Health program, which charges premiums and has more limited benefits than Medicaid. • 48% of families in the transition population did not make the transition and disenrolled 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 who disenrolled from Basic Health in the first 11 months did so because they did not pay premiums. • Most (61%) of the group that successfully transitioned to Basic Health relied on assistance from third parties to pay premiums.
Maryland Department of Health and Mental Hygiene, *Maryland Children's Health Insurance Program: Assessment of the Impact of Premiums*, (Baltimore, MD: Department of Health and Mental Hygiene, April 2004).	State administrative and survey data, February 2004	**Maryland:** Children disenrolled from CHIP with incomes between 185-200% FPL	• Studies the effects of a new monthly premium in Maryland's CHIP program on program enrollment and health coverage. In 2003, Maryland made several changes to its CHIP program, including requiring families with incomes between 185-200% FPL to pay a new monthly premium of $37 per family. • Enrollment data showed about one-quarter of families subject to the new premiums disenrolled. • In surveys conducted with parents, the most common reason given was gaining other coverage (41%), but 20% cited a premium related reason.
John McConnell and Neal Wallace, *Impact of Premium Changes in the Oregon Health Plan*, Prepared for the Office for Oregon Health Policy & Research, (Portland, OR: Oregon Health & Science University, February 2004.	State administrative data, January 2002 – October 2003	**Oregon:** Adults with incomes below 100% FPL who disenrolled from Medicaid in Oregon	• Examines the effects of changes to Oregon's Medicaid program on enrollment and highlights the effects for enrollees at different income levels. In 2003, Oregon made a range of policy changes to its Medicaid program, the Oregon Health Plan (OHP), which included benefit reductions, increased premiums and cost sharing and stricter premium payment policies for adults enrolled in its OHP Standard program. Enrollees in OHP Plus continued to receive benefits similar to the original OHP. • OHP Standard 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.
Norma I Gavin, et. al., *Evaluation of the BadgerCare Medicaid Demonstration*, Prepared by RTI International and MayaTech Corp. for the Centers for Medicare & Medicaid Services, (Research Triangle Park, NC: RTI International and MayaTech Corporation, December 2003).	Case study, including site visit interviews, focus groups, and document review; administrative enrollment data 1997-2002; and surveys of BadgerCare participating, eligible nonparticipating, and disenrolled families.	**Wisconsin:** Families enrolled in Medicaid/CHIP	• Evaluates Wisconsin's BadgerCare Medicaid/CHIP program for low-income families. BadgerCare, includes premiums for families with incomes over 150% FPL who must pay monthly premiums of approximately 3% of their income. • 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. This was the most common reason for leaving the program.

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Citation	**Data**	**Study Population(s)**	**Study Focus and Major Findings**
Monette Goodrich, Joan Alker, and Judith Solomon, *Families at Risk: The Impact of Premiums on Children and Parents in Husky A, Policy Brief* (Washington, DC: Georgetown Center for Children and Families, November 2003), http://ccf.georgetown.edu/wp-content/uploads/2012/03/Far%20-%20impact%20of%20premiums.pdf.	State administrative data, August 2003	**Connecticut:** Children and adults enrolled in Medicaid	• Models potential effects of adding new premiums to Connecticut's Medicaid program. In 2003, Connecticut was planning to charge premiums for families with monthly incomes ranging from 50%-185% FPL for a family of three enrolled in Medicaid. • Estimates that premiums would contribute to an enrollment decline of by 86,744 adults and children. Of these persons who could be expected to lose coverage, 59,638 – approximately 69% – would be children; the remaining 27,106 would be parents or pregnant women. • Of the adults that could be expected to lose coverage, 1,006 would be pregnant women. • Just under half of those who could be expected to lose coverage would be children and parents whose income falls below the poverty level – 26,212 children and 15,070 adults – with monthly incomes ranging from $604 to $1,196 a month. • The remaining 33,426 children and 12,036 adults who could be expected to lose coverage come from families whose incomes range from 100-184% of the poverty line.
Elizabeth Shenkman, et. al., "Disenrollment and Re-Enrollment Patterns in a SCHIP Program," *Health Care Financing Review* 23, 3 (Spring 2002:47-63.	Census of all children enrolled in CHIP program for at least 1 month from October 1, 1997-September 30, 1999.	**Florida:** Children enrolled in CHIP	• Examines the impact of four policy changes made to Florida's CHIP program on enrollment and re-enrollment, including a reduction in premiums. Prior to 1998, families paid $5-$27 per child per month (depending on the county where they lived) and family income while families above 186% FPL paid $55-$65 per child per month. In 1998, Florida changed its CHIP program, including extending subsidized premiums which reduced premiums to $15 per family per month for those 185%-200% FPL. Families above 200% FPL paid about $75 per child per month. • Larger decreases in monthly premiums had larger effects on reducing the likelihood of disenrollment. While an average of $5 per month decrease in premiums resulted in families being only 2% less likely to disenroll their children from the program, a $45 per month reduction in premiums meant that families were 17-20% less likely to disenroll their children from the program. • Families experiencing the mean premium change were slightly more likely to re-enroll their children following a disenrollment episode. For example, families experiencing the mean premium change were 6-7% more likely to re-enroll post- versus pre-April 1998.
Leighton Ku and Teresa A Coughlin, "Sliding-Scale Premium Health Insurance Programs: Four States' Experiences," *Inquiry* 36, 4 (Winter 1999/2000).	Interviews with state officials, review of state documents, and 1995 state data	**Washington, Tennessee, Hawaii, and Minnesota:** Medicaid/CHIP enrollees	• Examines the experiences in four states that implemented Medicaid expansion programs that include sliding-scale premiums for families. In the 1990s, Washington, Tennessee, Hawaii, and Minnesota initiated Medicaid expansion programs using sliding-scale premiums. • Participation in public health programs fell from 57% when premiums were equal to 1% of family income to 35% when premiums grew to 3% of family income. Participation continued to fall to 18% when premiums rose to 5% of family income.

Table 2: Effects of Cost Sharing			
Citation	**Data**	**Study Population(s)**	**Study Focus and Major Findings**
National Studies			
Charles Stoecker, Alexandra M Stewart, and Megan C Lindley, "The Cost of Cost-Sharing: The Impact of Medicaid Benefit Design on Influence Vaccination Uptake," *Vaccines* 5, 8, (March 2017).	Behavioral Risk Factor Surveillance System (BRFSS) data, 2003-2012	Nonelderly adult Medicaid enrollees receiving care on a fee-for-service basis	• Examines the effects of three aspects of Medicaid benefit design—coverage for vaccines, prohibiting cost sharing, and copayment amounts—on vaccine uptake among nonelderly adults enrolled in fee-for-service Medicaid. • Medicaid copayment charges negatively affected influenza vaccination levels. Each additional dollar of copayment for vaccination decreased influenza vaccination coverage by 1-6 percentage points.
Deliana Kostova and Jared Fox, "Chronic Health Outcomes and Prescription Drug Copayments in Medicaid," *Medical Care* published ahead of print (February 2017).	National Health and Nutrition Examination Survey (NHANES) data, 1999-2012.	Adults age 20-64 enrolled in Medicaid in 18 states and those not enrolled in Medicaid with family incomes at or below 250% FPL who were identified to have hypertension or hypercholesterolemia	• Evaluates the association between prescription drug copayments and uncontrolled hypertension, uncontrolled hypercholesterolemia, and prescription drug utilization among Medicaid beneficiaries with these conditions. • Introducing drug copayments to Medicaid beneficiaries with hypertension or hypercholesterolemia was associated with a rise in the average rates of uncontrolled hypertension and uncontrolled hypercholesterolemia by 7.7 and 13.2 percentage points, respectively. These copayment estimates translate into a relative increase of 15% in uncontrolled hypertension and 25% in uncontrolled hypercholesterolemia. • Introducing drug copayments also resulted in a 9.2 percentage point reduction in the average rate of taking medication among persons with hypercholesterolemia, while the resulting reduction among patients taking anti-hypertension medication was smaller and not statistically significant.
Lindsay M. Sabik and Sabina Ohri Gandhi, "Copayments and Emergency Department Use Among Adult Medicaid Enrollees," *Health Economics* 25 (May 2016):529-542.	National Hospital Ambulatory Medical Care Survey (NHAMCS) and state-level data, 2001-2009	Nonelderly adult Medicaid enrollees	• Examines the effect of copayments on non-urgent emergency department utilization among nonelderly adults enrolled in Medicaid. • Results suggest copayments for non-emergent use of the emergency department may reduce non-urgent visits. When a copayment is in place, there is a statistically significant 6.3 percentage point decrease in the probability that a given visit is non-urgent, compared to when there is no copayment.
Mona Siddiqui, Eric T Roberts, and Craig E Pollack, "The Effects of Emergency Department Copayments for Medicaid Beneficiaries Following the Deficit Reduction Act of 2005," *JAMA Internal Medicine* 175,3 (March 2015):393-398.	Medical Expenditure Panel Survey (MEPS) data, January 2001 to December 2010	Adult Medicaid enrollees	• Evaluates effect of allowing states to enforce emergency department copayments for non-urgent visits on emergency department utilization among Medicaid beneficiaries and compares the effects among beneficiaries living in states that did and did not adopt emergency department copayments. • Results suggest that copayments for non-emergent use of the emergency department did not affect use of the emergency department. There were no significant differences in the rate of emergency department visits per enrollee in states with copayments compared to states without copayments. • The findings also suggest that the non-emergent use of emergency department copays did not affect rates of outpatient medical provider visits or use of inpatient care.

Table 2: Effects of Cost Sharing			
Citation	**Data**	**Study Population(s)**	**Study Focus and Major Findings**
Vicki Fung, et. al., "Financial Barriers to Care Among Low-Income Children with Asthma: Health Care Reform Implications," *JAMA Pediatrics* 168, 7 (July 2014):649-656.	2012 Telephone survey of 769 parents	Children between ages 4-11 with asthma	• Examines the associations between cost sharing, income, use of care, and financial stress among children with asthma. • Overall, findings show that cost-related barriers to care among children with asthma were concentrated among low-income families with higher cost sharing levels. • Among parents with incomes at or below 250% FPL, those with lower cost sharing levels were less likely than those with higher cost sharing levels to delay or avoid taking their children to a physician's office visit (3.8% vs. 31.6%) and to delay or avoid using the emergency department (1.2% vs. 19.4%) because of cost. Higher income parents and children enrolled in public coverage were also less likely to forgo care for their children compared to parents with incomes at or below 250% FPL who had high cost sharing levels. • Overall, 15.6% of parents borrowed money or cut back on necessities to pay for their children's asthma care. Families with incomes at or below 250% FPL with higher levels of cost sharing were more likely than those with lower cost sharing to borrow money to pay for their children's asthma care.
Jessica Greene, Rebecca M Sacks, and Sara B McMenamin, "The Impact of Tobacco Dependence Treatment Coverage and Copayments in Medicaid," *American Journal of Preventive Medicine* 46, 4 (April 2014):331-336.	Current Population Survey (CPS) Tobacco Use supplement data, 2001-2003, 2006-2007, and 2010-2011	Adults enrolled in Medicaid who reported smoking 12 months prior to the survey and lived in 28 states with consistent tobacco dependence treatment coverage across Medicaid fee-for-service and managed care.	• Examines whether more generous tobacco dependence treatment (TDT) coverage, in terms of cost sharing requirements and treatment covered, is associated with greater likelihood of quit attempts and successful quit rates. • States with the most generous Medicaid TDT coverage (pharmacotherapy with copayment and counseling without copayment) had the highest successful quit rates (9.1%) and the highest proportion of quit attempts that were successful (20.3%). • Data suggest that when cost sharing was required for counseling, quit rates were lower than when cost sharing was not required. However, the findings were not statistically significant.
Gery P Guy Jr., "The Effects of Cost Sharing on Access to Care among Childless Adults." *Health Services Research* 45, 6 Pt. 1 (December 2010): 1720-1739.	Behavioral Risk Factor Surveillance System (BRFSS) data, 1997–2007	Nonelderly adults	• Analyzes the impacts of public health expansions and differences in cost sharing requirements on insurance status and receipt of preventive screening and physician services. • Results indicate that childless adult expansion programs resulted in significant gains in coverage regardless of cost sharing requirements. • However, cost sharing requirements were found to play an important role in providing access to preventive health screenings. Use of preventive health screenings significantly increased among childless adults eligible for programs with traditional Medicaid cost sharing levels. In programs with higher cost sharing, there were no statistically significant gains in screening utilization. • Differences in cost sharing levels did not appear to impact the likelihood of having a personal doctor or health care provider or prevent adults from seeking needed medical care.

Table 2: Effects of Cost Sharing			
Citation	**Data**	**Study Population(s)**	**Study Focus and Major Findings**
Karoline Mortensen, "Copayments Did Not Reduce Medicaid Enrollees' Nonemergency Use of Emergency Departments," *Health Affairs* 29, 9 (September 2010): 1643-1650.	Medical Expenditure Panel Surveys (MEPS) data, 2001-2006	Nonelderly adults enrolled in Medicaid	• Examines how changes in nine states' copayment policies influence enrollees' use of emergency departments. • Requiring copayments for nonemergency visits did not decrease emergency department use by Medicaid enrollees.
State Specific Studies			
Leah Zallman, et. al., "Affordability of Health Care Under Publicly Subsidized Insurance After Massachusetts Health Care Reform: A Qualitative Study of Safety Net Patients," *International Journal for Equity in Health* 14 (October 2015):112.	Face to face interviews with 12 individuals	**Massachusetts:** Individuals with Medicaid or subsidized coverage (Commonwealth Care) at a safety net hospital emergency department	• Examines whether cost sharing levels in public insurance programs in Massachusetts led to unaffordability of care. • Individuals with higher cost sharing requirements described difficulties affording care, inability to get needed medical care due to cost, inability to afford other basic needs (e.g., rent, food, being unable to return to college) due to paying for medical care, and the need to rely on non-insurance based resources in order to pay for medical care. • Difficulty obtaining medical care was less common among those with low cost sharing. In fact, most low cost sharing participations reported no difficulty affording their care and the problems that were reported were of smaller magnitude compared to those with higher cost sharing. Individuals with lower cost sharing did not report inability to afford other basic needs. • For both higher and lower cost sharing participants, inability to afford care was associated with needing to rely on other sources, e.g., loans from family or friends, providers' willingness to accept late payments, enrollment in other government programs.
Leah Zallman, et.al., "Perceived Affordability of Health Insurance and Medical Financial Burdens Five Years in to Massachusetts Health Reform," *International Journal for Equity in Health* 14 (October 2015):113.	Face to face surveys	**Massachusetts:** A sample of 976 patients seeking care at three hospital emergency departments	• Compares perceived affordability of insurance, financial burden, and satisfaction among individuals with low cost sharing public plans (Medicaid enrollees, and enrollees in Exchange-based plans with minimal cost sharing) and individuals with high cost sharing public plans (enrollees in Exchange-based plans with high cost sharing and commercially insured individuals). • Despite having higher incomes, individuals with higher cost sharing requirements were less satisfied with their insurance plans and perceived more difficulty affording their insurance than those with a low cost sharing plan. Individuals with a higher cost sharing public plan also reported more difficulty affording care as well as insurance premiums compared to those with commercial insurance. • Patients with low cost sharing public plans reported higher plan satisfaction and less financial concern than the commercially insured.

Table 2: Effects of Cost Sharing			
Citation	**Data**	**Study Population(s)**	**Study Focus and Major Findings**
Daniel A Lieberman, et. al., "Unintended Consequences of a Medicaid Prescription Copayment Policy," *Medical Care* 52, 5 (May 2014):422-427.	State-level aggregate medication utilization data from the Center for Medicare and Medicaid Services (CMS), 2007-2011	**Massachusetts:** Prescription medication utilization in Massachusetts Medicaid	• Evaluates copayment policies implemented in Massachusetts Medicaid intended to incentivize the use of selected generic medications. In 2009, Massachusetts kept copayments for certain target generics at $1 while it increased copayments for all non-targets to $2-$3. • The increase in copayments modestly increased utilization of target generic medications. However, it had unintended consequences for other medications. In particular, the policy decreased and subsequently eliminated incentives for patients to use generic rather than brand name drugs among all other medication classes. After policy implementation, use of non-target essential generics decreased and use of name brand medications increased.
Bisakha Sen, et. al., "Can Increases in CHIP Copayments Reduce Program Expenditures on Prescription Drugs?," *Medicare & Medicaid Research Review* 4, 2 (May 2014).	State administrative and claims data, 1999-2007	**Alabama:** Children enrolled in CHIP	• Explores whether prescription expenditures by enrollees changed in Alabama's CHIP program after copayment increases. In FY 2004, Alabama increased copayments for several non-preventive services, including prescription drugs, in its CHIP program. The magnitude of the increases varied across incomes, with lower fees in the 101-150% FPL group and higher fees in 151-200% FPL group. • The copay increase is associated with a statistically significant reduction in utilization for all prescription drugs (5.8%), brand name drugs (7%), and generic drugs (7.4%). However, there is substantial variation in responsiveness to the increased copayments across categories of drugs. • There is evidence of larger declines in utilization and expenditures among children with no chronic conditions versus those with chronic conditions, and of larger reductions among children between 101-150% FPL versus 150-200% FPL.
Amitabh Chandra, Jonathan Gruber and Robin McKnight, "The Impact of Patient Cost-Sharing on Low-Income Populations: Evidence from Massachusetts," *Journal of Health Economics* 33 (2014): 57-66.	State enrollment and claims data, July 2007-June 2009	**Massachusetts:** Adults enrolled in Massachusetts Commonwealth Care, a state-funded program that subsidizes insurance for families with incomes <300% FPL	• Examines the effects of increased copayments on low-income adults enrolled in the Massachusetts Commonwealth Care program. • A 10% increase in copayments faced by patients would reduce utilization by 1-2 percentage points. • Utilization among individuals with greater health needs appears to be less sensitive to copayments than those with fewer health needs.
James Marton, et. al., "The Effects of Medicaid Policy Changes on Adults' Service Use Patterns in Kentucky and Idaho," *Medicare & Medicaid Research Review* 2, 4 (February 2013).	State administrative data, 2004-2008	**Kentucky:** Nonelderly, non-institutionalized adults enrolled in Medicaid	• Examines the impact of Medicaid policy changes implemented in Kentucky and Idaho on utilization of services, including increases in cost sharing requirements in Kentucky. Kentucky introduced new cost sharing in its Medicaid program in 2006, including a $50 copayment for inpatient hospitalization, 5% coinsurance for nonemergency use of the ER, $1–$3 copayments for prescription drugs, and $3–$6 copayments for physician visits. • New cost sharing requirements did not appear to have a substantial impact on service use in Kentucky. Authors note that reimbursement increases to providers introduced a year later may have neutralized the negative effects of the copayments. In addition, the extent to which these copayments were actually collected by providers at the point of service is not clear.
Bisakha Sen, et. al., "Did Copayment Changes Reduce Health Service Utilization among CHIP Enrollees? Evidence from Alabama," *Health Services Research* 47, 4 (September 2012):1303-1620.	State administrative data, 1999-2009	**Alabama:** Children enrolled in CHIP	• Explores whether health care utilization changed among enrollees in Alabama's CHIP program following copayment increases. At the beginning of FY 2004, Alabama increased copayments for children enrolled in its CHIP program. • There are 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 small increases in copayments may have significant effects on service utilization.

Table 2: Effects of Cost Sharing			
Citation	**Data**	**Study Population(s)**	**Study Focus and Major Findings**
Sujha Subramanian, "Impact of Medicaid Copayments on Patients with Cancer," *Medical Care* 49, 9 (September 2011): 842-847.	Medicaid administrative data linked with cancer registry data, 1999-2004	**Georgia:** Low-income nonelderly adult Medicaid enrollees diagnosed with cancer	• Studies the impact of increased copayments in Georgia on nonelderly adult Medicaid beneficiaries with cancer. In 2002, Georgia significantly increased copayments for prescription drugs and other services. The experiences in Georgia are compared to experiences in two control states, South Carolina and Texas. • After the implementation of copay changes in Georgia, there was a substantial decrease in prescription drug use, while there was no decline in South Carolina or Texas. In Georgia, those with multiple comorbidities had larger reductions in their prescription use compared to those with a single comorbidity and those with no comorbidities. Patients with multiple comorbidities in South Carolina and Texas increased their prescription use. • The probability of having an emergency room visit increased in Georgia while the probability did not change in neither South Carolina nor Texas. • Authors conclude that copayments do not decrease Medicaid cost of care for patients with cancer, but may instead lead to unintended negative consequences and that the results show that even relatively small copayments impact utilization among Medicaid beneficiaries.
Marisa Elena Domino, et. al., "Increasing Time Cost and Copayments for Prescription Drugs: An Analysis of Policy Changes in a Complex Environment," *Health Services Research* 46, 3 (June 2011):900-919.	Medicaid claims data from CMS, 2000- 2002	**North Carolina:** Nonelderly adults enrolled in Medicaid	• Estimates the effects of policy changes in the North Carolina Medicaid program on medication adherence and expenditures. The North Carolina Medicaid program decreased the allowable supply per prescription from 100 days to 34 days on July 1, 2001, and then increased the copayment for brand name drugs in October 2001. • Both policies decreased medication adherence. The reduction in allowable days supply had a much larger effect on adherence than the copayment increase. Data also find an increase in the probability of filling medications from the copayment policy, but authors suggest this may be due to medication switches that might bring individuals to the pharmacy more often.
Bill J Wright, et. al., "Raising Premiums and Other Costs for Oregon Health Plan Enrollees Drove Many to Drop Out," *Health Affairs* 29, 12 (December 2010):2311-2316.	Survey, 2003, 2004, and 2005	**Oregon:** Low-income adult Medicaid recipients with incomes under 100% FPL	• Examines effects of premium and cost sharing increases for poor adults enrolled in Oregon's Medicaid program. In 2003, Oregon made a range of policy changes to its Medicaid program, the Oregon Health Plan (OHP), which included benefit reductions, increased premiums and cost sharing and stricter premium payment policies for adults enrolled in its OHP Standard program. Enrollees in OHP Plus continued to receive benefits similar to the original OHP. • OHP Standard enrollees were nearly twice as likely to have unmet health care needs and cost was a more significant driver of unmet need than for Plus enrollees. • OHP Standard enrollees were less likely to have had a primary care or emergency room visit than Plus members, but were 68% more likely to have indicated financial strain due to medical costs.

Table 2: Effects of Cost Sharing			
Citation	**Data**	**Study Population(s)**	**Study Focus and Major Findings**
Robert A Lowe, et. al., "Impact of Policy Changes on Emergency Department Use by Medicaid Enrollees in Oregon," *Medical Care* 48,7 (July 2010): 619-627.	State administrative data, 2001-2004.	**Oregon**: Low-income nonelderly adults enrolled in Medicaid	• Examines effects of premium and cost sharing increases for poor adults in Oregon affected emergency department use. In 2003, Oregon made a range of policy changes to its Medicaid program, the Oregon Health Plan (OHP), which included benefit reductions, increased premiums and cost sharing and stricter premium payment policies for adults enrolled in its OHP Standard program. Enrollees in OHP Plus continued to receive benefits similar to the original OHP. These changes included $50 copayments for emergency department use. • Following the change, emergency department utilization among OHP Standard enrollees dropped 18% compared to OHP Plus enrollees who did not have a copay increase for emergency department care. The rate of emergency department visits leading to hospitalization fell 24% and patterns for injury-related visits and psychiatric visits excluding chemical dependency exhibit a similar pattern to overall emergency department visits. • Additional analysis finds increases in inpatient costs and increases in cost per emergency department visits. The authors note that these additional findings suggest that the decrease in emergency department visits that led to hospitalizations may reflect OHP Standard enrollees deferring necessary care as much as they defer optional care.
Joel F Farley, "Medicaid Prescription Cost Containment and Schizophrenia: A Retrospective Examination," *Medical Care* 48, 5 (May 2010): 440-447.	CMS Medicaid Analytical Extract Data Files, 2001-2003	**Mississippi**: Medicaid patients with schizophrenia	• Examines the effects of Medicaid policy changes in Mississippi on compliance to anti-psychotic medications and mental health care utilization and payments among patients with schizophrenia. In 2002, Mississippi enacted several policies to curb prescription spending, including increasing prescription copayments from $1 to $3 per brand and instituting a cap of seven prescriptions per month, a 34-day supply limitation, and a 5% reduction in dispensing fees. • After the changes, patients in Mississippi were 4.87% less compliant with antipsychotic treatments and experienced 20.5% more antipsychotic treatment gaps than patients in control states. There also was a 3.7% reduction in outpatient mental health visits and a 4.2% reduction in mental health care payments.
Daniel M Hartung, et. al., "Impact of a Medicaid Copayment Policy on Prescription Drug and Health Services Utilization in a Fee-for-service Medicaid Population," *Medical Care* 46, 6 (June 2008):565-572.	State claims data, 2002-2004	**Oregon:** Non-pregnant adults (parents receiving Temporary Assistance for Needy Families, individuals with disabilities, and elderly individuals) enrolled in Medicaid, receiving care on a fee-for-service basis	• Assesses the impact of increased copayments for prescription drugs on medication and health services utilization among Medicaid enrollees in Oregon with certain chronic conditions. In 2003, Oregon implemented new copay requirements, including $2 for generic drugs, $3 for brand name drugs, and $3 for outpatient services. • Utilization of all prescription drugs decreased significantly by 17.2% immediately after the policy change, and there was no significant change in the overall trend. This finding suggests that the impact of the copay was immediately realized and sustained. However, because the trend did not change, there was not continued decline over time. • The impact of the copay differed across drug classes. The smallest decrease was among use of cardiovascular medications and the largest decreases were in use of drugs for depression (20%) and respiratory disease (19%). • Immediately following the policy change, patients with diabetes, respiratory disease, depression, and schizophrenia had smaller reductions in use of drugs for their conditions compared to non-indicated drugs. However, trend data suggest that, although patients may have initially resisted reducing use of medication for their condition, over the longer term this medication use was reduced. • Overall, there were no significant changes in utilization observed in outpatient office visits, hospitalizations, and emergency room encounters.

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Citation	**Data**	**Study Population(s)**	**Study Focus and Major Findings**
Gene LeCouteur, Michael Perry, Samantha Artiga and David Rousseau, *The Impact of Medicaid Reductions in Oregon: Focus Group Insights,* (Washington, DC: Kaiser Commission on Medicaid and the Uninsured, December 2004).	Focus groups, 2004	**Oregon**: Adults enrolled in Medicaid with incomes under 100% FPL	• Assesses the impacts of policy changes in Oregon's Medicaid program on poor adults. In 2003, Oregon made a range of policy changes to its Medicaid program, the Oregon Health Plan (OHP), which included benefit reductions, increased premiums and cost sharing and stricter premium payment policies for adults enrolled in its OHP Standard program. Enrollees in OHP Plus continued to receive benefits similar to the original OHP. • 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.
Leighton Ku, et. al., *The Effects of Copayments on the Use of Medical Services and Prescription Drugs in Utah's Medicaid Program*, (Washington, DC: Center on Budget and Policy Priorities, November 2004).	Utah Department of Health (UDOH) data, 2001-2002	**Utah:** Adults enrolled in Medicaid	• Examines the effect of copayment increases in Utah's Medicaid program. In 2001 and 2002, Utah began imposing copayments in its Medicaid program for low-income parents, as well as for low-income senior citizens and people with disabilities. The state subsequently increased copayments for certain groups. • The analysis showed that copays resulted in significant reductions in utilization of services, including physician and inpatient services, although an earlier Utah Department of Health study had shown no significant changes in utilization of these services. In contrast to the earlier analysis, this analysis used a new model that assumed either a flat or positive trend in utilization absent policy changes to determine if copays significantly affected utilization.
Office of the Executive Director, *2003 Utah Public Health Outcome Measures Report,* (Salt Lake City, UT: UT Department of Health, December 2003), http://www.hpm.umn.edu/ambul_db/db/pdflibrary/ DBfile_49007.pdf	Medicaid Administrative Data 2001-2003 and Medicaid Benefits Survey 2003	**Utah**: Adults enrolled in Medicaid	• Examines the effect of copayment increases in Utah's Medicaid program. In 2001 and 2002, Utah began imposing copayments in its Medicaid program for low-income parents, as well as for low-income senior citizens and people with disabilities. The state subsequently increased copayments for certain groups. • Copay requirements had no statistically significant impact on utilizations except in a few cases: prescriptions and outpatient claims. • For a subset of the population, the copays for physician services and pharmacy created a financial burden. While some enrollees reported getting needed dental care by paying for it themselves, a greater number had dental needs that were not addressed, primarily due to inability to pay.

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State Specific Studies			
Bisakha Sen, et. al., "Health Expenditure Concentration and Characteristics of High-Cost Enrollees in CHIP," *Inquiry* 53 (May 2016):1-9.	Claims data, 1999 - 2011	**Alabama:** Children enrolled in CHIP	• Determines whether expenditures for high-cost enrollees in a state public health program change in response to changes in cost sharing policies. In October 2003, Alabama raised premiums and copayments for most non-preventive services for children in its CHIP program. • Nominal increases in cost sharing are likely to have minimal effects on cost containment. Results show that cost sharing had limited impact on utilization among high-cost enrollees. Increased cost sharing does not reduce cost concentration or average expenditure among high-cost utilizers.
Marisa Elena Domino, et. al., "Increasing Time Cost and Copayments for Prescription Drugs: An Analysis of Policy Changes in a Complex Environment," *Health Services Research* 46, 3 (June 2011):900-919.	Medicaid claims data from the Centers for Medicare & Medicaid Services (CMS), 2000- 2002	**North Carolina:** Nonelderly adults enrolled in Medicaid	• Estimates the effects of policy changes in the North Carolina Medicaid program on medication adherence and expenditures. The North Carolina Medicaid program decreased the allowable supply per prescription from 100 days to 34 days on July 1, 2001, and then increased the copayment for brand name drugs in October 2001. • The copayment policy resulted in a net increase in Medicaid expenditures. Costs increased in five of the six examined drug classes, with increases ranging from 0.4% to 8.0%. This reflected increased probability of using services in four of the six drug categories, and increases in the level of spending among service users in two categories.
Maryland Department of Health and Mental Hygiene, *Estimated Medicaid Savings and Program Impacts of Service Limitations, Copayments, and Premiums,* (Baltimore, MD: Maryland Department of Health and Mental Hygiene, December 2010), https://mmcp.dhmh.maryland.gov/Documents/medicaidsavingsJCRfinal12-10.pdf.	2009 state Medicaid data	**Maryland:** Medicaid and CHIP enrollees	• Estimates potential state savings of implementing copayments in the Maryland Medicaid program. • After excluding exempt populations, increased copayments could be applied to only 21% of total Maryland Medicaid enrollees. • The maximum potential gross savings accrued from applying the highest allowable cost sharing across all categories of enrollees is estimated to be $8.5M in state funds. However, the study notes that this amount overestimates potential actual savings because it does not reflect the cap on cost sharing of 5% of household income, decreased or delays in utilization of essential and preventive health services that may result in increased utilization of more expensive services later on, or additional administrative costs of implementing new copayment requirements.
Stephen Zuckerman, Dawn M Miller, and Emily Shelton Page, "Missouri's 2005 Medicaid Cuts: How Did they Affect Enrollees and Providers?," *Health Affairs* 28, 2, (2009):w335-w345.	State administrative data; Current Population Survey (CPS) data, 2005-2007; provider utilization and financial reports; and structured interviews	**Missouri:** Nonelderly adults and children in Medicaid and CHIP	• Examines the effects of a broad range of policy changes in Missouri Medicaid and CHIP coverage, including new monthly premiums for CHIP. In 2005, Missouri adopted large policy changes to Medicaid and CHIP, including new monthly premiums of 1-5% of family income for children in CHIP with incomes above 150% FPL. • Community health centers saw a shift in patients from those covered to those who were uninsured, with the drop off most pronounced for CHIP, which experienced large enrollment declines following introduction of the new premiums. The number of CHIP visits to community health centers declined by about 25%, while the number of visits by uninsured patients increased 29%.

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Robert A Lowe, et. al. "Impact of Medicaid Cutbacks on Emergency Department Use: The Oregon Experience," *Annals of Emergency Medicine* 52, 6 (December 2008):626-534.	Hospital billing data from 26 Oregon emergency departments, 2002-2004	**Oregon:** Emergency department visits	• Examines effects of benefit reductions in Oregon's Medicaid program on emergency department use. In 2003, Oregon made a range of policy changes to its Medicaid program, the Oregon Health Plan (OHP), which included benefit reductions, increased premiums and cost sharing, and stricter premium payment policies for adults enrolled in its OHP Standard program. Enrollees in OHP Plus continued to receive benefits similar to the original OHP. • After the changes, there was an abrupt 20% increase in emergency department utilization by uninsured individuals, while there was a decrease in visits with OHP coverage. The increase was even larger among uninsured individuals with behavioral health conditions. • The proportion of emergency department visits that resulted in hospital admission also increased.
Health Management Associates, *Co-pays for Nonemergent Use of Hospital Emergency Rooms: Cost Effectiveness and Feasibility Analysis*, Prepared for the Texas Health and Human Services Commission, (Austin, TX: Health and Human Services Commission, May 2008).	N/A	**Texas:** Medicaid enrollees	• Fiscal analysis on the cost effectiveness of charging a co-pay for non-emergency use of the emergency room in the Texas Medicaid program. • 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 study estimated the state would save about $153,000 over a two-year period from emergency room diversions, but it would have cost the state $2.9 million to collect the payments.
Neal T Wallace, et. al., "How Effective are Copayments in Reducing Expenditures for Low-Income Adult Medicaid Beneficiaries? Experience from the Oregon Health Plan," *Health Services Research* 43, 3 (April 2008):515-530.	Medicaid eligibility, claims and encounter data, November 2001-October 2002 and May 2003-April 2004	**Oregon:** Nonelderly adults enrolled in Medicaid	• Determines the impact of introducing copayments on medical care use and expenditures for low-income adult Medicaid beneficiaries in Oregon. In 2003, Oregon made a range of policy changes to its Medicaid program, the Oregon Health Plan (OHP), which included benefit reductions, increased premiums and cost sharing and stricter premium payment policies for adults enrolled in its OHP Standard program. Enrollees in OHP Plus continued to receive benefits similar to the original OHP. • Total expenditures per person remained unchanged despite reductions in use. Use and expenditures per person decreased for pharmacy but increased for inpatient and hospital outpatient services. Ambulatory professional and emergency department use decreased, but expenditures remained unchanged as expenditures per service user rose. • Authors conclude that applying copayments shifted treatment patterns but did not provide expected savings.
Gina A Livermore, et. al., "Premium Increases in State Health Insurance Programs: Lessons from a Case Study of the Massachusetts Medicaid Buy-in Program," *Inquiry* 44 (Winter 2007):428-442.	2002-2003 Medicaid Management Information System (MMIS) and administrative data	**Massachusetts:** Enrollees in the Massachusetts CommonHealth-Working (CH-W) Medicaid buy-in program for people with disabilities	• Evaluates the impact of premium increases on disenrollment in a state-funded Medicaid buy-in program for people with disabilities in Massachusetts. In 2003, monthly premiums for the Massachusetts CommonHealth-Working (CH-W) program increased from $37 to $51. • The revised premium schedule resulted in an estimated 39% increase in CH-W premium revenues during the six-month period following the change. Revenues increased without a significant reduction in enrollment. • Authors suggest that several aspects of the program may contribute to the limited impact on disenrollment, including it being a longstanding program, the changes increasing existing premiums rather than introducing new premiums, the exemption of enrollees with incomes under 150% FPL from premiums, the analysis accounting for the movement of enrollees to other categories of Medicaid coverage, and other administrative procedures, including processes designed to minimize disenrollment due to nonpayment. Further, people with disabilities may be less price-sensitive to premiums given their significant health care needs.

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Genevieve Kenney, et. al., "Assessing Potential Enrollment and Budgetary Effects of SCHIP Premiums: Findings from Arizona and Kentucky," *Health Services Research* 42, 6 Part 2 (2007):2354-2372.	State administrative data, 2001 to 2004/2005	**Arizona and Kentucky:** Children enrolled in CHIP with family incomes between 101-150% FPL in Arizona and 151-200% FPL in Kentucky.	• Assesses whether new premiums in CHIP affect rates of disenrollment and reenrollment in CHIP and whether they have spillover enrollment effects on Medicaid. In July 2004, Arizona introduced CHIP premiums ranging from $10-$15 per month for families with incomes between 101-150% FPL. In December 2003, Kentucky introduced a premium of $20 per month per family for children in CHIP with family incomes between 151-200% FPL. • The amount of premiums collected net of the costs associated with administering premiums is small in both states. The maximum amount of projected state-level savings implied by this analysis represented just 1.2% of SCHIP spending in Arizona and 6.8% of SCHIP spending in Kentucky. Further, if premiums increase enrollment in other programs that would further limit savings to states.
Arizona Health Care Cost Containment System, *Fiscal Impact of Implementing Cost Sharing and Benchmark Benefit Provisions of the Federal Deficit Reduction Act of 2005,* (Phoenix, AZ: Arizona Health Care Cost Containment System, December 2006), http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.482.6057&rep=rep1&type=pdf.	N/A	**Arizona**: Medicaid program	• Assesses fiscal impacts associated with implementing premiums and cost sharing as allowed under the Deficit Reduction Act in the Arizona Medicaid program. • 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 enrollees receiving long term care services may have an adverse fiscal 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. • New premiums may increase disenrollment, resulting in more uninsured and increased uncompensated care for the state's hospitals. • Premiums can lead to high member turnover, making care management difficult.
Tricia J Johnson, Mary Rimsza, and William G Johnson, "The Effects of Cost-Shifting in the State Children's Health Insurance Program," *American Journal of Public Health,* 96, 4 (April 2006):709-715.	Yuma HealthQuery (YHQ) community health data, 2001	**Arizona:** Children in Yuma County, Arizona who received non-traumatic care at an emergency room and were enrolled in CHIP or uninsured	• Simulates the effects of increasing CHIP premiums on health care use and public costs using data for children in Yuma, Arizona. • Estimates that a $10 increase in monthly premiums for CHIP would induce 10% of CHIP children to disenroll, resulting in a 6% increase in public expenditures. Specifically, it is estimated that increases in the number of uninsured children would increase emergency department visits and inpatient hospitalization visits, and decrease the number of physician visits.
Mark Gardner and Janet Varon, *Moving Immigrants from a Medicaid Look-Alike Program to Basic Health in Washington State: Early Observations*, (Washington, DC: Kaiser Family Foundation, May 2004).	State administrative data, key informant interviews, a focus group, and interviews, September 2002-September 2003	**Washington State:** Immigrant families moved from Medicaid to Basic Health in Washington State	• Assesses the impact of changes in coverage options for low-income immigrants in Washington State. In 2002, Washington State eliminated three state-funded programs for individuals whose immigration status prevented them from qualifying for Medicaid. Instead, "slots" were set aside for them in the state's Basic Health program, which charges premiums and has more limited benefits than Medicaid. • Providers saw a substantial increase in the demand for charity care and emergency services after more than half of families lost coverage during the first few months of the transition.

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John McConnell and Neal Wallace, *Impact of Premium Changes in the Oregon Health Plan*, Prepared for the Office for Oregon Health Policy & Research, (Portland, OR: Oregon Health & Science University, February 2004.	State administrative data, January 2002 – October 2003	**Oregon:** Adults with incomes below 100% FPL who disenrolled from Medicaid	• Examines the effects of changes to Oregon's Medicaid program on enrollment and highlights the effects for enrollees at different income levels. In 2003, Oregon made a range of policy changes to its Medicaid program, the Oregon Health Plan (OHP), which included benefit reductions, increased premiums and cost sharing and stricter premium payment policies for adults enrolled in its OHP Standard program. Enrollees in OHP Plus continued to receive benefits similar to the original OHP. • Potential premium revenues fell from approximately $800,000 per month to $500,000 per month in late 2003 due to large coverage losses following the premium increases. As such, potential premium revenues after the premium increase were equal to approximately 65% of potential revenues prior to the change.
Steven Crawford and Garth L Splinter, *It's Health Care, Not Welfare: Appropriate Rate Structure for Services Rendered and Estimated Percent of Co-Pays Collected Under the Medicaid Program,* Prepared for the Oklahoma Health Care Authority, (Oklahoma City, OK: Oklahoma Health Care Authority, January 2004).	Survey of physicians and other providers in Oklahoma	**Oklahoma:** Physicians and other health care providers	• Estimates the percentage of allowed copayments collected by Medicaid providers in Oklahoma. • On average, providers collected only 29% of the copay amounts from Medicaid recipients.
Pamela Hines, 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, (Salem, OR: Office for Oregon Health Policy & Research, December 2003).	Interviews with health center administrators and physicians in the Portland, Oregon metropolitan area.	**Oregon:** Health center administrators and physicians in the Portland, Oregon metropolitan area.	• Assesses the impacts of changes in the Oregon Medicaid program on federally qualified health centers in the Portland, Oregon area. In 2003, Oregon made a range of policy changes to its Medicaid program, the Oregon Health Plan (OHP), which included benefit reductions, increased premiums and cost sharing and stricter premium payment policies for adults enrolled in its OHP Standard program. Enrollees in OHP Plus continued to receive benefits similar to the original OHP. • Administrators and physicians reported diverting considerable clinic resources to finding resources for patients who lost their Medicaid coverage following the premium increases and noted that copayments were causing an increased number of "no shows," which also wastes resources and can contribute to provider revenue shortfalls. • Respondents indicated that limited resources intended to help the uninsured were stretched to meet the new gaps in coverage. For example, when Portland area physicians saw that many of their Medicaid patients were not filling their prescriptions due to copayments, they diverted some of the funds for the uninsured to help these patients.