

medicaid
and the **uninsured**

March 2003

**Health Insurance Premiums and Cost-Sharing:
Findings from the Research on Low-Income Populations**

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Health insurance coverage is a vital component to ensure access to needed health care services, including preventive care. Historically, the Medicaid program has prohibited or sharply limited premiums and cost-sharing because it serves a low-income population who lack substantial resources to apply to out-of-pocket costs. However, as publicly financed health coverage programs, including the State Children's Health Insurance Program, have expanded to reach families with somewhat higher incomes, family contributions to premiums for coverage or cost-sharing for services have come under renewed discussion.

A significant body of literature exists that examines the effect of cost-sharing on various measures of access to care, utilization of services, and health outcomes. Most, but not all, studies reached the same conclusion – that cost-sharing reduces utilization, especially primary care and preventive services (Leibowitz et al, 1985; Anderson et al, 1991; Blustein, 1995; Solanki and Schaufli, 1999; Solanki et al, 2000; Blais et al, 2001; Wong et al, 2001). A handful of studies, however, did not find that cost-sharing significantly impacted utilization for the general population (Soumerai et al, 1987; Cherkin et al, 1990; Johnson et al, 1997a) or health status and outcomes (Johnson et al, 1997b; Wong et al, 2001).

While both published and unpublished studies are included, the studies emphasized are generally from well-known peer-reviewed journals¹. Studies were identified by conducting key word searches in the National Library of Medicine's Medline database and from previous literature reviews. While we conducted a general search of the cost-sharing literature, our findings focus on the low-income population, those with incomes less than 200 percent of federal poverty level. In the last ten years, there have been several published reviews of the cost-sharing literature, but these reviews did not exclusively focus on the low-income population (OTA, 1993; Soumerai et al, 1993; Rice and Morrison, 1994; Rasell, 1995; Markus et al, 1998).

This brief reviews the studies that have investigated the impact of premiums and cost-sharing, particularly on low-income populations and finds generally that premiums depressed participation in public programs and cost-sharing affected health care utilization, access and outcomes. However, the studies did not always find a significant effect on every type of health service at all levels of cost-sharing. In addition, one study

¹ Please see the appendix for a table the key studies on cost-sharing and premiums.

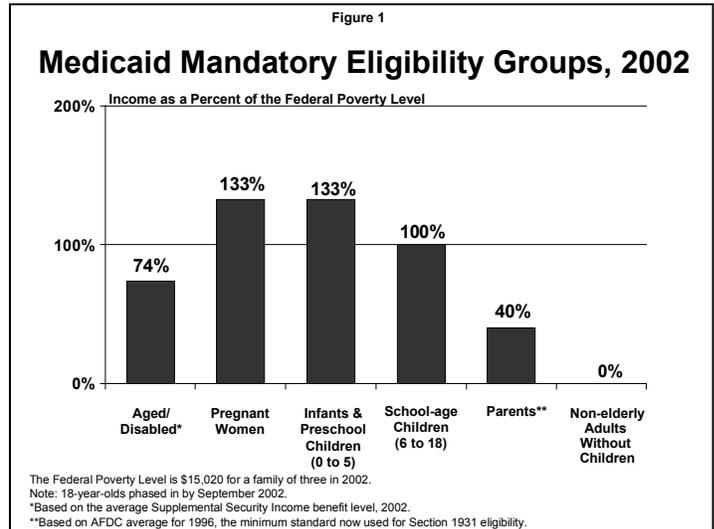
that focused on the Medicaid population did not find any effects on access to health care services after implementing cost-sharing (Wolfson et al, 1982).

This brief begins with a review of who is covered by publicly financed health programs. It then highlights the findings from the research that has been conducted over the past several decades on the impact of premiums and cost-sharing policies on low-income populations. The research consistently demonstrates that the low-income population is particularly sensitive to out-of-pocket costs--enrollment in health plans declines steeply as premiums increase and even low levels of cost-sharing can have adverse effects on use of health care services and health outcomes. In addition, the research shows that cost-sharing policies do not necessarily produce cost savings for the Medicaid program. On the contrary, they may result in the substitution of more expensive care, such as hospitalization and higher net costs to the state. In view of the greater health care needs and limited resources of the low-income population, and the potential to replace primary and preventive care with more expensive care, these findings warrant caution as policymakers consider the use of premiums and cost-sharing in public programs for people with modest or low incomes.

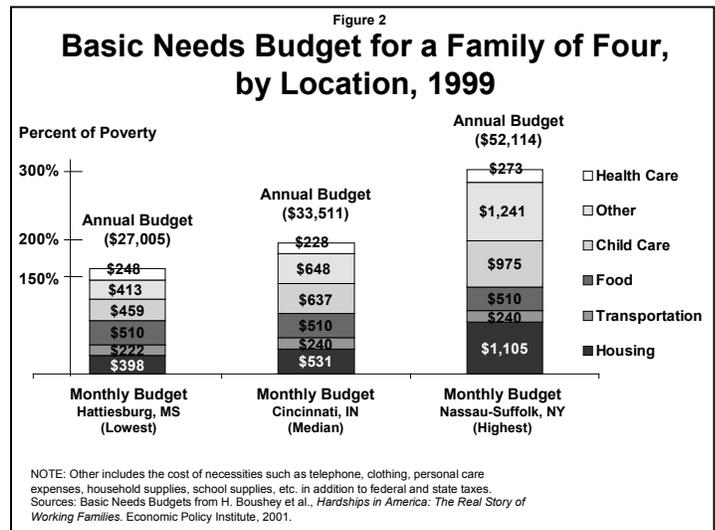
I. BACKGROUND

Medicaid is the Single Largest Health Program for Low-Income and Disabled Populations

Medicaid provides health coverage to 47 million low-income beneficiaries, including health insurance for low-income families, acute and long-term care coverage for people with disabilities, and supplemental coverage for low-income Medicare beneficiaries. The State Children's Health Insurance Program (SCHIP) provides health coverage to an additional 3.5 million low-income children who do not qualify for Medicaid. In order to receive health insurance coverage through Medicaid or SCHIP, individuals must be low-income. Medicaid covers all children under age 6 up to 133 percent of the federal poverty line and older children to the federal poverty level (**Figure 1**). SCHIP covers children who do not qualify for Medicaid, typically up to 200 percent of the federal poverty line (about \$30,000 for a family of three in 2002). Medicaid's coverage of parents is much more limited. In most states, parents must generally be well below the poverty line to qualify. State Medicaid programs are also generally required to cover the elderly and disabled who qualify for the Supplemental Security Income (SSI) program. Medicaid also plays an important role for low-income Medicare beneficiaries, filling in coverage of prescription drugs, long-term care and other Medicaid benefits for the poorest among them, and premium and cost-sharing obligations for other low-income Medicare beneficiaries.

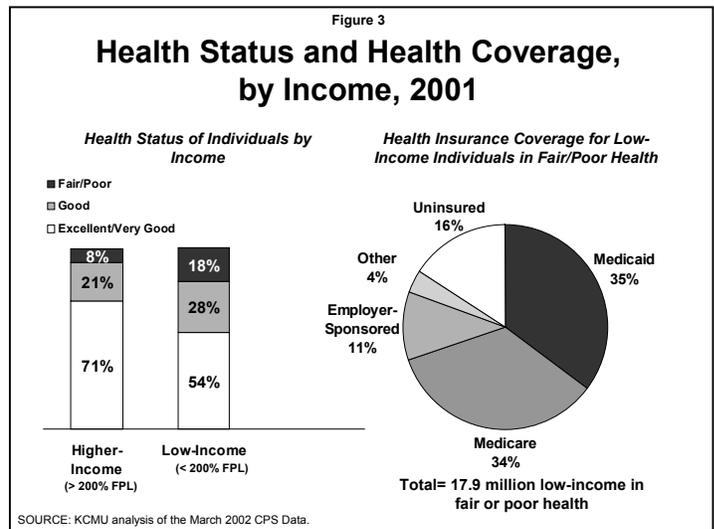


At these income levels, family budgets are extremely tight, dominated by basic needs for housing, food, transportation and child care. Research has shown that, in many communities, an income at 200 percent of the federal poverty line is not adequate to meet these basic needs, much less health care (Boushey, 2001). Depending on the cost of living in a community, a family of four needs between \$27,005 and \$52,114 per year to meet its basic needs. According to this research, the national median income necessary to meet basic needs in 1999 was \$33,511, which is roughly twice the poverty level of \$17,463 (Figure 2). Twenty-nine percent of all U.S. families with one to three children under the age of 12 fell below the recommended income to meet their basic needs (Boushey, 2001). Focus groups with low-income families reveal consistently that families feel compelled to place priority in their budgets on meeting rent and housing costs, buying food, covering transportation costs so that they can work, and paying for child care (Kannel, et al, 2001; Schwalberg and Dulio, 2001; Riley et al, 2002).



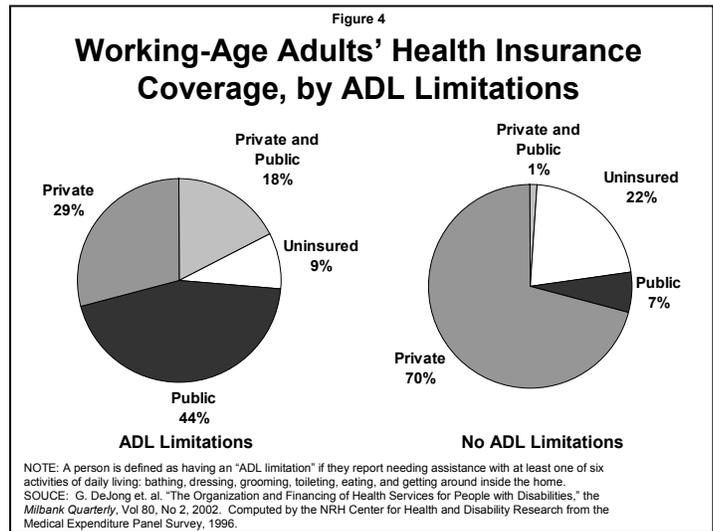
Health Status of Beneficiaries

The population groups served by public programs typically have greater health care needs than those at higher income levels; therefore, they are likely to be more affected by cost-sharing policies tied to use of services. Eighteen percent of low-income individuals report poor or fair health, compared to 8 percent of higher income individuals (Figure 3). While most Medicaid beneficiaries are low-income children and their parents, the elderly and disabled comprise a quarter of beneficiaries. Elderly and disabled beneficiaries commonly have multiple chronic conditions and disabilities that require substantial access to and use of health care services, including prescription drugs, to monitor and manage their medical conditions. Public programs also play an important role for low-income working adults with limitations in daily activities such as difficulty bathing and eating, who cannot obtain or afford private coverage (Figure 4-next page).



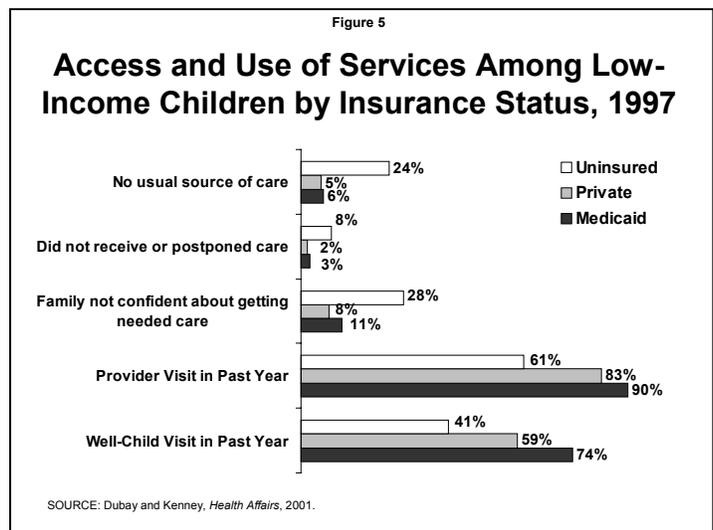
Medicaid and Access to Care

Medicaid provides coverage to low-income families, persons with disabilities and the elderly allowing them to access preventive and primary care services, as well as hospital care and specialist services for more serious conditions. The comprehensiveness of the benefit package in Medicaid and SCHIP and the limitations on out-of-pocket spending are designed to meet the needs of low-income people who lack the financial resources to meet premium and cost-sharing requirements and to pay for necessary services. Research has shown that Medicaid can work for the low-income population, providing access and use of services at levels comparable or better than private coverage (Dubay and Kenney, 2001) (Figure 5). Researchers also suggest that cost-sharing for the poor and low-income with private health insurance leads to less access to health care services than for individuals covered by Medicaid (Freeman and Corey, 1993; Dubay and Kenney, 2001).



Premium and Cost-Sharing Policies in Medicaid and SCHIP

Under Medicaid, children and pregnant women are protected from cost sharing. Elderly and disabled beneficiaries who receive cash assistance are also protected from cost-sharing for some services. All Medicaid beneficiaries are protected from cost-sharing in respect to emergency room visits, family planning services and hospice care. States have greater latitude with imposing cost-sharing for all other groups of Medicaid beneficiaries and other all services; however, copays have to be nominal (generally either 5 percent of the state's payment for the service or \$3 or less). In addition, states have the option of imposing income-related premiums on certain optional eligibility groups such as the medically needy and working disabled.



Under SCHIP, which targets children who are not poor but are of low-income, the amount of cost-sharing permitted depends on the type of SCHIP program and the child's family income. In SCHIP programs that are Medicaid expansions, the Medicaid rules

apply; that is, children cannot be charged cost-sharing or premiums. By contrast, under separate SCHIP programs, such charges are allowed except that preventive services and American Indian/Alaska Native children are exempt. Cost-sharing, not including premiums, is limited to 5 percent of family income per year for all children in separate state SCHIP programs. In addition, for children in families under 150 percent of the federal poverty level, regulations prescribe limits on the level of cost-sharing and premiums that may be imposed.

II. FINDINGS FROM THE LITERATURE ON LOW-INCOME POPULATIONS

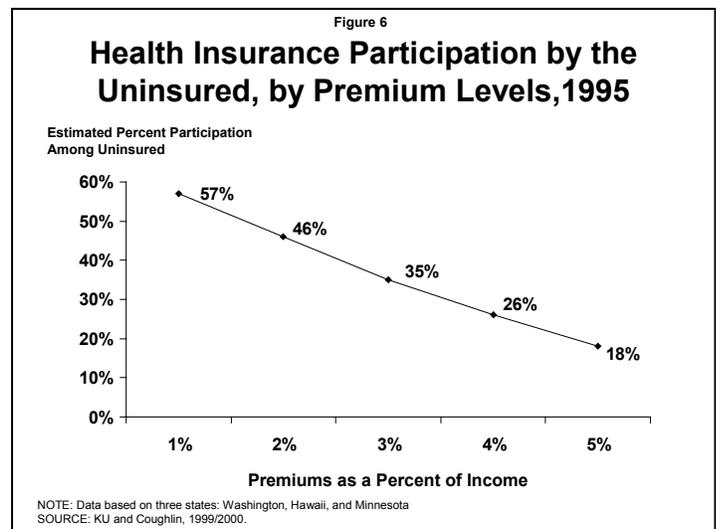
1) Health Insurance Premiums Can Limit Participation in Publicly Funded Health Coverage

Premiums in Public and Private Plans

Health insurance premiums are amounts that must be paid for insurance coverage on a regular basis. In the private, non-group market, an individual or family purchasing coverage, must pay the full premium amount -- averaging \$7,352 a year for family coverage (GAO, 2000). In the employer-based market, the employer commonly pays a large share of the premium -- 82 percent of firms pay more than 75 percent of the premium for the employee's coverage--and the employee is responsible for the remainder (Kaiser/HRET, 2002). Often, low-income workers face the same premiums and cost-sharing obligations as their higher-income counterparts because these policies do not tie out-of-pocket spending requirements to income (Rice and Thorpe, 1993). In contrast, publicly subsidized health coverage targeted at the low-income population typically does not require premiums or applies them on a sliding-scale basis.

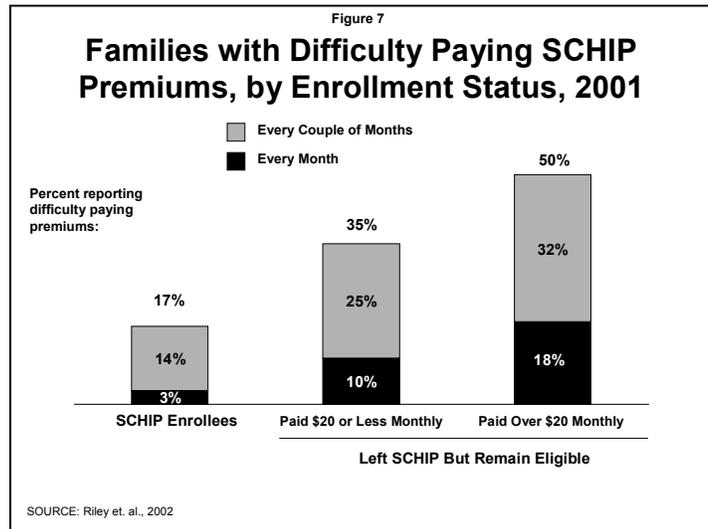
Research Findings

Research examining the impact of premiums in public programs has found that participation falls off sharply as the premium amount increases. An analysis using state administrative data from Washington's Basic Health Plan, Minnesota's MinnesotaCare and Hawaii's Quest program estimated participation rates among the eligible population in health programs with income-related premiums. The authors found that participation declined from 57 percent to 18 percent as premiums rose from 1 percent to 5 percent of family income (Ku and Coughlin, 1999/2000) (**Figure 6**).



Other research shows that many families who participate in public coverage programs either cannot afford or do not pay premiums and enrollment fees on time, even when these amounts are relatively low. A recent study of the impact of charging premiums

under SCHIP found that 17 percent of parents with children enrolled in SCHIP reported periodic trouble paying these premiums (Riley et al, 2002). Of families who have left SCHIP but remain eligible, 50 percent reported difficulty paying premiums that exceeded \$20 per month (Figure 7). Similarly, a 4-state GAO study found that up to 10 percent of children with SCHIP lost that coverage due to their parents' failure to pay premiums (GAO, 2001). Findings from the first national evaluation of SCHIP sponsored by Department of Health and Human Services found, among other things, that failure to pay an enrollment fee in North Carolina--\$50 per child with a \$100 maximum -- was the leading cause of denied applications (Rosenbach et al, 2001).



2) Cost-Sharing Has a Greater Impact on Low-Income Populations

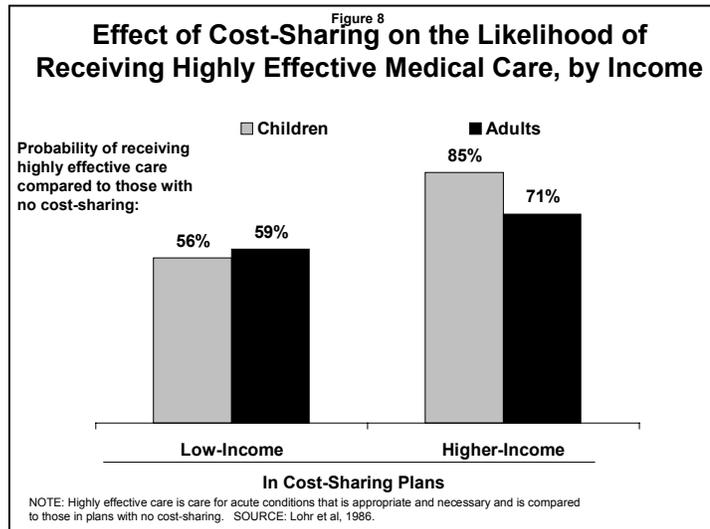
Cost-sharing is often implemented with the goal of reducing use of services by making the consumer bear part of the cost. Cost-sharing strategies can have a disproportionate impact on poorer people. Moreover, cost-sharing applied to a service, such as physician visits, does not discriminate between services that are medically needed and those that are more discretionary. These two aspects of cost-sharing put low-income people at special risks, especially considering their often poorer health status. A number of research studies have used data from the RAND Health Insurance Experiment (HIE) of the 1970s to assess the impact of cost-sharing on the low-income population. The HIE was a randomized, controlled experiment supported by the federal government, and remains the most comprehensive and rigorous study of the relationship between cost-sharing, health care utilization and outcomes that exists, although it is now over 20 years old. The RAND HIE included nearly 4,000 people between the ages of 14 and 61 who were free of disabilities that precluded work. Families were randomly assigned to insurance plans for three to five years. One plan had no cost-sharing, while the others required cost-sharing of 25 percent, 50 percent, or 95 percent. All plans covered ambulatory and hospital care, preventive services, most dental services, psychiatric and psychological services, and prescription drugs. Total out-of-pocket costs were limited to 5, 10 or 15 percent of income or \$1,000, whichever was less.

Primary and Preventative Care

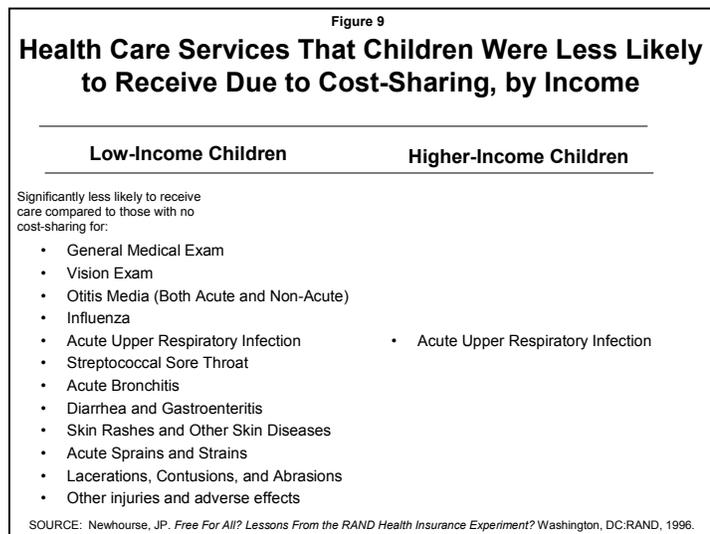
To better understand the effects of cost-sharing on receiving care, researchers using the RAND data grouped medical diagnoses by the effectiveness of seeking medical intervention for them (Lohr et al, 1986). Effective care was defined as care that is appropriate and necessary and offers more benefit than risk. Care was categorized as: highly, quite, less or rarely effective. A major area of interest concerned how cost-sharing affected access to highly effective care for acute conditions (such as trauma --

including fractures and lacerations, pneumonia, acute bronchitis, ear infections and strep throat) for low-income adults and children.

Analysis of RAND data showed that low-income children in cost-sharing plans had only a 56 percent likelihood of receiving highly effective outpatient care for acute conditions relative to low-income children with no cost-sharing, in contrast to 85 percent likelihood for higher income children (**Figure 8**). Similarly, low-income adults in cost-sharing plans had only a 59 percent chance of receiving highly effective care for acute conditions relative to those with no cost-sharing. Higher income adults in cost-sharing plans fared better – they had a 71 percent likelihood of receiving highly effective care (Lohr et al, 1986). The RAND study also demonstrated that low income children in the cost-sharing plans were significantly less likely to see a physician for 14 conditions compared to low-income children without cost-sharing, while higher income children were generally not affected – with the sole exception being acute respiratory infection (Newhouse, 1996) (**Figure 9**).



Another series of studies that examined California’s implementation of co-payments in its Medicaid program in the early 1970s found that even small co-payments resulted in fewer physician visits and less preventive care. Analysis of Medicaid claims from 1972-3 showed that beneficiaries subject to a \$1 copay per service received fewer preventive services, especially immunizations (45% decrease), Pap smears (21.5% decrease), and obstetrical care (58% decrease) compared to beneficiaries not subject to the copay (Brian and Gibbens, 1974). Another study using the same data found a 33 percent greater decline in outpatient physician visits among beneficiaries subject to the copay compared to those who were not (Roemer et al, 1975). A study of the implementation of sliding scale co-payments (averaging \$15 per visit, with a \$44 maximum) for well-child visits in Maryland county public health care clinics in the late 1970s showed a 42 percent decline in total visits by infants less than 6 months (Fischer et al, 1984).



Prescription Drugs

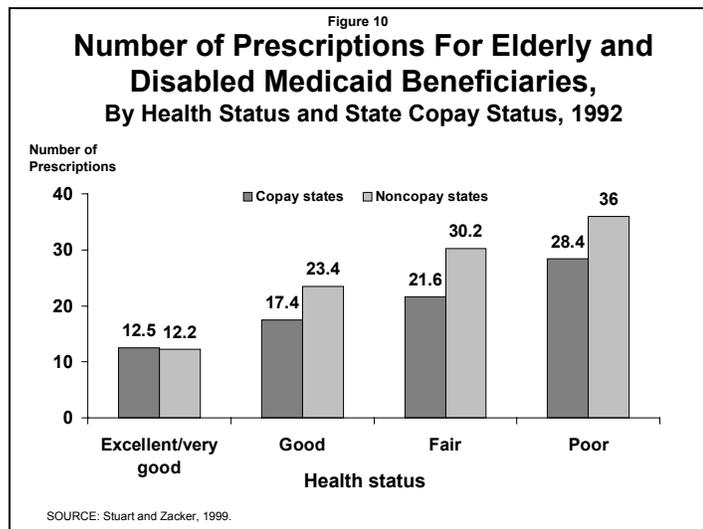
Access to prescription drugs is vital to the health and well-being of low-income and chronically ill populations, however many individuals lack prescription drug coverage. A recent survey of eight states found considerable variation in the percentage of seniors with prescription drug coverage, especially among low-income seniors, due in part to state Medicaid and pharmacy-assistance programs (Safran et al, 2002). Among poor seniors, the lack of prescription coverage ranged from 11 percent in New York to 38 percent in Michigan and Colorado. A number of studies have shown that even individuals with Medicaid have difficulty affording medications and that co-payments often decrease access to prescription drugs, especially for the poorest and sickest. A recent analysis of the national Community Tracking Study found that 26 percent of Medicaid beneficiaries reported that they did not fill a prescription because they could not afford it -- despite drugs being a Medicaid-covered benefit in all states (Cunningham, 2002).

Several additional studies have examined the impact of state policies with regard to co-payments on use of prescription drugs. Findings consistently demonstrate that use of prescription drugs by Medicaid beneficiaries is lower in states that impose co-payments, even when these copays are small (Roemer et al, 1975; Nelson et al, 1984; Stuart and Zacker, 1999). A time series study of Medicaid claims data for nearly 18,000 Medicaid beneficiaries (67% were elderly and disabled) in South Carolina found an 11 percent drop in average monthly prescriptions following the 1977 implementation of a \$.50 copay (Nelson et al, 1984). This decline was significantly greater than in the comparison state of Tennessee where no cost-sharing was in effect. In addition, the authors observed a long-term decline in drug use in South Carolina for classes of drugs (including cardiovascular, cholinergic, diuretic, and psychotherapeutic agents) that are often used for life-threatening or hard-to-manage conditions compared to the control state.

Stuart and Zacker examined the impact of co-pays ranging between \$.50 and \$3.00 in 38 states using the 1992 Current Medicare Beneficiary Survey.

They found that elderly and disabled Medicaid beneficiaries residing in copay states had lower rates of prescription drug use than their counterparts in non-copay states. After controlling for demographic and state policy differences, they found that the disparity is due primarily to a reduced likelihood of filling any prescription, and that the disparity was greatest for beneficiaries in fair or poor health (Stuart and Zacker, 1999). **(Figure 10)**

The RAND Study also showed that cost-sharing significantly affected use of antibiotics by adults. Low-income adults in plans with cost-sharing were three times less likely to



use appropriately prescribed antibiotics as those with no cost-sharing (Newhouse, 1996).

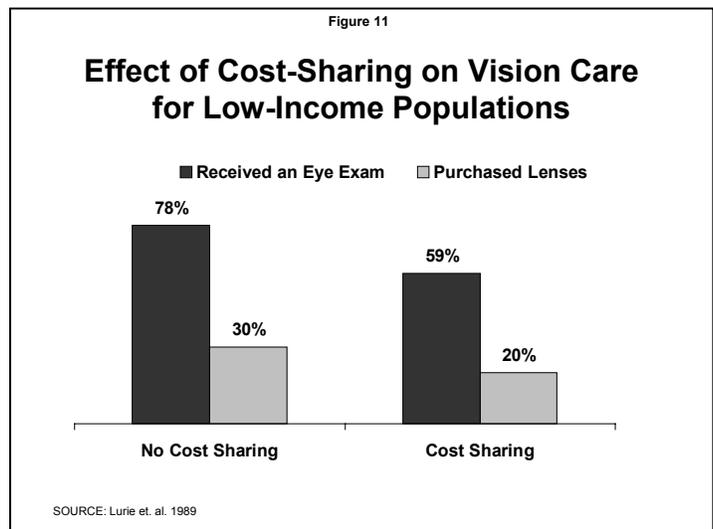
3) Poorer Health Outcomes are Associated with Higher Cost-Sharing for Low-Income Populations

After conducting an extensive review of the literature, the Office of Technology Assessment recommended to Congress in 1993 that “..if health effects are a concern, Congress should be cautious about the extent to which cost-sharing is relied on to control costs, especially for sick, low-income individuals” (OTA, 1993). Findings from the RAND Health Insurance Experiment showed significantly better health outcomes for low-income individuals (bottom 20% of income distribution) in plans without cost-sharing compared to low-income populations with cost-sharing, for three conditions: improved diastolic blood pressure for those with hypertension; a 10 percent reduction in the risk of dying for those at high risk (high blood pressure, high cholesterol; smoker); and improved vision (Brook et al, 1983; Keeler et al, 1985; and Lurie et al, 1989). Keeler and his colleagues report that, for clinically defined hypertensives, blood pressures among those with no cost-sharing were significantly lower than among those with cost-sharing, with a larger difference among those with low income (Keeler et al, 1985). The difference was attributed to more physician contacts in the no cost-sharing plan; which led to better detection and treatment of hypertensives, including greater adherence to diet and smoking recommendations and higher use of needed medications.

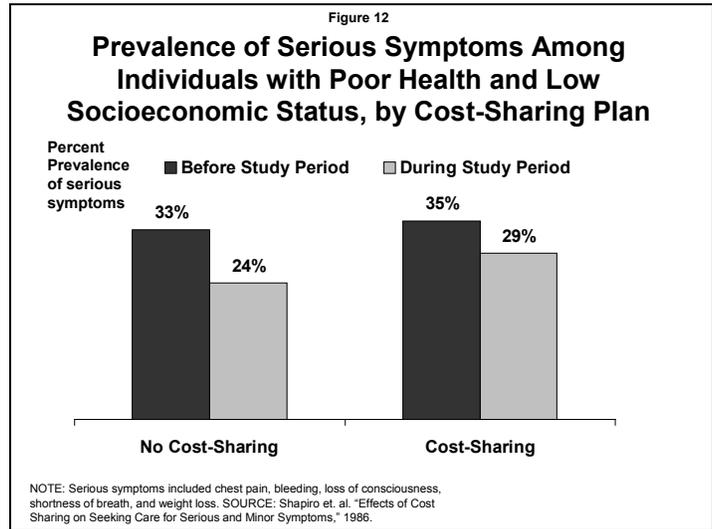
Visual acuity outcomes of low-income individuals were adversely affected by enrollment in cost-sharing plans, compared to non-poor enrollees (Lurie et al, 1989). In addition, among low-income enrollees, 59 percent of those in the cost-sharing plans received an eye exam, compared to 78 percent of those with no cost-sharing (**Figure 11**). Cost-sharing also affected whether or not an individual received corrective lenses.

Other analysis using the RAND data found that for low-income participants in poor health, the prevalence of serious symptoms, such as chest pain, major weight loss, and loss of consciousness, was higher for those in a cost-sharing plan (29%), compared to those in the no cost-sharing plan (24%) (Shapiro et al, 1986). Individuals with low socioeconomic status and poor health who were not in cost-sharing plans experienced a 27 percent decline in serious symptoms from the beginning of the study to a point during the experiment. In contrast, similar individuals in cost-sharing plans experienced a 17 percent decline of serious symptoms in a similar time period (**Figure 12-next page**).

Adverse health outcomes have also been associated with cost-sharing for prescription drugs among poor and elderly persons. A recent study found that the use of “essential drugs” -- drugs that either prevent deterioration in health or prolong life -- decreased by



14 percent for poor individuals and 9 percent for elderly individuals after cost-sharing policies went into effect, leading to higher rates of serious adverse events and greater emergency room use (Tamblyn et al, 2001).



4) Cost-Sharing Policies Can Result in Higher Costs in Other Program Services and For Other Payors

Limiting access to services, particularly outpatient care, through the use of cost-sharing may result in higher costs overall if more expensive services, such as hospital care, are used instead (Helms et al, 1978; Tamblyn et al, 2001). The studies analyzing the implementation of Medicaid copays in the early 70s found that copays were not effective in reducing overall costs to the Medicaid program (Roemer et al, 1975; Helms et al, 1978). After implementation of a \$1.00 copay for physicians' services, use of ambulatory care services declined by 8 percent, but use of hospital inpatient services increased by 17 percent for the copay population, resulting in higher total Medicaid costs of 3 to 8 percent (Helms et al, 1978).

Another study analyzed the effects of California's Office of Family Planning implementation of sliding scale co-payments for contraceptive (maximum \$10 copay) and sterilization (maximum \$20 copay) services on clinic patients in the early 1980s. Among clinics that required co-payments, 22 percent reported a decline in the provision of contraceptive services. The authors estimated that the California government would pay about \$3 million in health services associated with unintended pregnancies resulting from decreased use of family planning services (Aved and Harp, 1983).

Cost-sharing policies may also raise costs for other payors if providers increase their prices to offset lower payments received from payors that require enrollee cost-sharing. One study of a large group practice during a three-year period surrounding the introduction of cost-sharing in plan for the United Mine Workers Health and Retirement Fund compared costs for these patients to those covered by the United Steelworkers' health benefit plan with no cost-sharing. Analysis of medical records and billing claims showed that the average cost per episode of illness decreased by 10 percent for patients with cost-sharing, but increased by 17 percent for other patients who were not subject to cost-sharing (Fahs, 1992). The author concluded that cost-sharing had a "spill-over

effect” with providers increasing visits with other patients not exposed to cost-sharing, and thus increasing expenditures for these patients to make up the lost revenue from patients that had less provider visits because of cost-sharing. However, the author notes that the providers in this study were reimbursed by fee-for-service, and these results may not be as relevant in a capitated reimbursement setting (Fahs, 1992).

III. CONCLUSIONS

The health services research literature documents that premiums can discourage enrollment of the uninsured in publicly funded health insurance programs, and cost-sharing disproportionately affects low-income people, and reduces the use of beneficial, cost-effective services, preventive care and prescription drugs, which can result in worse health outcomes. The research also shows that cost-sharing policies may not result in cost savings for the Medicaid program, but could result in higher costs in other program services, such as hospitalization. Much of this research comes from the government-sponsored RAND Health Insurance Experiment, widely regarded as the major source of information on the effects of cost-sharing, despite its age.

Over the past 35 years, the Medicaid program (and more recently, SCHIP) has increased access to care and improved health outcomes for millions of individuals. Because beneficiaries in these programs tend to have higher health care needs but lower incomes, coverage was provided without premiums or substantial copays to encourage participation and reduce barriers to access to care. While the tightening fiscal situation that the states and federal government face has spurred interest in the use of enrollee out-of-pocket payments as a cost control, the literature suggests that in view of the greater health needs and limited resources of low-income individuals, these findings warrant caution as policymakers consider the use of premiums and cost-sharing in public programs for people with modest or low incomes.

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Key Studies on Premiums and Cost-Sharing for Low-Income Populations

Citation	Study Population	Major Findings
<p>Aved B, Harp V.</p> <p>“Assessing the Impact of Copayments on Family Planning Services: A Preliminary Analysis in California.”</p> <p><i>American Journal of Public Health</i> Vol. 73(7): 763-65, 1983.</p>	<p>California Office of Family Planning provider survey in 1982 with 171 respondents.</p>	<p>Of the clinics implementing the co-payment system, 22% of provider respondents reported a decrease in contraceptive services provided. As a consequence of the co-payment requirement, there was an overall 2.4% decrease in clients seeking family planning services statewide. Authors estimate this could result in 2,402 unintended pregnancies over the course of a year costing the state about \$3 million.</p>
<p>Brian EW, Gibbens S.</p> <p>“California’s Medi-Cal Co-payment Experiment.”</p> <p><i>Medical Care</i> Vol.12(12 suppl): 4-56, 1974.</p>	<p>California Medicaid Experiment; surveys and claims files, 1972-73.</p>	<p>Findings show that Medicaid beneficiaries who were required to pay a \$1 co-payment per service received significantly fewer preventive medical services, particularly immunizations (45% decrease), Pap smears (21.5% decrease), and obstetrical care (58% decrease) than Medicaid patients not subject to co-payments. In addition, the influence of co-payments as a deterrent to seeking health care appeared to diminish as the significance of the service to the patient increased.</p>
<p>Brook R, et al.</p> <p>“Does Free Care Improve Adult’s Health?”</p> <p><i>The New England Journal of Medicine</i> Vol. 309(23):1426-34, December 1983.</p>	<p>The Rand Health Insurance Experiment data; 3,958 people between the ages of 14-61 were randomly assigned to a set of insurance plans.</p>	<p>Findings showed significantly better health outcomes for low-income individuals with no cost-sharing experience compared to low-income populations with cost-sharing for three conditions: improved diastolic blood pressure for those with hypertension; 10% reduction in the risk of dying for those at high risk (high blood pressure; high cholesterol; smoker) and improved vision.</p>
<p>Fahs M.</p> <p>“Physician Response to the United Mine Workers’ Cost-Sharing Program: The Other Side of the Coin.”</p> <p><i>HSR: Health Services Research</i> Vol. 27(1): 25-45, April 1992.</p>	<p>11,785 clinic claims and medical record abstracts from the United Mine Workers Health and Retirement Fund.</p>	<p>Analysis showed that average cost per episode of illness decreased by 10% for patients with cost-sharing, but increased by 17% for other patients not exposed to cost-sharing. The author concluded that cost-sharing had a “spill-over effect” with providers increasing visits with other patients not exposed to cost-sharing, and thus increasing expenditures for these patients to make up for lost revenue from patients that had less visits because of cost-sharing.</p>
<p>Fisher PJ, Strobino DM, Pickney CA.</p> <p>“Utilization of Child Health Clinics Following Introduction of a Copayment.”</p> <p><i>American Journal of Public Health</i> Vol. 74(12): 1401-3, 1984.</p>	<p>Maryland Child Health Services Information System, in one Maryland county, 1975-79.</p>	<p>After implementation of a sliding scale co-payment system for clinic well-child services ranging from \$0 to \$44 per visit, the number of children under 6 months and aged 1 to 2 years attending County health clinics for both a first visit and for well-child care declined. First visits by Medicaid-enrolled infants, both white and black, also declined during the period of the study. Analysis revealed that implementation of the co-payment resulted in a 42% decline in total visits by infants less than 6 months old.</p>

Key Studies on Premiums and Cost-Sharing for Low-Income Populations

Citation	Study Population	Major Findings
<p>Helms J, Newhouse JP, Phelps CE.</p> <p>“Copayments and Demand for Medical Care: The California Medicaid Experience.”</p> <p><i>Bell Journal of Economics</i> Vol. 9:192-208, 1978.</p>	<p>California Medicaid Experiment with 40,662 individuals from three counties who were Medi-Cal beneficiaries in the Aid to Families with Dependent Children program from July 1971 through December 1972.</p>	<p>A \$1 co-payment for physician visits appeared to decrease the demand for ambulatory care by 8%. During the same time period, the demand for hospital inpatient services increased by 17% in the co-pay population. The authors suggest that the imposition of the co-payments resulted in a 3% to 8% increase (statistically insignificant) in overall Medicaid program costs during this time period.</p>
<p>Keeler EB, et al.</p> <p>“How Free Care Reduced Hypertension in the Health Insurance Experiment.”</p> <p><i>Journal of the American Medical Association</i> Vol. 254(14): 1926-31. October 11, 1985.</p>	<p>The Rand Health Insurance Experiment data using 3,958 individuals.</p>	<p>For clinically defined hypertensives, blood pressures with free care were significantly lower (1.9 mm Hg) than with cost-sharing plans, with a larger difference for low-income hypertensives than for high-income hypertensives (3.5 v 1.1 mm Hg), but similar differences for blacks and whites. The cause of the difference was the additional contact with physicians under free care; this led to better detection and treatment of hypertensives not under care at the start of the study.</p>
<p>Ku L, Coughlin T.</p> <p>“Sliding-Scale Premium Health Insurance Programs: Four States’ Experiences.”</p> <p><i>Inquiry</i> Vol. 36: 471-480, Winter 1999/2000.</p>	<p>1995 sliding-scale premium schedules and participation counts from four states: Hawaii, Minnesota, Tennessee, and Washington.</p>	<p>Sliding-scale premiums resulting in higher out-of-pocket costs for low-income individuals were associated with lower participation rates in health insurance programs. Participation declined from 57% to 18% as premiums rose from 1% to 5% of family income.</p>
<p>Lohr K, et al.</p> <p>“Effect of Cost-Sharing on Use of Medically Effective and Less Effective Care.”</p> <p><i>Medical Care</i> Vol. 24(9): supplement, S31-38, September 1986.</p>	<p>The Rand Health Insurance Experiment data using 7,700 persons.</p>	<p>Findings show that low-income children with co-insurance were only 56% likely to receive highly effective care as other low-income children with no cost-sharing; low-income nonelderly adults were only 59% likely to receive care because of cost-sharing; and low-income adults in the cost-sharing groups were 46% less likely to receive examinations than their counterparts with free care.</p>
<p>Lurie N, et al.</p> <p>“How Free Care Improved Vision in the Health Insurance Experiment.”</p> <p><i>American Journal of Public Health</i> Vol. 70(5): May 1989.</p>	<p>The Rand Health Insurance Experiment data using 2,399 enrollees with natural vision impairment at entry or exit.</p>	<p>Researchers found that low-income individuals with no cost-sharing experienced better vision outcomes than other low-income populations with cost-sharing, 78% vs. 59% respectively.</p>
<p>Nelson AA, Reeder CE, Dickson WM.</p> <p>“The Effect of a Medicaid Drug Copayment Program on the Utilization and Cost of Prescription Services.”</p> <p><i>Medical Care</i> 22(8):724-36, August 1984.</p>	<p>17,811 Medicaid claim files in South Carolina and 27,841 in Tennessee from 1976-1979.</p>	<p>Researchers found an 11% drop in prescriptions per patient per month following a \$.50 co-payment, and concluded that a small co-payment for prescription services is a successful mechanism to control the cost and assist in financing a Medicaid prescription drug program.</p>

Key Studies on Premiums and Cost-Sharing for Low-Income Populations

Citation	Study Population	Major Findings
<p>Newhouse JP.</p> <p>“Free for All?: Lessons From the RAND Health Insurance Experiment.”</p> <p>Rand, 1996.</p>	<p>The Rand Health Insurance Experiment data using approximately 2,000 nonelderly families.</p>	<p>The difference in cost-sharing response between poor and non-low-income children is significant. For non-poor children there is no response to cost-sharing except for acute upper respiratory infections, and for low-income children there are significant differences resulting in less utilization for 14 diagnoses.</p>
<p>Reeder CE, Nelson AA.</p> <p>“The Differential Impact of Co-payment on Drug Use in a Medicaid Population.”</p> <p><i>Inquiry</i> 22(4):396-403, 1985 Winter.</p>	<p>Examined 10 categories of drug use by South Carolina Medicaid beneficiaries over 4 years.</p>	<p>The imposition of co-payments for prescriptions services exerted a differential effect among therapeutic category drugs. Out of ten classes of drugs for two state Medicaid programs, there was a long-term decrease in expenditures on cardiovascular, cholinergic, diuretic and psychotherapeutic agents after implementing co-pays.</p>
<p>Roemer MI, et al.</p> <p>“Copayments for Ambulatory Care: Penny-Wise and Pound-Foolish”.</p> <p><i>Medical Care</i> Vol. 13(6): 457-66, 1975.</p>	<p>California Medicaid Experiment; a subsample of claims files from three counties from 1972-73 with 10,687 observations in copay cohort and 29,975 observations in the non-copay cohort.</p>	<p>The introduction of a \$1 co-payment per physician visit had a differential effect on the co-paying and no-copaying populations. The co-pay group had a 12% decline in ambulatory care visits versus an 8% decline among the non-co-payment group. Urinalysis index rates decreased 27% among the copayers versus 9% among the non-copayers. Index of Pap smear rates decreased 17% for the copayers while by increasing 13% for the non-copayers. In contrast, the co-pay group had a higher level of hospitalization during 3 out of 4 co-payment quarters studied.</p>
<p>Shapiro MF, Ware JE, Sherbourne CD.</p> <p>“Effects of Cost Sharing on Seeking Care for Serious and Minor Symptoms.”</p> <p><i>Annals of Internal Medicine</i> 104: 246-251, 1986.</p>	<p>3539 persons aged 17-61 from the Rand Health Insurance Experiment data.</p>	<p>Findings show that the cost-sharing group was nearly one third less likely than the no cost-sharing group to see a physician when they had minor symptoms. For the low-income participants in poor health, the prevalence of serious symptoms was 22% higher in the cost-sharing group than the no cost-sharing group.</p>
<p>Stuart B, Zacker C.</p> <p>“Who Bears the Burden of Medicaid Drug Co-payment Policies?”</p> <p><i>Health Affairs</i> Vol.18(2): 201-212, March/April 1999.</p>	<p>1992 Medicare Current Beneficiary Survey data with 1,302 respondents.</p>	<p>Elderly and disabled Medicaid beneficiaries residing in copay states had lower rates of prescription drug use than their counterparts in non-copay states. After controlling for demographic and state policy differences, the disparity is due primarily to a reduced likelihood of filling any prescription and was greatest for beneficiaries in fair or poor health.</p>
<p>Tamblyn R, et al.</p> <p>“Adverse Events Associated With Prescription Drug Cost-Sharing Among Poor and Elderly Persons.”</p> <p><i>Journal of the American Medical Association</i> Vol. 285(4): 421-429, January 2001.</p>	<p>Random sample of 93,950 elderly persons and 55,333 adult welfare prescription drug recipients in Quebec, Canada from August 1995-1997.</p>	<p>The use of “essential” drugs decreased by 14% for poor and 9% for elderly populations after cost-sharing policies went into effect leading to higher rates of serious adverse events and greater emergency room use.</p>

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