

Low Take-Up in Medicaid: Does Outreach Matter and for Whom?

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Of the ten million children in the United States who lacked health insurance in 1996, an estimated 4.7 million were eligible for Medicaid but not enrolled (Thomas Selden et al., 1998). In response, federal and state governments have recently devoted up to \$500 million annually to the development of outreach campaigns to increase take-up among those eligible. However, little is known about the reasons families fail to enroll, how to increase enrollment, or whether outreach can work.

There is also no evidence that early enrollment in Medicaid improves outcomes. Children in need of hospitalization who are eligible for Medicaid but not enrolled are typically enrolled in Medicaid at the point of hospitalization. In addition, estimation of the impact of early enrollment in Medicaid on health-care utilization and child health is hindered by the endogeneity of the enrollment decision: children in greater need of medical care are more likely to enroll. Thus, straightforward estimation of the impact of Medicaid enrollment on child health will underestimate the effect of Medicaid enrollment on health.

I examine both the causes and consequences of low take-up in Medicaid using data on Medicaid enrollment in California from 1996 to 2000 and the timing and placement of community-based application assistants that were part of an outreach campaign launched in mid-1998. I find the most profound effects of outreach on those with the highest costs of enrolling: Hispanic and Asian children, who have greater language and immigration concerns than other families. Access to bilingual application assistants increases new monthly Medicaid enrollment among Hispanics by 4.6 percent and among Asian children by 6 percent on average relative to other children in the same neighborhood.

Furthermore, I find that increased take-up leads to more efficient use of medical resources. In theory, enrolling children in Medicaid earlier increases their financial access to primary preventative care. I find that early enrollment in Medicaid does lead to fewer hospitalizations for those conditions that are avoidable if timely and effective ambulatory care is received, resulting in more efficient use of health-care resources.

I. Medicaid Take-up and Outreach in California

Though Medicaid has no out-of-pocket costs and lowers the cost of medical care faced by low-income families, many still fail to enroll: nearly half of the 1.8 million uninsured children in California are eligible for Medicaid but not enrolled. Dahlia Remler et al. (2001) undertook a review of the existing literature on Medicaid take-up and concluded that of the factors affecting Medicaid participation “what little evidence ... exists is primarily qualitative and self-reported, based on focus groups ... and reports of officials ... [T]heir quantitative magnitude is entirely unknown” (p. 3). The three main reasons for low take-up, as hypothesized in the literature, are (i) lack of information (information costs), (ii) administrative hassle associated with an application that requires considerable paperwork (process costs), and (iii) stigma associated with public programs (outcome costs).

Medicaid enrollment in California peaked in 1995 and then began to decline as a result of falling welfare rolls, since two-thirds of Medicaid enrollment in California is automatic through participation in the cash welfare program. Beginning in mid-1998 and coincident with the launching of California’s outreach campaign, the decline has been partially offset by a rise in children enrolled through non-welfare-related channels.

California’s outreach campaign launched in June 1998 is composed of two main components: community-based application assistants

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to reduce the process costs of enrolling and a media campaign to increase awareness of the program and reduce the information costs of enrolling. In this paper, I focus only on the former. In other work, I also examine the impact of advertisements on Medicaid enrollment (Aizer, 2002).

Community-based application assistants (CBO's) are preexisting nonprofit community organizations staffed by individuals who are trained by the state in the completion of Medicaid applications. They also receive \$50 for each approved application. Nearly half of the 1,100 CBO's providing assistance in the first year had bilingual staff. Over time, access to CBO's has increased. In 1998, 28 percent of all zip codes had a CBO, increasing to 46 percent by 2000. Ten months after the campaign was launched, half of all applications received by the state were completed with assistance.

II. Data and Methods: Impact of Outreach on Medicaid Enrollment

To assess the impact of outreach on the flow of Medicaid enrollment, data on CBO's were linked with monthly data on new Medicaid enrollment by zip code, age, race, and month for February 1996 to December 2000. CBO access is defined as the number of CBO's in one's zip code in the month of application.

To account for possible selection in the placement or timing of outreach efforts, I include zip code and month fixed effects to control for the facts that areas with more intense outreach efforts may have higher numbers of low-income children and more general trends in enrollment over this time period, respectively. Also included are controls for changes in the business cycle (the county employment-to-population ratio, EMP/POP) and the underlying demographic composition of the state (the number of births to women without a college degree, BIRTHS), which may affect the demand for health insurance. I also include interactions of Hispanic and Asian children with indicators for whether they ever gained access to a bilingual CBO. This controls for the possibility that Hispanic and Asian families residing in areas that gain access to bilingual CBO's differ from others in the same area. Finally I include welfare caseloads, indicators for age (infant, preschooler, school-

age) and race (white, black, Hispanic, and Asian). The equation is

$$\begin{aligned}
 (1) Y_{arzt} = & \beta_0 + \beta_1 \text{ENGCBO}_{zt} \\
 & + \beta_2 \text{SPCBO}_{zt} + \beta_3 \text{ASNCBO}_{zt} \\
 & + \beta_4 (\text{HISP} \times \text{SPCBO}_{zt}) \\
 & + \beta_5 (\text{ASIAN} \times \text{ASNCBO}_{zt}) \\
 & + \beta_6 \text{RACE}_r + \beta_7 \text{AGE}_a \\
 & + \beta_8 \text{BIRTHS}_{rzt} + \beta_9 (\text{EMP/POP}_{ct}) \\
 & + \beta_{10} \text{MONTH}_t + \beta_{11} \text{ZIPCODE}_z \\
 & + \beta_{12} (\text{HISP} \times \text{EverSPCBO}_{zt}) \\
 & + \beta_{13} (\text{ASIAN} \times \text{EverASNCBO}_{zt}) \\
 & + \beta_{14} (\text{AFDC/TANF}_{arzt}) + v_{arzt}.
 \end{aligned}$$

Y_{arzt} is the rate of new Medicaid enrollment (flow) for age group a , race r at time t in zipcode z . ENGCBO_{zt} is the number of community-based application assistants without bilingual staff in the zipcode in the month of enrollment, SPCBO_{zt} is the number of CBO's with Spanish-speaking staff. Spanish-speaking CBO's are interacted with a dummy for Hispanic ($\text{HISP} \times \text{SPCBO}_{zt}$), while Asian-language-speaking CBO's (ASNCBO_{zt}) are interacted with a dummy for Asian, ($\text{ASIAN} \times \text{ASNCBO}_{zt}$). All analyses are weighted by the size (population) of the cell.

III. Results: The Impact of Outreach on Medicaid Enrollment

The results indicate that bilingual application assistance effectively increases enrollment among Hispanic and Asian families, who likely face the greatest barriers to enrollment [Table 1, Column (i)]. The coefficients on the two interaction terms (0.159 and 0.176) imply a marginal increase in new monthly non-welfare-related Medicaid enrollment of 2.5 percent for Hispanics with access to a CBO with Spanish-speaking staff and 13 percent for Asians with access to a CBO with Asian-language-speaking staff. As a specification check, I estimate the

TABLE 1—IMPACT OF OUTREACH ON MEDICAID ENROLLMENT

Variable	(i)	(ii)
	Total Medicaid	Welfare-related
Spanish CBO's × Hispanic	0.159 (0.013)	-0.022 (0.015)
Asian CBO's × Asian	0.176 (0.032)	-0.039 (0.038)
Spanish CBO's	0.003 (0.029)	0.013 (0.032)
Asian CBO's	-0.067 (0.058)	0.029 (0.065)
English-only CBO's	0.105 (0.110)	0.037 (0.123)
Observations:	933,477	933,477
R ² :	0.54	0.21

Note: Robust standard errors are reported in parentheses.

impact of CBO's on welfare-related Medicaid enrollment. The results [column (ii)] show that both the main effects and interaction effects are small and statistically insignificant, as expected.

IV. Data and Methods: The Impact of Enrollment on Hospitalization

The benefit of enrolling children in Medicaid prior to their hospitalization is the improvement of access to ambulatory preventative care. In California, nearly one-third of all child hospitalizations are ambulatory-care-sensitive (ACS), defined as those “diagnoses for which timely and effective ambulatory care can help to reduce the risks of hospitalization by either preventing the onset of an illness or condition, controlling an acute episodic disease or conditions” (John Billings et al., 1993 p. 163). While studies have effectively shown that geographic access to primary care results in fewer ACS hospitalizations, the link between ACS hospitalizations and insurance is more tenuous (see e.g., Michael Parchman and Steven Culler, 1994; Leemore Dafny and Jonathan Gruber, 2000; Jennifer Parker and Kenneth Schoendorf, 2000). If unobserved factors such as initial health status, care-seeking behavior, and poverty are associated with both Medicaid enrollment and with rates of ACS hospitalizations (as they likely are) then Medicaid enrollment is endogenous.

Thus, in order to identify the effect of Medicaid enrollment on ACS hospitalizations, I in-

TABLE 2—IMPACT OF MEDICAID ENROLLMENT ON HOSPITALIZATIONS

Variable	ACS		CHD/Appendicitis	
	OLS	IV	OLS	IV
Medicaid enrollment/ 1,000	3.56 (1.105)	-3.26 (0.426)	-0.0997 (0.067)	0.046 (0.091)
Observations:	324,331	324,331	324,331	324,331
R ² :	0.20	0.19	0.02	0.02

Note: Robust standard errors are reported in parentheses.

strument for Medicaid enrollment with outreach measures. Data on Medicaid enrollment in January, April, July, and October of each year (1996–2000) were matched to Medicaid hospital admissions occurring in the following quarter by zip code, race, and age group. The equation estimated is

$$\begin{aligned}
 (2) \quad H_{arzq} = & \beta_1 \text{MEDICAID}_{arzq} \\
 & + \beta_2 \text{AGE}_a + \beta_3 \text{RACE}_r \\
 & + \beta_4 \text{ADULTADM}_{rzq} \\
 & + \beta_5 (\text{AFDC/TANF}_{arzq}) \\
 & + \beta_6 \text{QUARTER}_q + \beta_7 \text{ZIPCODE}_z \\
 & + \varepsilon_{arzq}
 \end{aligned}$$

where H represents the rate of Medicaid ACS hospitalizations, MEDICAID is the Medicaid enrollment rate, and ADULTADM is the adult hospitalization rate to control for area-specific hospitalization patterns. Also included are the welfare caseload, age, race, zip code, and quarter fixed effects.

In the first two columns of Table 2, I present ordinary least-squares (OLS) and instrumental variables (IV) estimates of the impact of Medicaid enrollment on ACS hospitalizations. The OLS estimates suggest a positive impact of Medicaid enrollment on hospitalizations, reflecting negative selection into Medicaid (i.e., sicker children in need of hospitalization are more likely to enroll in Medicaid). In contrast, the IV estimates are negative and significant.

As a specification check, I estimate the impact of Medicaid enrollment on congenital heart

defect (CHD) and appendicitis and present the results in the last two columns of Table 2. These conditions should not be affected by access to preventative care so that the impact of Medicaid enrollment on these hospitalizations should be close to zero, as it is.

The empirical results presented here represent some of the first to shed light on the causes and consequences of low take-up in public programs. The finding that community-based application assistance improves take-up especially among Hispanics and Asians suggests that process costs are indeed important barriers to the use of public programs and that they are greater for those with language barriers and immigration concerns. Furthermore, the finding that early Medicaid enrollment reduces avoidable hospitalizations by improving access to primary preventative care suggests that increased outreach to those eligible but not enrolled may lead to both costs savings and improvements in child health.

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