Impact of Enrolling in Health Insurance on Low-Income Children that Enrolled for a Medical Reason

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Abstract

The Los Angeles Healthy Kids program is a county-based health insurance program providing coverage for children in families with household income below 300 percent of the federal poverty level who are ineligible for Healthy Families and Medi-Cal. Children enrolled for a medical reason may have more urgent and specialized medical needs. This special study seeks to compare the experience of children that enrolled in Healthy Kids for a medical reason with the general Healthy Kids population, those who enrolled without indicating a current health care need. The client survey was conducted in two waves (baseline and follow-up) among 474 children ages 12–72 months with a response rate of 86 percent. Children were included in the "enrolled for a medical reason" category if they enrolled because the child was sick or needed medical care, needed a prescription medicine that the family could not afford or if their parent gave a medical reason in response to the following question: "Was there any other important reason that the child was enrolled in Healthy Kids?" A two sided t-test was used to compare responses at baseline and follow-up for children who did and who did not enroll for a medical reason.

Children enrolling for a medical reason reported a range of common conditions including allergies, anemia, asthma, cough/cold, stomach problems, ear/eye infection, fever, and rash as their reason for enrollment. A large portion (67 percent) of parents of children enrolled for a medical reason report enrolling because the child needed a prescription medication that the family could not afford. This study found that access to care for children enrolling for a medical reason and those not enrolling for a medical reason substantially improved one year after enrollment in Healthy Kids. Thus, enrollment in health insurance is associated with improved access to timely health care and, particularly for those enrolled for a medical reason, lower out-of-pocket health care costs. However, families of children enrolled for a medical reason face persistent barriers in accessing subspecialty care and demonstrate persistent higher use of emergency department services compared with those not enrolled for a medical reason.

Introduction

The Los Angeles Healthy Kids program is a county-based health insurance program providing coverage for children in families with household income below 300 percent of the federal poverty level (FPL) who are ineligible for Healthy Families and Medi-Cal. The enrollees are largely low income undocumented immigrant children, but include some children above the income level for Healthy Families (250 percent of the FPL). The program was created in 2003 and initially covered children 0–5 years of age. In 2004, the Healthy Kids was expanded to cover older children, ages 6 through 18, as well.

Medical coverage is intended to improve access for acute illnesses, chronic care, and quality preventive care. Children with current perceived medical conditions may have more urgent and specialized medical needs. This special study seeks to compare the experience of children that enrolled in Healthy Kids with a concern for a specific health condition to the general Healthy Kids population, those that enrolled without indicating a current health care need.

Background

Children with acute or chronic conditions or chronic conditions with acute exacerbation (e.g. asthma), may face special challenges in accessing health care services[1] (Chen and Newacheck 2006; Jeffrey and Newacheck 2007). The nature of the condition may require timely access to subspecialty care, medical equipment, specialized therapies including occupational and physical therapy, access to after hour services or emergency services, and need for intensive health education. Families of children with acute or chronic conditions may face additional out-of-pocket costs for medications and equipment (Chen and Newacheck 2006). Transportation for children with certain conditions may present unique challenges to families and lack of transportation may be a significant barrier to timely access to care in case of an urgent health care need (Yu et al. 2004).

Health insurance is designed to improved access to timely health care and lower out-of-pocket health care costs. However, the impact of obtaining health insurance may vary depending on the families particular needs at enrollment; prior studies suggest that children with chronic conditions benefit from health insurance expansions in terms of continuity with primary care, selected quality measures, and parental concerns about ability to meet the child's medical needs (Szilagyi et al. 2007). In addition, the quality of health services obtained using health insurance depends on capacity of the existing health care system. This study examines the experiences of children that enrolled in Healthy Kids with a specific health concern and compares their experiences to those of the general Healthy Kids population. This study may highlight areas to improve the quality of care for children with specific medical needs and highlight strengths as well as weaknesses in the health care system that serves these children.

[1] **Chronic disease:** A disease that persists for a long time. A chronic disease is one lasting three months or more, by the definition of the U.S. National Center for Health Statistics. Chronic diseases generally cannot be prevented by vaccines or cured by medication, nor do they just disappear.
Acute disease: Of abrupt onset, in reference to a disease. Acute often also connotes an illness that is of short duration, rapidly progressive, and in need of urgent care (http://www.mednterms.com).

Data and Methods

The Healthy Kids evaluation was launched in 2004 and includes a qualitative analysis (focus groups and interviews), a process analysis based on health plan administrative data and a client survey. The client survey was conducted in two waves among children ages 12–72 months. The first wave of the survey was conducted between April and December 2005 with parents of 474 new enrollees. The second wave was conducted between May 2005 and January 2006 among the same families that had been enrolled for one year in the program. The response rate for the first wave was 86 percent of the originally sampled population and 90 percent for the second wave (77 percent of the original sample). The majority of interviews were conducted in Spanish (88 percent).

The client survey included items from a related child health insurance survey in San Mateo County, with questions covering prior health insurance coverage, health status, access to care, unmet need, and satisfaction. In this paper, we distinguish between children who enrolled for a medical reason and those who did not. Children were included in the "enrolled for a medical reason" category if their parent answered yes to either of the following two questions:

(1) "Was the child enrolled because he/she was sick or injured and needed medical care?"

(2) "Was the child enrolled because he/she needed a prescription medicine that the family could not afford?"

Children were also included in this group if their parent gave a medical reason in response to the following question: "Was there any other important reason that the child was enrolled in Healthy Kids?"

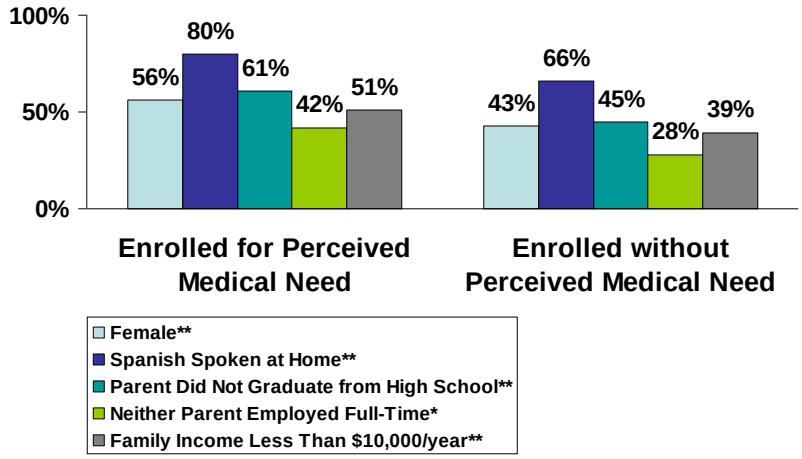
A two sided t-test was used to compare responses at baseline and follow-up for children who were and who were not enrolled for a medical reason.

Results

Children enrolling for a medical reason reported a range of conditions including allergies, anemia, asthma, cough/cold, stomach problems, ear/eye infection, fever, and rash as their reason for enrollment (see table 3 for the frequency of conditions experienced in the past month). A large portion (67 percent) of parents of children enrolled for a medical reason report enrolling because the child needed a prescription medication that the family could not afford.

At baseline, children enrolling for a medical reason (n=207 or 43.6 percent of the sample) had different demographic characteristics than children who did not enroll for a medical reason (see figure 1). Specifically, children enrolling for a medical reason were more often female than those that did not enroll for a medical reason. They came from lower income families with less formal education and less employment. More parents of children enrolling for a medical reason spoke primarily Spanish compared to those who did not enroll for a medical reason.

Figure 1: Demographic Characteristics of Healthy Kids Participants, by Reason for Enrollment



*Difference between enrollee groups is significant at p<0.05.
**Difference between enrollee groups is significant at p<0.01.

The majority of children that enrolled for a medical reason had Emergency Medi-Cal (state sponsored emergency only coverage for low-income families requiring annual re-enrollment) at the time of enrollment in Healthy Kids (see table 1). Emergency Medi-Cal does not provide coverage for well-child care, vaccinations, dental, vision, preventive care (e.g., tuberculosis screening/follow-up care) or minor illnesses. A higher proportion of children who were enrolled for a medical reason had Emergency Medi-Cal at the time of enrollment in Healthy Kids. Approximately a quarter were uninsured and 10 percent mentioned more than one prior type of "insurance" (e.g., Emergency Medi-Cal). In this cohort, no children enrolled for a medical reason were reported to be participating in California Children's Services, a state sponsored program for children with range of qualifying conditions including chronic conditions such as cerebral palsy or severe congenital heart disease.

At baseline (wave 1), more children who were enrolled for a medical reason had fair to poor health status when compared to children who were not enrolled for a medical reason (see table 2). After one year of enrollment, children who enrolled for a medical reason continued to have significantly poorer health status, as reported by their parents, compared to those that did not enroll for a medical reason.

Table 1: Child's Prior Insurance Coverage, by Reason for Enrollment

Insurance Status*	Enrolled for a medical reason (%)	Did not enroll for a medical reason (%)
Uninsured	27.8	29.2
ESI or Union	0.0	3.4
Self-pay	0.2	0.5
Medi-Cal	4.3	6.5
Emergency Medi-Cal	57.3	43.6
Healthy Families	0.8	2.7
California Kids or Kaiser Kids	1.1	1.0
CHDP	0.0	1.0
Other	0.5	1.2
Multiple Prior Coverage	8.0	10.8

*Distributions are significantly different at p<.05.

Table 2: Health Status, by Survey Wave and Reason for Enrollment

	Enrolled for a Medical Reason		Did Not Enroll for a Medical Reason	
Health Status	**Wave 1**	**Wave 2**	**Wave 1**	**Wave 2**
			(Percent)	
Excellent, Very Good, or Good	73.5*	81.6*	88.7	90.5
Fair/Poor	26.5	18.4	11.3	9.5

*Difference significant within the wave between enrollee groups
No significant differences between the waves.

At baseline and follow-up, parents reported if their child had experienced one of a range of conditions in the past month. These conditions ranged from accidents, tuberculosis treatment, dental and dermatologic problems to common colds and fever (table 3). Fever and upper respiratory infections/flu-like illness were the most commonly cited conditions experienced by children originally enrolled for a medical reason as well as by other children. Accidents were mentioned by approximately 3 percent of both groups. While fever was reported for more children enrolled for a medical reason than for other children, there were no other significant differences between conditions mentioned by both groups.

Table 3: Health Conditions Identified by Families of Children, By Reason for Enrollment

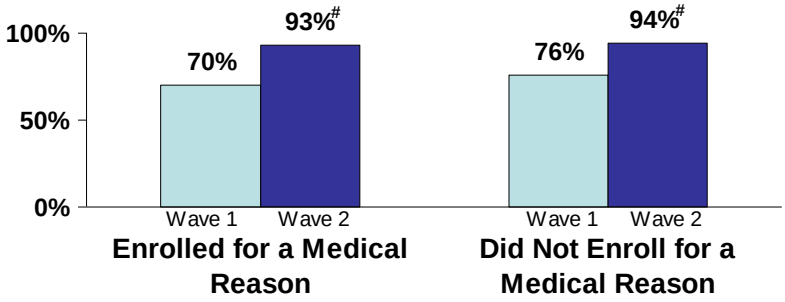
	Percentage	
Problem	**Enrolled for a medical reason**	**Did not enroll for a medical reason**
Accident	3.5	3.3
Allergies/sinus problem	0.5	0.7
Cold/sore throat/throat infection/cough/tonsillitis/chicken pox/flu	5.9	7.8
Dental problems	2.2	1.2
Digestive/stomach/eating problem/vomiting	1.5	3.5
Ear ache/ear infection	0.7	1.2
Eye problem/problem seeing	0.0	0.0
Fever	16.7	9.3*
Heart/lung problem	0.0	1.5
Orthopedic problem	0.0	0.6
Skin problems/rash	1.7	1.0
Speech problem	0.7	0.0
Tuberculosis	1.9	1.0
Urinary tract problem	1.1	0.0
Weight loss/lack of appetite/improper nutrition	3.1	0.9
Other problem	0.6	0.5
Unknown (respondent indicated child had a health problem but did not specify what it was.)	1.3	0.0
Any of the above	33.4	26.4
N	**207**	**267**

*Difference between groups is significant at the .05 level

Both groups of children demonstrated changes in access to care and use of services after one year of enrollment in Healthy Kids. Significantly more children in both groups reported usual source of care (USOC) after one year of enrollment in Healthy Kids (see figure 2).

Only children that had *not* been enrolled for a medical reason reported significantly less need for after hours care and less emergency room use at follow-up when compared to baseline. Preventive care, hospitalization and subspecialty use did not change significantly for either group (table 4).

Figure 2: Percent of Enrollees with Usual Source of Care, by Survey Wave and Reason for Enrollment



#Difference significant at p <.0.05 between the waves within the enrollee group
No significant differences between enrollee groups.

Table 4: Percent of Enrollees Using Different Services, by Survey Wave and Reason for Enrollment

Type of Access	Enrolled for a Medical Reason		Did Not Enroll for a Medical Reason	
	Wave 1	Wave 2	Wave 1	Wave 2
	(Percent)			
Need for after hours care (when usual source is closed)	23.9	18.5	27.5	17.8#
Use of services				
ER visits	20.0	17.6	22.4	11.8#
Preventive care visits	61.1	64.2	65.8	62.5
Hospitalizations	3.3	3.8	3.6	3.0
Subspecialty	10.2	17.0	9.5	11.5

Difference significant at p<0.05 between the waves within enrollee group.
No significant differences between enrollee groups.

In addition, after one year of enrollment, both groups had significantly lower rates of unmet need for preventive care and for accident or illness care (table 5). These improvements in access were associated with significantly less worry for parents about meeting the child's health care needs and significantly more confidence in getting needed services for both groups. Despite this improved access to care, children enrolled for a medical reason continued to have more unmet need for specialist care compared to children that were not enrolled for a medical reason.

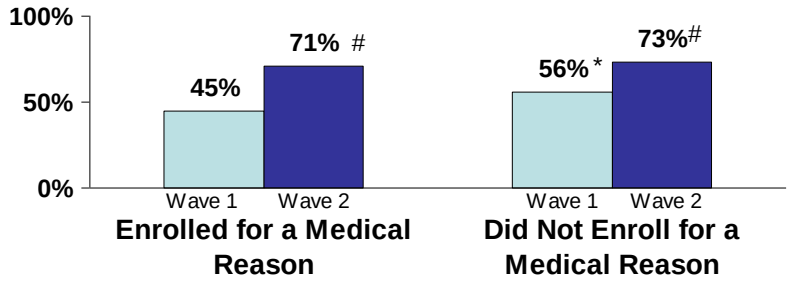
Table 5: Percent of Children with Unmet Need, by Reason for Enrollment

Type of Unmet Need	Enrolled for a Medical Reason		Did Not Enroll for a Medical Reason	
	Wave 1	Wave 2	Wave 1	Wave 2
	(Percent)			
Unmet Need for Preventive Care	25.6	9.7#	18.9	9.2#
Unmet Need for Specialist Care	12.0	5.6#	9.1	0.6*#
Unmet Need for Accident Or Illness Care	6.5	1.5#	5.8	1.9#
Parent is Very Worried About Meeting the Child's Health Care Needs	40.7	23.3#	42.3	23.5#
Parent is Very Confident That Child Can Get Needed Services	28.0	64.5#	34.3	59.5#

* Difference significant at p<0.05 within the wave between enrollee groups.
# Difference significant at p<0.05 between the waves

At baseline, a higher proportion of families of children that enrolled for a medical reason had financial difficulties because of the medical need compared to those not enrolled for a medical reason (figure 3). After one year of enrollment, this level of financial difficulty decreased significantly for both groups, reaching the same rate in both groups of children.

Figure 3: Percent of Enrollees without Financial Difficulties Paying for Health Care, by Survey Wave and Reason for Enrollment



* Difference significant at p<0.05 within the wave between enrollee groups.
# Difference significant at p<0.05 between the waves within enrollee group.

Both groups experienced significant changes in the level of parental satisfaction with care and perceived quality of care after enrollment in Healthy Kids (see table 6). Specifically, in both groups, a significantly higher proportion of parents reported having a personal doctor or nurse that was familiar with the family and higher satisfaction with the quality of the health care received after one year of enrollment in Healthy Kids. Children enrolled for a medical reason reported a significant post-enrollment increase in satisfaction with the amount of time spent with doctors and other providers. Parents of children who did not enroll for a medical reason reported similar rates of satisfaction with the amount of time spent with doctors and other providers at baseline and follow-up. Neither group reported a change in providers' ability to communicate with families, courteous and respectful treatment by providers and whether or that they would refer a friend to their child's provider (see table 6).

Table 6: Satisfaction with Care, by Wave and Reason for Enrollment

	Enrolled for a Medical Reason		Did Not Enroll for a Medical Reason	
Satisfaction with Care	Wave 1	Wave 2	Wave 1	Wave 2
Has a personal doctor or nurse that is familiar with the family	54.7	74.7#	54.3	72.7#
At USOC doctors or other providers always explained things in a way parent could understand	43.7	50.7	50.2	58.0
At USOC doctors or other providers always treated parent and child with courtesy and respect	75.1	82.7	74.3	80.2
Parent very satisfied with the amount of time spent with doctors and other providers	42.3	54.8#	46.6	56.1
Parent would recommend USOC to family or friends	89.9	91.9	86.1	91.1
Parent very satisfied with the quality of health care child received	44.6	65.6#	45.0	62.5#

#Difference significant at p<0.05 between the waves within enrollee group.
No significant differences between enrollee groups.

Discussion

Overall, enrollment in Healthy Kids is associated with improved access to health care services, satisfaction with health care and reduced unmet need for health care for both children enrolled for a medical reason and children that did not enroll for a medical reason. However, those enrolled for a medical reason have significantly less reduction in use of emergency room services, and more unmet need for specialist care between the time of enrollment and after having coverage for one year. These same families also experienced more relief from the financial burden of health care than those that did not enroll for a medical reason.

In addition, children enrolled for a medical reason have different demographic profile then those that did not enroll for a medical reason. Specifically, they are lower income, less educated, and are more likely to be mono-lingual Spanish speakers. This group also reports poorer self-reported

health status and were more often enrolled in Emergency Medi-Cal. These data suggest that families of children enrolled for a medical reason have a high degree of vulnerability and may face many economic, literacy and communication challenges beyond those not enrolled for a medical reason. The fact that more are enrolled in Emergency Medi-Cal suggests that families of children enrolled for a medical reason had been more likely to seek care for their children's condition, possibly in an emergency setting, thus resulting in enrollment in Emergency Medi-Cal. The report of poorer health status among those enrolled for a medical reason is consistent with their report of a medical condition(s) as a reason for their enrollment. The fact that the majority (67 percent) of parents of children enrolled for a medical reason report enrolling because the child needed a prescription medication that the family could not afford is consistent with these families' lower income status coupled with their child's poorer health status.

Interestingly, most medical conditions reported by families of children enrolled for a medical reason are relatively common, typically acute conditions. For example, fever was the most commonly cited medical need for this group. Additionally, no families in this group reported being enrolled in California Children's Services (CCS), suggesting that many of these families face barriers when accessing basic acute care services and/ or prescription medications. It is also possible that some children in this group have chronic conditions that would not qualify them for CCS services yet still require additional medical care beyond routine well child care (e.g., asthma, re-current/chronic ear infections).

The demographic differences between groups (e.g., "enrolled for a medical reason" group appearing more "vulnerable") coupled with the child's condition (whether acute or chronic) could impact the patterns of health service use and could explain the small but significant differences in use of emergency room services, unmet need for specialist care and greater relief from financial burden experienced by those enrolled for a medical condition when compared those not enrolled for a medical condition.

After enrollment in Healthy Kids, children that did not enroll for a medical reason demonstrate a 50 percent decrease in their use of emergency services. In contrast, those that enrolled for a medical reason show persistent emergency room use. This suggests that Healthy Kids enrollment is allowing access to appropriate primary care and re-directing those with less urgent medical needs away from the emergency department. However, the persistent use of emergency services among those enrolled for a medical reason, while potentially reflective of problems with accessing primary care systems, could also be related to their poorer health status and underlying conditions.

The higher persistent emergency room use among children enrolled for a medical reason is coupled with no significant reduction in unmet need for after hours care but a significant reduction in unmet need for accident and illness care (see table 5). This suggests that improved after hours urgent care options for these children might reduce their use of emergency services. However, routine accident and illness care needs are improved for this group, suggesting an improvement in access to general pediatric acute care.

Children enrolled for a medical reason also face barriers in obtaining subspecialty care. Although both groups have similar rates of unmet need for subspecialty care at enrollment, those that did not enroll for a medical reason had virtually no such needs one year later (see table 5) while

the need among those enrolled for a medical reason persisted (albeit at a lower rate than without Healthy Kids). One explanation for the persisting (although small) unmet need for subspecialty care could be related to the well documented shortage of subspecialists, particularly for children in public health insurance programs (Hill et al. 2005, 2006). Therefore, enrollment in health insurance, while helpful, may not eliminate unmet need for subspecialist care because of the inherent lack of physician capacity in this area. The sparse subspecialist network that has less linguistic diversity and tends to be located further from families than the primary care provider creates more of an access barrier for low-income, less educated monolingual families (i.e. those enrolled for a medical reason) when compared to those that did not enroll for a medical reason (who tended to be higher-income, more educated and more bilingual).

Despite these persistent barriers for families of children enrolled for a medical reason, this study shows a marked improvement in financial burden from health care for those who enrolled for a medical reason. Prior studies have demonstrated that low-income families spend disproportionately more on health care than higher income families (Galbraith et al. 2005). This finding is consistent with that data and highlights the importance of health insurance coverage especially for low-income families.

Limitations

This study is limited by the fact that all data are self-reported. In addition, data are from one California county that surveyed a cohort of young health insurance participants (0–5 years). Families self-defined their need for medical care, creating a heterogeneous study group. Another limitation is that the study did not account for differences in the two groups (those who did and did not enroll for medical reasons) in the analysis or for aging over the two years. Finally, the improvement observed across a number of access measures for children with medical needs could be due to regression to mean rather than improvements in their access to care.

Conclusion

This study shows that access to care for children enrolling for a medical reason and those not enrolling for a medical reason was substantially improved by one year after enrollment in Healthy Kids. This shows that enrollment in health insurance is associated with improved access to timely health care and, particularly for those enrolled for a medical reason, lower out of pocket health care costs. However, families of children enrolled for a medical reason face persistent barriers in accessing subspecialty care and demonstrate persistent higher use of emergency department services when compared to those not enroll for a medical reason.

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