

# The Impact of the Los Angeles Healthy Kids Program on Access to Care, Use of Services, and Health Status

*Prepared for:*



Prepared By

**Embry Howell**  
**Lisa Dubay**  
**Louise Palmer**



**January 2008**

## TABLE OF CONTENTS

ACKNOWLEDGMENTS

EXECUTIVE SUMMARY

CHAPTER 1: BACKGROUND.....	1
CHAPTER 2: METHODS.....	5
CHAPTER 3: CHARACTERISTICS OF STUDY GROUPS .....	11
CHAPTER 4: ACCESS TO AND USE OF MEDICAL CARE.....	14
CHAPTER 5: ACCESS TO AND USE OF DENTAL CARE.....	27
CHAPTER 6: DEVELOPMENTAL ASSESSMENTS AND GUIDANCE.....	30
CHAPTER 7: SATISFACTION WITH QUALITY OF CARE, CONFIDENCE IN GETTING CARE, AND FINANCIAL DIFFICULTIES .....	32
CHAPTER 8: HEALTH STATUS AND CHILD DEVELOPMENT.....	35
CHAPTER 9: CONCLUSIONS .....	48
REFERENCES .....	51

## **ACKNOWLEDGMENTS**

The staff of the survey division of Mathematica Policy Research, under the leadership of Martha Kovac and Betsy Santos, led the sampling and fielded the survey, achieving very high response rates. We appreciate the support of First 5 LA, whose generous funding made this project possible. Our project officer, William Nicholas, provided critical support and comments throughout survey development and analysis. Our project director, Ian Hill, along with Jenny Kenney, Chris Trenholm, Brigitte Courtot and Patricia Barreto reviewed the manuscript and provided helpful comments. We are grateful to statistical consultants Tim Waidmann and Doug Wissoker as well as research assistants Dawn Miller and Asya Magazinnik for their valuable input. We appreciate the help of Elaine Batchlor and Eleanor Young of L.A. Care Health Plan, who facilitated our access to data for sampling. And finally, we are grateful to the hundreds of parents in Los Angeles County who generously gave their time and input when responding to our surveys.

## EXECUTIVE SUMMARY

In July 2003 a new program called Healthy Kids began in Los Angeles County, California. The program provides health coverage for uninsured children in families with income below 300 percent of the federal poverty level who are not eligible for Medi-Cal or Healthy Families (California's State Children's Health Insurance Program).

This report presents results from the evaluation of the Los Angeles Healthy Kids Program showing the impact of the program on newly enrolling children one to five years of age. We found substantial positive impacts on access to care; use of specialty and dental care services; unmet need for ambulatory, preventive, specialty and dental services; and parent confidence in getting care, satisfaction with quality of care, and reduced financial worries. For example:

- The percent of children with a usual source of medical care increased by 14.7 percentage points.
- The percent with a usual source of dental care increased by 27.5 percentage points.
- The percent with an ambulatory care visit increased by 7.4 percentage points.
- The percent of children that received specialist care increased by 5.7 percentage points.
- The percent with dental care increased by 14.4 percentage points.
- Unmet need for specialty care decreased by 6.5 percentage points.
- Unmet need for dental care decreased by 9.0 percentage points.
- The percent of parents reporting that they were confident they could get care for their child increased by 21.5 percentage points.
- The percent of parents satisfied with their child's health care quality increased by 16.0 percentage points.

The strong health care safety net for children in Los Angeles provided substantial protection for uninsured children prior to the advent of Healthy Kids, and many already had a usual source of care and preventive care before they enrolled in the program. However, there is strong evidence that their care improved after they enrolled, especially among those who had no usual source of care before enrolling. These improvements in access and use of services led to a 4.7 percentage point reduction in emergency room use after enrollment in Healthy Kids.

Most important, the health of these young children improved in the year after they enrolled in the program, as perceived by their parents, according to several measures. This suggests that Healthy Kids has improved the prospects of success for these young children as they approach school age.

## **CHAPTER 1: BACKGROUND**

In July 2003, a new program called Healthy Kids began in Los Angeles County, California with the goal of extending universal health insurance to children in families with incomes below 300 percent of the federal poverty level. To achieve this goal, Los Angeles adopted models from similar initiatives underway in other California counties. The key components of the Los Angeles Healthy Kids program include:

- Intensive outreach and simplified enrollment assistance provided through a network of community-based organizations;
- New insurance, “Healthy Kids,” to cover uninsured children under 300 percent of the federal poverty level who are not eligible for Medi-Cal or Healthy Families (California’s State Children’s Health Insurance Program, or SCHIP);
- A benefit package modeled after that of the Healthy Families that covers a comprehensive set of preventive, primary, and specialty care services, including dental and vision care; and
- Income-related premiums and co-payments (families with incomes below 133 percent of poverty pay no premiums).

The roots of the program lie in Proposition 10—The California Children and Families First Act of 1998—which added a \$0.50 tax on cigarettes and other tobacco products with revenues earmarked for activities to promote, support, and improve early development among children from the prenatal period through age five. Twenty percent of funds collected through the tax were allocated to a new state Proposition 10 Commission, while 80 percent were proportionately distributed to county-level Commissions. In Los Angeles, First 5 LA administers these funds and, in July 2002, its Commissioners decided to devote \$100 million of its budget to create the Healthy Kids program. The program initially began in July 2003 by enrolling children ages 0-5 using these funds from First 5 LA. Subsequent fundraising efforts by the Children’s Health Initiative of Greater Los Angeles (CHI) raised an additional \$86 million,

permitting Healthy Kids to expand coverage to children ages 6 through 18 beginning in May 2004. Enrollment in that age group was so rapid that a “hold” was imposed on enrollment of children ages 6-18 in June 2005 and remains in place today. Enrollment for children ages 0-5 remains open.

The Healthy Kids program evaluation is designed to provide feedback to stakeholders on the progress and impacts of the initiative. First 5 LA has contracted with The Urban Institute and its partners—the University of Southern California, the University of California at Los Angeles, Mathematica Policy Research, Inc., and Castillo & Associates—to conduct the evaluation, which is producing a series of reports based on case studies of implementation; focus groups with parents; ongoing process monitoring (using secondary data sources); and a longitudinal survey of parents of children enrolled in Healthy Kids (the subject of this report). Because funding for the survey component of the evaluation comes solely from First 5 LA, we focus our impacts analysis only on Healthy Kids enrollees ages 0-5.<sup>1</sup> The evaluation began in May 2004 and several reports have been produced to date.<sup>2</sup>

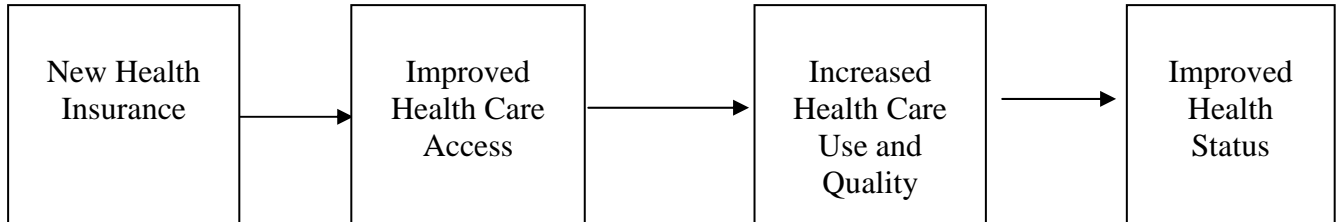
This report presents results regarding the impact of the Healthy Kids program on enrollees’ access to care, use of services, and health status. Questions regarding the program’s impact are based on the following “logic model,” which shows how increasing health insurance coverage might improve access to care, service use, and health status:

---

<sup>1</sup> Beginning September 2004, The California Endowment also provided funds to the evaluation to support additional evaluation activities and, as a result, most other study components assess the program as it serves children of all ages.

<sup>2</sup> See the web sites of The Urban Institute ([www.urban.org](http://www.urban.org)) and First 5 LA ([www.first5la.org](http://www.first5la.org)) for additional reports and briefs.

**Figure 2.1**  
**Logic Model**  
**Evaluation of Los Angeles Healthy Kids**



As shown, first new health insurance is offered to previously uninsured children. As a result of reduced financial barriers, some children are linked to new usual sources of medical and dental care. Children then receive additional medical and dental services, both preventive and curative. This may improve parents' confidence in getting care and satisfaction with the quality of care. The final result is improvement in health.

Using this framework, the impact analysis addresses the following major research questions:

- How did enrollment in the Healthy Kids program affect children's access to care, their use of medical and dental services, and their unmet need for such services?
- To what extent did enrollment in the Healthy Kids program improve parents' satisfaction with the care received and the content provided?
- Did enrollment in the Healthy Kids program improve child health and reduce parents' developmental concerns?

The analysis is based on data from two waves of a parent survey. Parents of "new" enrollees were interviewed in Wave One as soon as possible after enrollment. Parents of "established" enrollees were interviewed in Wave One as soon as possible after their children renewed coverage in the program after one year of enrollment. The parents of both groups of children were re-interviewed a year after their initial interview.

Because of this longitudinal design, it was possible to ask three different evaluation questions concerning the impact of the program. These are:

- **Did outcomes for new enrollees in Wave One (for example, having a usual source of care) differ from those for established enrollees in Wave One?** This question has been asked in previous evaluations of health insurance expansions for children, when a longitudinal design was not possible. When established enrollees have better outcomes than new enrollees, it has been interpreted as a positive program impact (Wooldridge et al., Trenholm et al. 2005 and Howell et al. 2007).
- **Did outcomes improve over time for new enrollees?** New enrollee outcomes in Wave One are compared to outcomes for the same children in Wave Two.
- **Is the rate of improvement greater among new enrollees than among established enrollees?** This “difference-in-differences” approach introduces a control for secular trends unrelated to the Healthy Kids program that could affect both groups, such as improved availability of health services in the community.

Statistical controls were used to adjust for baseline differences between new and established enrollees, and for differences that occurred over time (such as aging between the two waves).

## **CHAPTER 2: METHODS**

The evaluation of Los Angeles Healthy Kids has multiple components, each addressing different evaluation questions. One critical evaluation component is the impact analysis. The impact analysis serves a key role in the evaluation, because it is the component that best answers questions about whether the program achieved some of its critical goals such as improved access to care, increased health service use, and improved health status.

### **Parent Survey**

The analysis uses data from the Healthy Kids parent survey. Mathematica Policy Research (MPR) conducted the survey under a sub-contract with the Urban Institute. Wave One data collection occurred in April through December 2005, and Wave Two data collection occurred from May 2006 to January 2007.

In both waves of the survey, parents were asked about their experiences with and use of the health care system as well as about the health status and development of their children. The survey instrument<sup>3</sup> was similar to those used in the evaluations of the Healthy Kids programs of Santa Clara and San Mateo Counties (Trenholm et al. 2005, Howell et al. 2005), which were based on the survey instrument used in the Congressionally Mandated Evaluation of the State Children's Health Insurance Program (Kenney, et al. 2005). For the Los Angeles Healthy Kids evaluation, we added a series of questions focusing on developmental issues for children ages 0-5 from the Parent Evaluation of Developmental Status (PEDS) and the Promoting Healthy Development (PHD) Surveys (Glascoe 1997, Bethell 2001). The content of the Wave One and Wave Two interviews was very similar. The Wave One interview averaged 36 minutes in length, and the Wave Two interview was about 10 minutes shorter, since it was not necessary to repeat all questions.

---

<sup>3</sup> The survey instrument is available upon request from the authors.

Most parents were interviewed by telephone. A small proportion who could not be contacted by telephone were interviewed in person. The majority of interviews were conducted in Spanish (87 percent), followed by English (8 percent) and Korean (5 percent).

Many survey questions asked about experiences (such as use of health services) during a fixed time period. For new enrollees in Wave One, parents were asked about the six months just prior to enrolling in Healthy Kids. For established enrollees in Wave One, and both groups in Wave Two, parents were asked about the six months just prior to the interview.

Project resources allowed for the completion of approximately 1000 interviews during Wave One, about half with new enrollees and about half with established enrollees. Drawn from a list of Healthy Kids enrollees from LA Care,<sup>4</sup> the sample included children ages 12-72<sup>5</sup> months who either were newly enrolled in Healthy Kids during the months of March-July 2005 (new enrollees), or who were enrolled during the months of March-July 2004 and had been in the program for one year (established enrollees).<sup>6</sup>

The response rate was higher than anticipated for both Wave One and Wave Two. In Wave One, of the 1,480 sampled children, 1,087 interviews were successfully completed – a response rate of 86 percent, after excluding 168 sampled children who were ineligible.<sup>7</sup> The response rate among new enrollees (82 percent) was lower than among established enrollees (91 percent).<sup>8</sup>

---

<sup>4</sup> LA Care is a not-for-profit managed care plan that administers the Healthy Kids program and the network of providers from whom Healthy Kids enrollees receive care.

<sup>5</sup> Infants were excluded because very few are enrolled in Healthy Kids, and because infant health care is very different from that of children ages 1-5. Children over 72 months old in Wave One were excluded because First 5 LA (the primary funder of the evaluation) is concerned with health care for children under age 6.

<sup>6</sup> More detail about the sampling plan is contained in the Wave One survey report (Howell et al. 2006).

<sup>7</sup> A brief screening interview determined if they were either the wrong age or were no longer enrolled in Healthy Kids.

<sup>8</sup> The reason for this difference in response rates between the two groups is that initially lower response rates from established enrollees resulted in more targeted locating. The locating uncovered a higher level of ineligibility, for

Wave Two interviews were completed with 975 of the 1,087 families who completed a Wave One interview (90 percent of eligible respondents), overall 77 percent of the original sample.<sup>9</sup> The response rate for new enrollees was 88 percent of eligible respondents and for established enrollees was 92 percent of eligible respondents. All parents were re-contacted, regardless of whether their child had renewed coverage. Ten percent of sampled families could not be located, and this was the overwhelming reason for non-response to the survey.

There were two significant demographic differences between children who were “lost-to-follow-up” and those whose parents were re-interviewed in Wave Two. Those lost-to-follow-up were more likely to have family incomes less than \$10,000 per year than those who responded. However, in contrast, their parents were more likely to have some college education.

Each child was assigned a sample weight according to his or her probability of selection into the sample and taking into account the complex sample design. The weight also included a non-response adjustment to account for non-response to both Wave One and Wave Two.

### **Analytic Methodology**

A quasi-experimental longitudinal design was used to address the evaluation questions listed above in Chapter One. As indicated, we addressed three questions concerning the impact of enrollment in Healthy Kids. The design used data from both waves to assess differences between the two groups in Wave One, changes over time between the waves for new enrollees, and differences in their rates of change (“difference-in-differences”).

Previous studies of the State Children’s Health Insurance Program (SCHIP) and the Santa Clara and San Mateo Children’s Health Initiatives have used survey instruments and collected

---

example, due to moving out of Los Angeles County. As a result, the response rate for established enrollees was higher.

<sup>9</sup>Calculated by dividing the number of completed follow-up surveys by the number of eligible baseline cases (or 975/1,262).

data similar to the Los Angeles Healthy Kids Evaluation Wave One survey to assess the impacts of those programs. As part of the LA Evaluation, such an analysis was conducted for Wave One on a limited set of access and use variables (Dubay et al., 2006). The main drawback to this cross-sectional approach is that those who enrolled in the program earlier (the established enrollees) may be different from those who enrolled one year later in ways that are difficult to measure and control for in the multivariate analysis.

A longitudinal design compares changes over time for the same child, avoiding the non-equivalent comparison group problem. This approach was used by Lave et al. (1998) to evaluate a child health insurance expansion in Pennsylvania. While this approach has the advantage of using individual children as their own control, it introduces another problem, which is that factors other than the Healthy Kids program could affect the changes observed, such as health system changes.

The analysis conducted for this evaluation produced estimates using both of these approaches, as well as a new estimate of program impact that has not been used in previous evaluations of child health insurance expansions. The new approach, a difference-in-differences model, subtracts the change in outcomes between Wave One and Wave Two for the established enrollees from changes in the same outcomes for new enrollees. This difference removes the effect of non-program-related secular factors that affect outcomes for both groups. This impact measure also has a potential flaw. The design assumes that all of the program effects occur during the first year of the program, and do not continue into the second year of enrollment. For example, children may continue to gain improvements in their health in their second year of enrollment as a result of receiving comprehensive continuous care in the first year. To the extent that the program continues to affect the outcomes under study in both the first and second years

of enrollment, the estimate will understate the impact of the program. Consequently, it is important to examine all three impact measures, since each has its own advantages and flaws.

Since it was not possible to have a randomized design, it was critical to use a regression model to adjust for differences in the two comparison groups, new and established enrollees, at two points in time. For example, all of the children in the study aged one year between waves and lived one additional year in Los Angeles County. These factors could have affected many important outcomes such as health service use and health status. Consequently, it is critical that each outcome that was examined be adjusted for changes between groups and over time. A logistic regression model using the following formula makes these adjustments and tests for statistical significance in the differences between groups. The model is specified as follows:

$$\ln (P_i/1-P_i) = \beta_1 + \beta_2\text{New} + \beta_3\text{Time2} + \beta_4\text{New*Time2} + \beta_k X_k,$$

Where  $P_i$  is equal to the probability that the outcome  $i$  equals 1; New indicates that that the child is a new enrollee; Time2 indicates that the observation is from Wave Two; and  $X_k$  is a vector of control variables, as follows: age, income, sex, family structure (spouse/adult partner in household), citizenship, child's health during infancy relative to other infants, language spoken, number of children in the household, parent's education, household employment status, length of time parent has lived in LA county, and month the child enrolled in Healthy Kids.

The regression modeling was programmed in STATA, which accounts for the complex sample design of the survey and makes an adjustment (the "Norton adjustment," see Ai and Norton, 2003) to the standard error and point estimates for the interaction term (New\*Time2). The analysis takes into account the repeated measurement of each child using the robust cluster option in STATA.

For simplicity of presentation, we present regression-adjusted means to compare outcomes in Wave One between new and established enrollees, and to compare outcomes over time for both new and established enrollees. Adjusted means reflect the levels and changes that would occur if all enrollees had the characteristics of established enrollees in Wave One. The statistical test for significance in each difference comes from the regression model above, as follows:

- Is the outcome better in Wave One for established enrollees than for new enrollees? (Is  $\beta_2$  is significantly different from zero?)
- Does the outcome improve for new enrollees between Wave One and Wave Two? (Is  $\beta_2 + \beta_4$  significantly different from zero?)
- Is the change for new enrollees between Wave 1 and Wave 2 greater than the change for established enrollees? (Is  $\beta_4$  significantly different from zero?) This is the difference-in-differences estimator.

### **CHAPTER 3: CHARACTERISTICS OF STUDY GROUPS**

Before presenting the impact analysis, it is important to examine characteristics of the two study cohorts to see how and to what extent they differed in Wave One, at the beginning of the study. The parent survey captured many demographic characteristics of Healthy Kids enrollees and their families that allow us to observe and control for many of these important differences that could lead to differences in outcomes with or without Healthy Kids.

As shown in Table 3.1, new and established Healthy Kids enrollees and their families share generally similar demographic profiles. Both groups of children live in predominantly low-income families, are mostly of Latino ethnicity, and are not U.S. citizens. Linguistic ability is an indicator of acculturation to the United States, and the large majority of enrollee families speak only Spanish at home (72.9 percent of new enrollees and 70.4 percent of established), although a good proportion live in bilingual families (17.8 percent of new and 19.3 percent of established). The majority of parents of both groups has not graduated from high school, and the large majority of both groups lives in households with either married parents or with a parent and their partner. Most parents of both groups work full-time: 72.4 percent of established enrollees compared to 65.0 percent of new enrollees.

However, the two groups differ in two distinct ways. Established enrollees are older on average than new enrollees by just over half a year, and their parents have lived longer in Los Angeles County. Both of these differences are in part an artifact of the study design, since children in the established groups have been enrolled one year longer.

**Table 3.1**  
**Demographics Characteristics of Healthy Kids Enrollees at Wave One**

	New Enrollees	Established Enrollees
	Percentage	
<b>Level of Poverty (% of FPL)</b>		
< 100	85.9	84.8
100-199	11.9	14.2
200-299	2.2	1.0
<b>Race/ethnicity</b>		
Latino	87.6	87.5
Asian, not Latino	8.9	10.9
Other, not Latino	3.5	1.6
<b>Citizenship</b>		
Citizen	9.3	6.4
Non-citizen	90.7	93.6
<b>Language spoken in child's home</b>		
Spanish	72.9	70.4
Korean	4.6	6.7
English	3.2	2.2
Other	1.5	1.5
More than 1 language	17.8	19.3
<b>Parental educational attainment</b>		
Less than high school	52.0	52.2
High school graduate	25.4	20.7
Any college or training	23.0	27.1
<b>Parent's spouse/adult partner in household</b>		
Yes	83.5	86.7
No	16.5	13.3
<b>Parental employment</b>		
Full-time	65.0	72.4
Part-time	26.1	20.3
Unemployed	8.9	7.3
<b>Age*</b>		
1	10.4	2.4
2	14.8	11.3
3	20.4	19.4
4	22.9	31.2
5	32.6	35.8
Average age (years)	4.0	4.6
<b>Years in L.A. County (parents)*</b>		
<1-3	69.3	45.9
4-5	21.4	43.0
6+	9.2	11.1
N	547	535

\* $\chi^2$  test significant,  $P < .05$

In summary, large majorities of both groups of children are from very poor Latino families. They often live with both parents, and usually one or both of their parents are working, at least part-time. The major differences in the groups have to do with their age and the length of time they have lived in the county. Our regression models control for all of these factors, to create comparisons between groups that are statistically as similar as possible, given the data available.

## **CHAPTER 4: ACCESS TO AND USE OF MEDICAL CARE**

The primary goal of the Healthy Kids program is to provide insurance coverage and, by extension, to improve access to health care for previously uninsured children and therefore increase their use of needed health services. As shown in the logic model in Chapter 1, access to care (often measured by whether the child has a usual source of care) is considered a necessary precursor to obtaining medical care (Starfield, 1992). Having a usual source of care should lead to increased use of primary and preventive services (“realized access”). The American Academy of Pediatrics recommends that one-year-old children receive two preventive visits a year and that two to five year olds receive one such visit annually. In addition to requiring routine primary and preventive care, most young children have periodic episodic illnesses that require a physician visit, and some have chronic conditions that need frequent monitoring and treatment. When a child needs medical care but cannot get it, another measure of the lack of access is “unmet need” for the particular service.

Healthy Kids members receive a comprehensive set of benefits which include preventive, primary, acute, and specialty health care services. The nonprofit L.A. Care Health Plan delivers these services to enrollees through a defined network of primary and specialty care providers that was created especially for the Healthy Kids program. The L.A. Care network has been built largely around the county “safety net” system, which includes community and health department clinics, Federally Qualified Health Centers, and public hospitals. This structure reflects program designers’ beliefs that these entities had more experience serving the target population and would be particularly successful at extending health, developmental and support services to disadvantaged families. L.A. Care offers enrollees a choice of over 1,400 primary care providers (PCPs)—300 of whom practice in safety-net settings—and the Healthy Kids network also

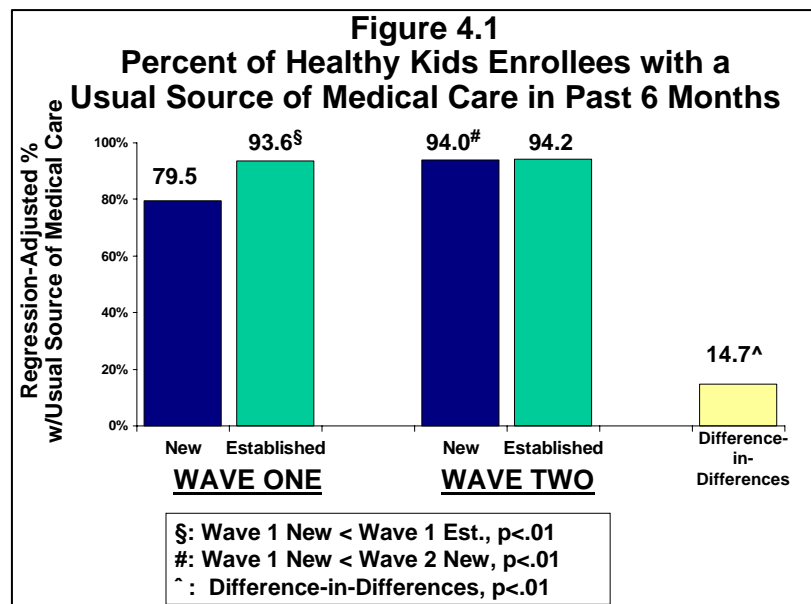
includes nearly 2,500 specialists and 45 hospitals (Hill, Courtot and Wada, 2005). To help promote continuity of care for the entire family, the health plan requires that providers participating in Healthy Kids must also accept Medi-Cal and Healthy Families. Healthy Kids dental services are delivered under a subcontract with Safeguard Dental, and vision services are delivered through the VSP network. L.A. Care recently contracted with the Pacific Care Behavioral Health network, giving Healthy Kids enrollees access to 2,000 behavioral health care providers across the county. Children with qualifying chronic conditions or disabilities are eligible to receive specialty care through the California Children's Services program (the state's Title V/Children with Special Health Care Needs program) through another "carve out" arrangement.

This report estimates the impact of enrollment in the Healthy Kids program on perceived and realized access to medical care using information from both waves of the parent survey. Specifically, impact estimates were derived using responses to the following three types of survey questions:

- *Usual Source of Care:* Do you have a particular place that your child usually goes to if he/she is sick or you need advice about his/her health?
- *Use of Services:* During the past six months, did your child see a doctor or any other health care professional such as a physician assistant or nurse? Did he/she see a doctor or health professional for preventive care, such as a check-up, well-child visit, shots, or physical examination? Did your child go to a hospital emergency room? Did your child see a specialist? Did your child have an overnight hospital stay?
- *Unmet Need:* During the last 6 months, was there any time that your child needed to see a doctor or other health professional because of an illness, accident, or injury but did not go? Needed to see a doctor or other health care professional for preventive care such as a well-child visit, checkup or physical examination but did not go? Needed to see a specialist but did not go? Needed a prescription drug but did not get it?

## Usual Source of Care

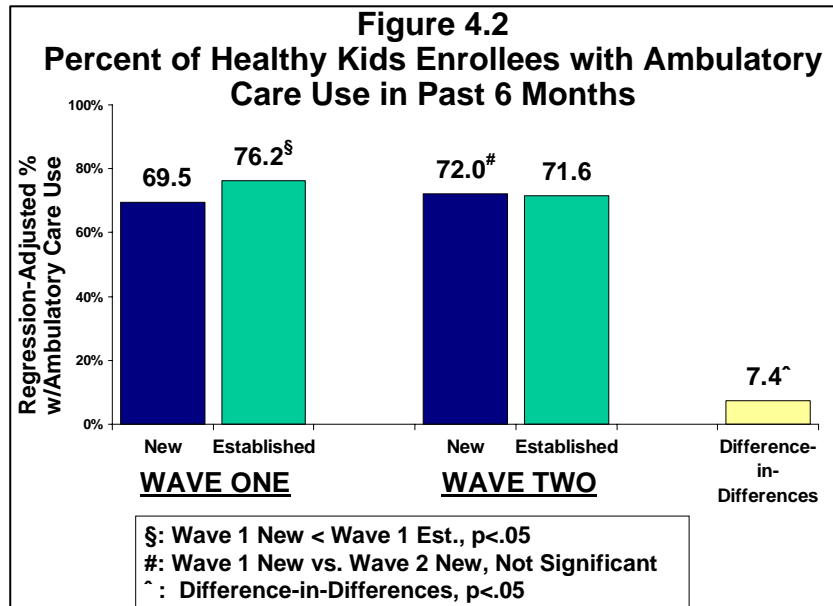
It is apparent that enrollment in Healthy Kids improved access to care, as shown in Figure 4.1, which presents regression-adjusted estimates of the percent of enrollees with a usual source of care by study cohort and survey wave. When new enrollees were compared to established enrollees at the first wave – as was done in previous evaluations and in our previous issue brief (Dubay and Howell, 2006) – after adjusting for age and demographic characteristics, the share of new enrollees with a usual source of care was substantially lower than the share of established enrollees (79.5 percent vs. 93.6 percent). However, by Wave Two the two cohorts had almost identical rates (94.0 percent and 94.2 percent respectively). It is apparent that all of the improvement in this important indicator of access occurred in the first year of the program. The impact of the program during the first year was a 14.7 percentage point increase in the likelihood of having a usual source of care (the difference-in-differences measure), which was highly significant.



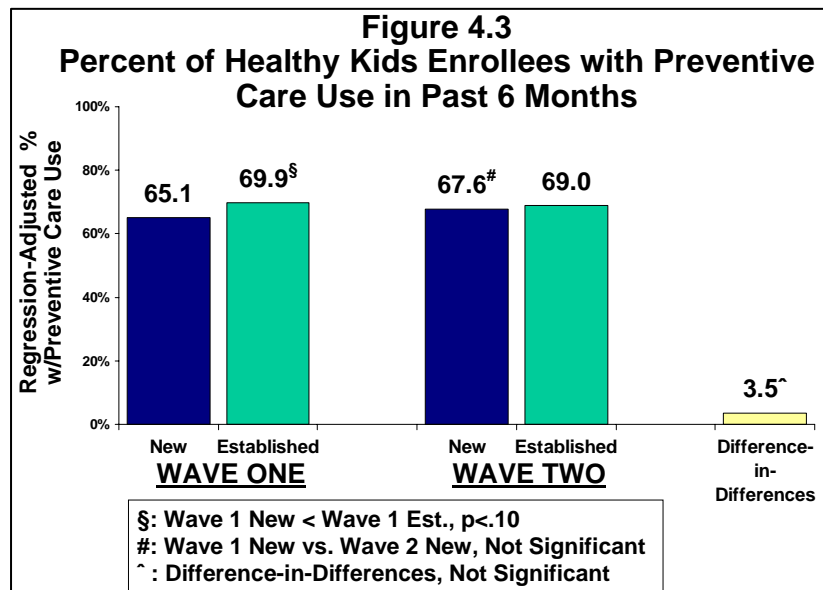
## Use of Services

As with having a usual source of care, use of services also increased as a result of enrollment in the program.

Figures 4.2-4.3 present estimates of the impact of Healthy Kids on having any ambulatory or preventive care visit during the six month reference period prior to the survey. At Wave One, new enrollees were significantly less likely to have an ambulatory visit of any kind in the six months before they enrolled in Healthy Kids than were established enrollees. Both groups had relatively high rates of ambulatory care use, after adjusting for differences in the cohorts (69.5 percent for new enrollees and 76.2 percent for established enrollees). New enrollees did not experience a significant change in ambulatory care visits between Wave One and Wave Two. After netting out the change for established enrollees, we find a positive and significant increase in ambulatory care of 7.4 percentage points.



Different patterns were observed for having a preventive care visit in the past six months. The likelihood of having a preventive care visit did not increase significantly between Wave One and Wave Two for the new enrollees. The difference between established and new enrollees at baseline was similar to the estimate of the impact of enrollment in the program obtained using the difference-in-differences approach, a 3.5 percentage point increase in having a preventive care visit. While the former was statistically significant at the  $p < 0.10$  level, the difference-in-differences did not obtain statistical significance.<sup>10</sup>

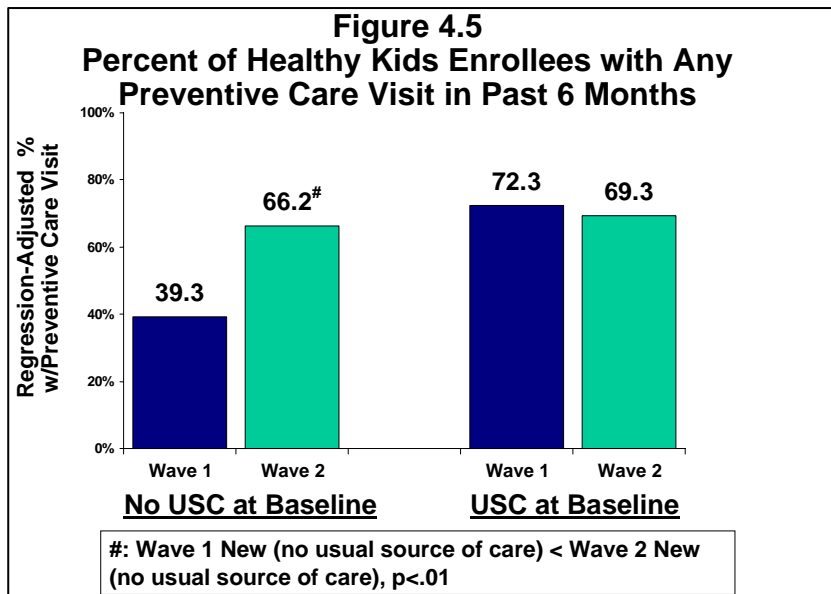
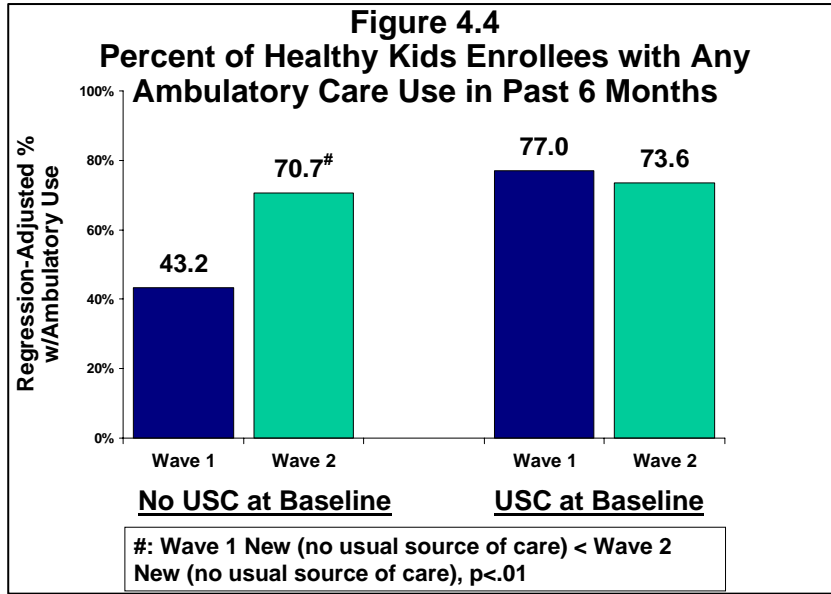


The impact of Healthy Kids on use of ambulatory care is likely muted by the strong safety net in place in Los Angeles that was serving many children prior to enrollment in Healthy Kids (Hill, Courtot, and Wada, 2005). At Wave One, during the period just before they enrolled in Healthy Kids, fully 73.6 percent of new enrollees already had a usual source of care. In addition, 75.0 percent of new enrollees indicated that a clinic was their usual source of care.

<sup>10</sup> One methodological limitation to difference-in-differences estimation is that it requires a substantially larger sample to attain the same degree of statistical power to find a significant difference.

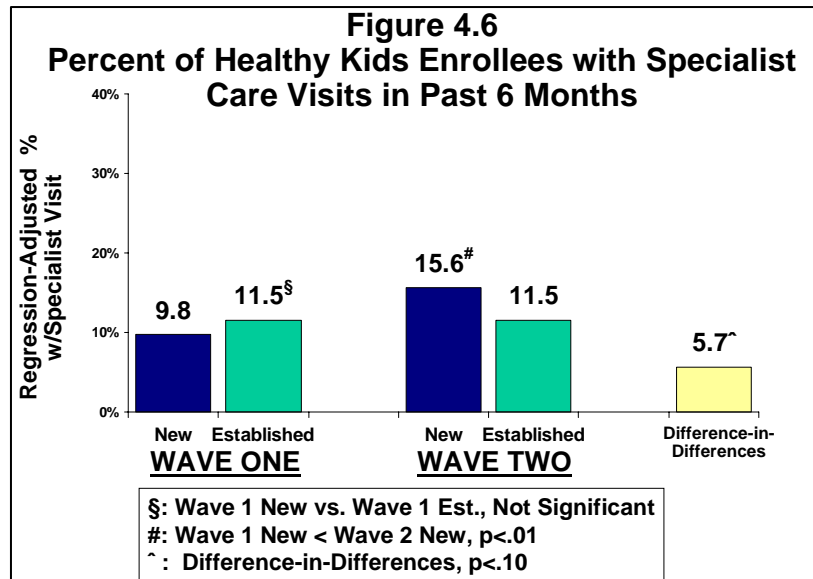
Many uninsured children in Los Angeles, especially those served by clinics, receive subsidized ambulatory care either through public programs such as the Child Health and Disability Program (CHDP) or Emergency Medi-Cal, or pay for services via a sliding scale fee. The county's Public Private Partnership (PPP)—a joint effort between the Department of Health Services and contracted physicians and clinics—provides limited funding for outpatient primary care services to low-income individuals (at or below 133 percent of FPL) of all ages. In light of these programs, the financial barriers to care for uninsured children are typically not severe.

We performed a sensitivity analysis to determine whether the impact on ambulatory care and preventive care use was strongest for children without a usual source of care before they enrolled in Healthy Kids. Not surprisingly, increases in use of services for new enrollees varied dramatically based on whether the child had a usual source of care. When changes in the use of health care for new enrollees who had no usual source of care prior to enrollment in the program were compared to those of enrollees who did have one, large and important improvements in the use of services were observed (See Figures 4.4-4.5). For example, while new enrollees who had a usual source of care showed no increase in the likelihood of having an ambulatory care visit, those who had no usual source of care showed a 27.5 percentage point increase. Those without a usual source of care had a 26.9 percentage point increase in the likelihood of having a preventive care visit. For both these outcomes, children who had a usual source of care in Wave One showed patterns that were similar to those of established enrollees.

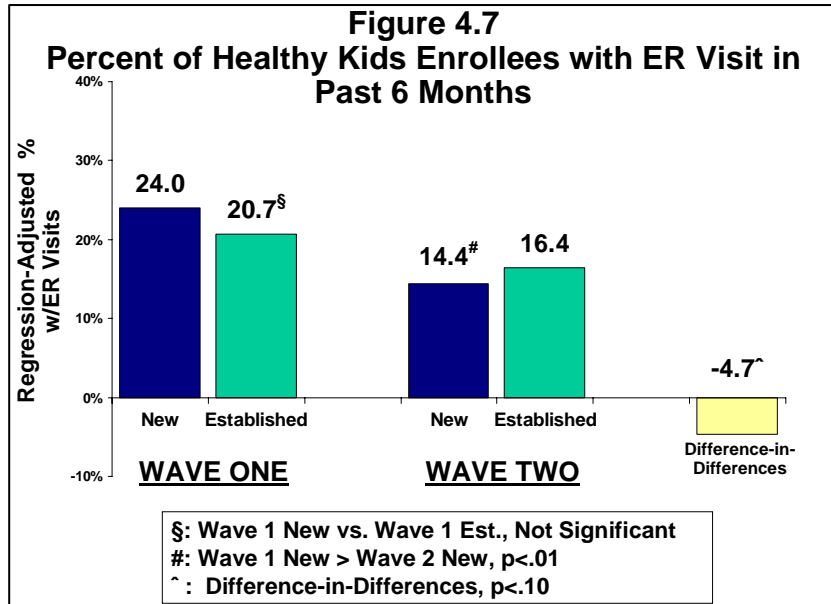


The pattern for specialist care is somewhat different (Figure 4.6). There was no significant difference at Wave One between the rates of specialist use of new and established enrollees (9.8 percent and 11.5 percent respectively had a specialist visit in the past six months—see Figure 4.6). The likelihood of visiting a specialist increased significantly, from 9.8 to 15.6

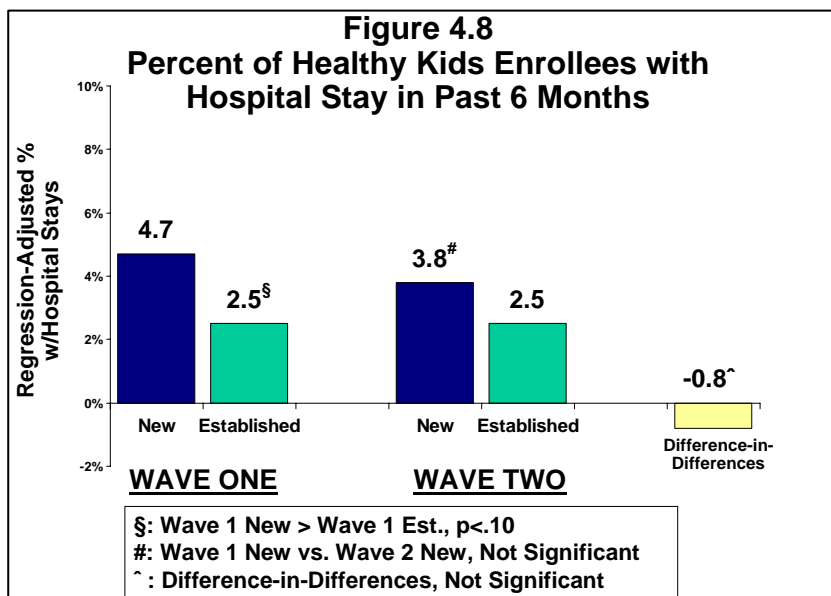
percent, for new enrollees but remained flat for established enrollees. Thus, the difference-in-differences change was 5.7 percentage points and significant at the  $p < 0.10$  level. This finding is consistent with qualitative feedback that there are substantial barriers to obtaining specialty care for uninsured children in Los Angeles that are partially overcome with the new insurance (Hill, Courtot, Barreto, and Wada, 2006).



Another positive trend is a decline in the percent of children who had an emergency room visit (Figure 4.7). Twenty-four percent of new enrollees had an emergency room visit in the six months prior to enrolling in the program, compared to 14.4 percent in an equivalent time period one year later. The decline in emergency room use for new enrollees was greater than for established enrollees and, as a result, enrollment in the program resulted in a 4.7 percentage point decline in the probability of having an emergency room visit ( $p < 0.10$ ). This decline is consistent with the theory that increased ambulatory and preventive care, and especially specialty care, can treat urgent conditions outside an emergency room.



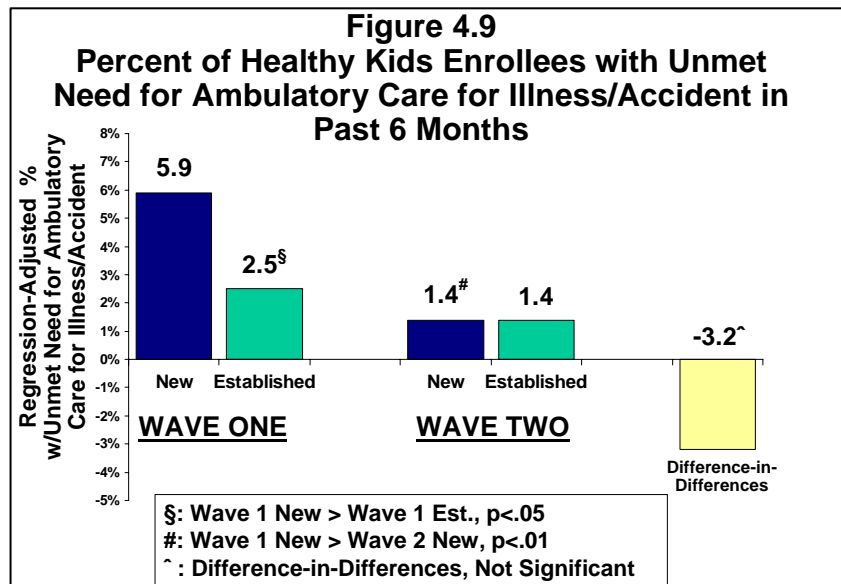
The rate of inpatient hospital stays was significantly higher for new than established enrollees in Wave One (4.7 percent vs. 2.5 percent), but there was no significant decline between Wave One and Wave Two (Figure 4.8). There was therefore no significant difference-in-differences over the time period.



## Unmet Need

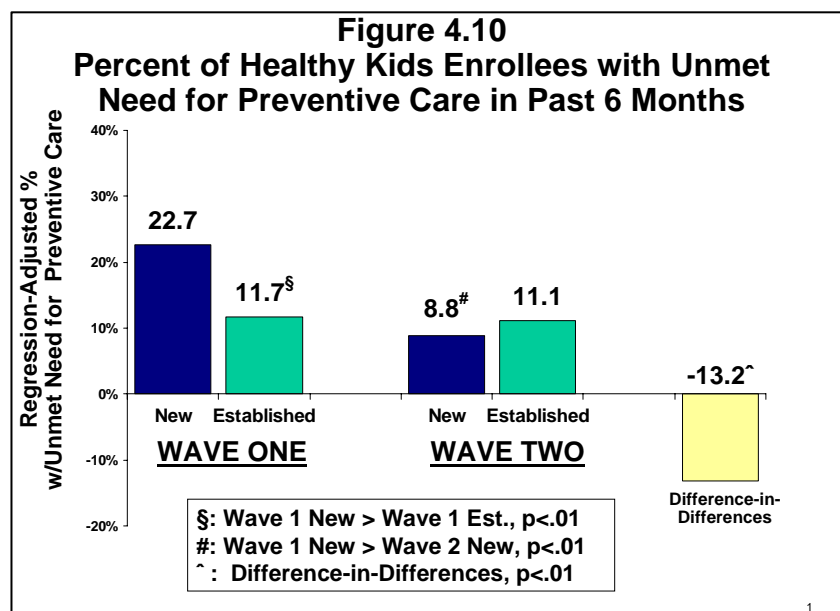
As another measure of improved access to care, we examined changes in the degree to which parents reported that they did not obtain care for their child when he or she needed it (“unmet need”). There was a reduction in unmet need for ambulatory care, preventive care visits, visits to specialists, and prescription drugs (Figures 4.9-4.12).

At Wave One, 5.9 percent of new enrollee parents reported that their child needed ambulatory care for an injury or illness but did not get it, significantly different from established enrollees at that time (only 2.5 percent). One year later, only 1.4 percent of new enrollees experienced unmet need for ambulatory care, a significant decline. The decline in unmet need for new enrollees net of that decline for established enrollees of 3.2 percent was not statistically significant. However, it was very close to the significant difference between new and established enrollees at Wave One.



There were also large and significant reductions in unmet need for preventive care. About 23 percent of new enrollee parents in Wave One reported that their child did not receive the

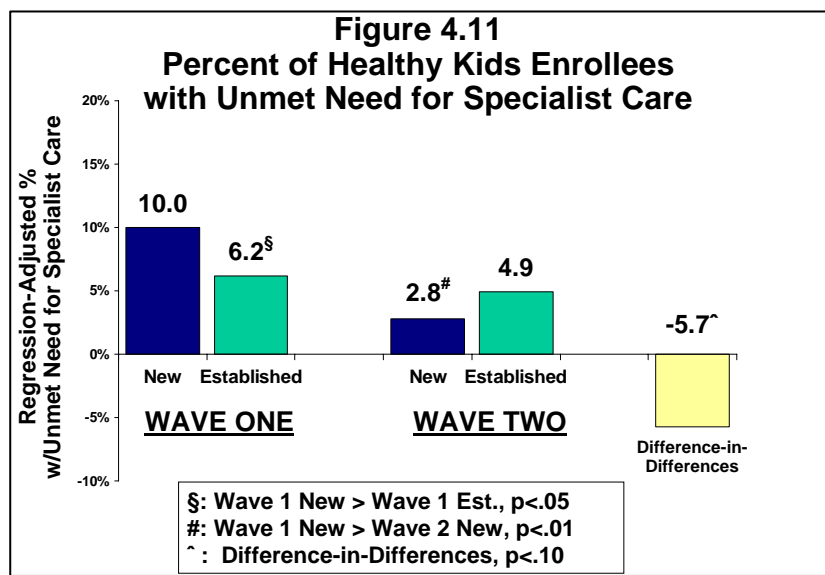
preventive care he or she needed, compared to 8.8 percent in Wave Two. This report from parents contrasts somewhat with the very moderate changes in preventive care use over the same period, as well as the findings from the qualitative study that the safety net system makes preventive care accessible. The difference-in-differences estimates suggest that enrollment in the program resulted in a 13.2 percentage point decline in the probability of having unmet need for preventive care. This estimate is consistent with the difference between new and established enrollees in Wave One.



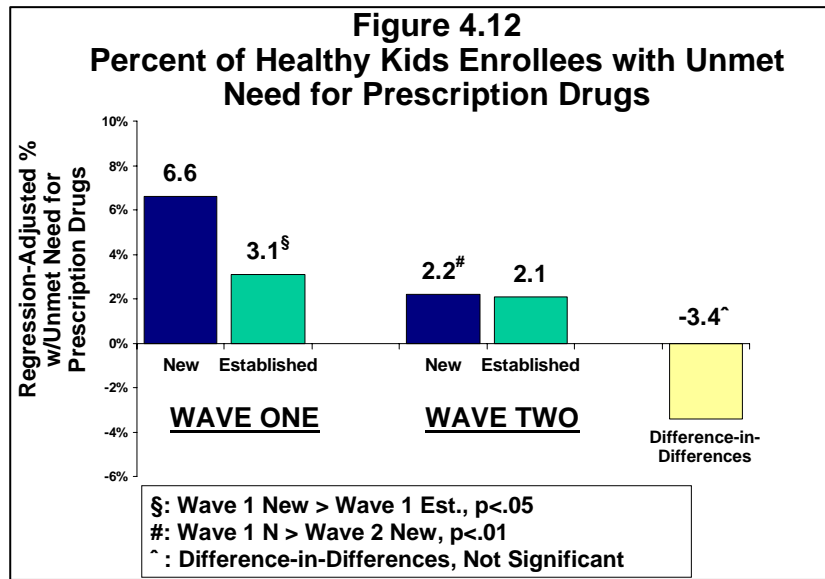
Even in Wave Two, after they had been enrolled in Healthy Kids for either one or two years, about 10 percent of both new and established enrollees experienced unmet need for preventive care. It is apparent that barriers to obtaining preventive care remain for some children. In the Wave One survey report, some evidence for reasons for unmet need for preventive care emerged from the reasons parents gave for not obtaining preventive care, even when their child needed it. Among the 66 parents of established enrollees who reported an unmet need for preventive care, reasons for having an unmet need fell into several categories, including parent

information issues such as believing the provider did not accept their insurance or not knowing where to go; transportation issues; access issues, such as not being able to schedule an appointment soon enough or not getting approval from the plan; cost issues; or missed appointments.

Unmet need for specialist care also declined as a result of enrollment in the program. While most children neither use nor need specialist care, ten percent of new enrollee parents in Wave One said their child needed specialist care but they did not receive it during the six months before enrolling in Healthy Kids. This compares to 6.2 percent of established enrollees having unmet need, a significant difference. Unmet need for specialist care declined during the year after the Wave One survey, to 2.8 percent for new enrollees. Netting the decline for established enrollees out of the decline for new enrollees indicates that enrollment in the program resulted in a 5.7 percentage point decline in the likelihood of not going for needed specialist care, significant at the  $p < .10$  level. This estimate is quite similar to the significant difference observed between new and established enrollees in Wave One.



Finally, there is evidence that unmet need for prescription drugs was reduced as a result of the program (Figure 4.12). The probability of having unmet need for prescription drugs decreased from 6.6 percent to 2.2 percent between Wave 1 and Wave 2 for new enrollees – a significant decline. Netting out the change for established enrollees resulted in a 3.4 percentage point decline in unmet need, but this was not statistically significant. However, this estimate is identical to the difference between new and established enrollees in Wave 1, which was significant at the  $P < .05$  level.



## CHAPTER 5: ACCESS TO AND USE OF DENTAL CARE

Dental care is the most prevalent unmet need and dental caries the most prevalent infectious disease rate among children (Newacheck et al., 2000). As with primary care, the Los Angeles Healthy Kids program has taken special steps to assist parents with establishing a usual source of dental care for their children. The program contracts with Safeguard Dental, which has a network of 2300 dentists—including 300 pediatric specialists—to serve Healthy Kids children, and assists parents with selecting a dental care provider as part of the enrollment process (Hill, Courtot, and Wada, 2005).

To examine the extent of access to dental care for established enrollees ages 3 to 5, we asked parents the following questions:

- *Usual Source of Dental Care:* Do you have a dentist’s office or clinic that your child usually goes to if he/she needs to see a dentist or a dental hygienist for a checkup, to get his/her teeth cleaned or for another dental procedure?
- *Use of Dental Care:* Children who had a visit to a doctor or other health professional in the past six months were asked: During the past six months did your child go to a dentist or dental hygienist for a checkup or to get his/her teeth cleaned? How about for a dental procedure such as having a cavity filled or a tooth pulled?<sup>11</sup>
- *Unmet Need for Dental Care:* During the past six months, was there a time that your child needed to go to a dentist or dental hygienist but did not go? During the past six months, was there any time that your child needed dental care and it had to be delayed?

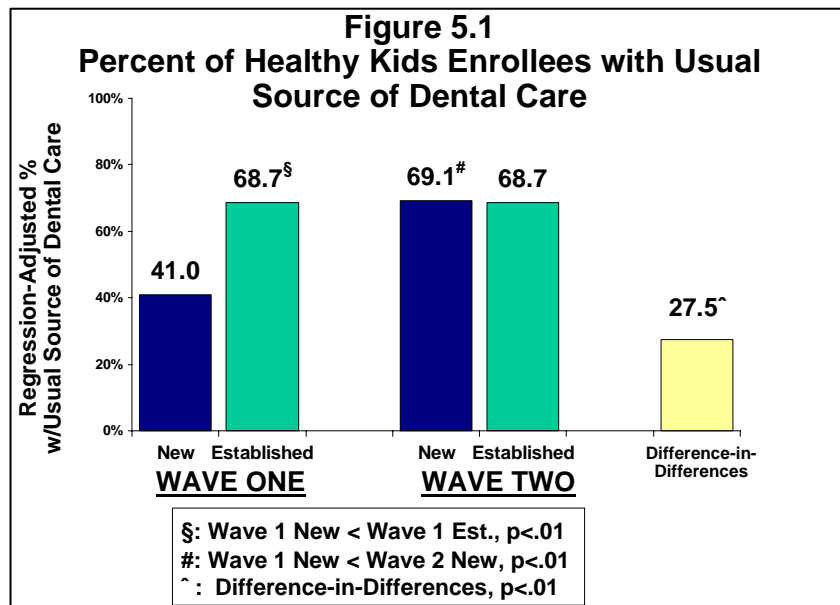
### Usual Source of Dental Care

As with having a usual source of medical care, enrollment in Healthy Kids was associated with large improvements in having a usual source of dental care (Figure 5.1). Rates of having a usual source of dental care were lower than for medical care, and the improvements were more rapid for dental care. In Wave One, only 41.0 percent of new enrollees had a usual

---

<sup>11</sup> Ideally, these questions would have been asked of all children in Wave One. Unfortunately, a skip pattern error meant that these questions were only asked of children who had had a health professional visit in the last six months. This is approximately  $\frac{3}{4}$  of established enrollees in the Wave One survey. The question was asked of all children in Wave Two.

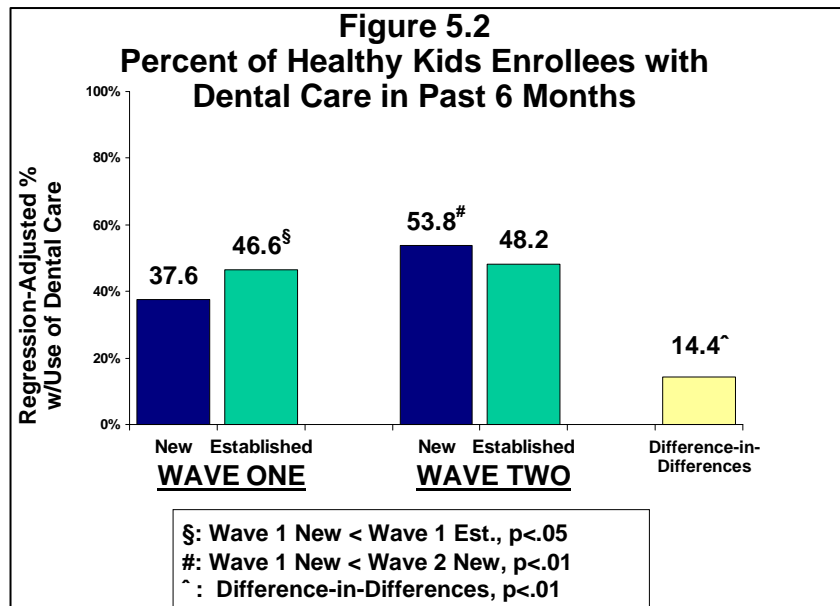
source of dental care just before enrolling, compared to 68.7 percent for established enrollees – a highly significant difference. The rate increased for new enrollees to 69.1 percent by the time of the Wave Two survey. Whether using the difference-in-differences approach or the difference between new and established enrollees in Wave One, the analysis indicates that enrollment in the program resulted in about a 28 percentage point increase in the likelihood of having a usual source of dental care.



### Use of Dental Care Services

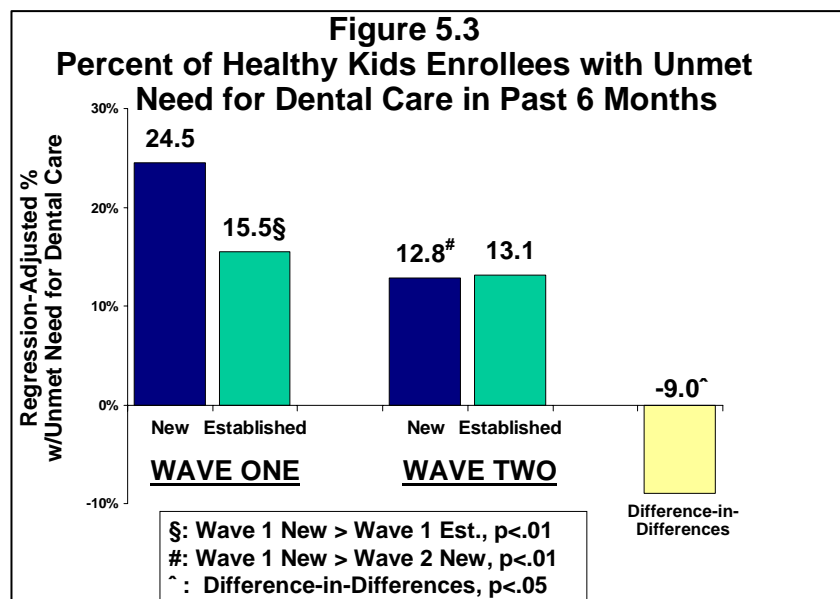
Among children who had a medical visit in the first year,<sup>12</sup> the likelihood of having a dental visit in the past six months increased from 37.6 percent to 53.8 percent for new enrollees, a 16.2 percentage point increase (Figure 5.2). When the change for the established enrollees is netted out of the change for the new enrollees, the result is a 14.4 percentage point increase in the likelihood of having a dental visit in the past 6 months. This estimate is somewhat larger than the difference between new and established enrollees at baseline.

<sup>12</sup> We present the results based on those who received the question in the first wave and recognize that it is likely an under-estimate of program impact.



### Unmet Need for Dental Care

Unmet need for dental care was reduced substantially as a result of enrollment in Healthy Kids. Before enrolling in the program, 24.5 percent of new enrollees needed dental care but did not receive it, compared to 15.5 percent of established enrollees in the same time period (Figure 5.3). This large unmet need for new enrollees declined by half to 12.8 percent. Consequently, enrollment in the program was associated with a 9.0 percentage point decline in the likelihood of needing dental care that was not obtained, a significant difference.



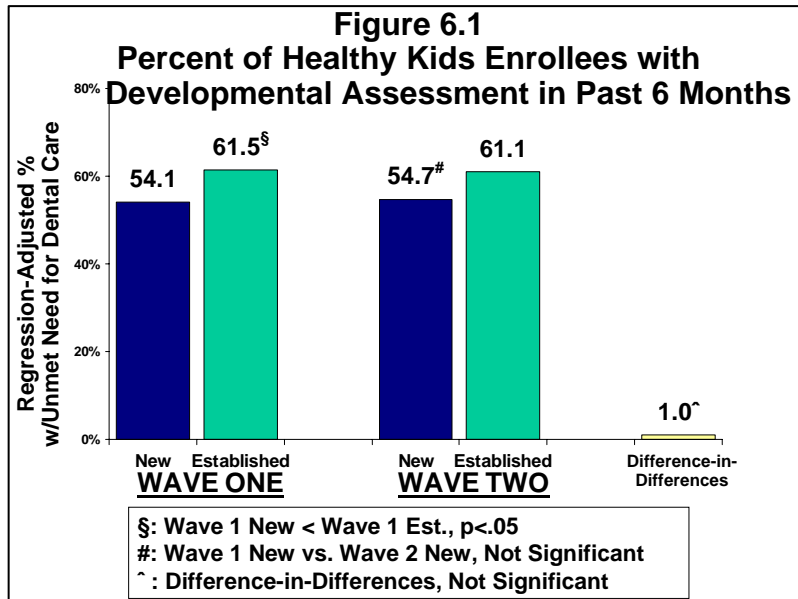
## CHAPTER 6: DEVELOPMENTAL ASSESSMENTS AND GUIDANCE

High quality preventive care for young children includes a regular assessment of whether the child is reaching developmentally appropriate milestones. Healthy Kids may have affected not only the availability of preventive care, but the content of that care. Developmental services, offered by the child's primary care provider during routine preventive care, include:

- Developmental assessment;
- Identification of possible developmental problems;
- Health education/counseling on important topics (“anticipatory guidance”); and
- Referral to specialty care and community-based resources for possible developmental problems.

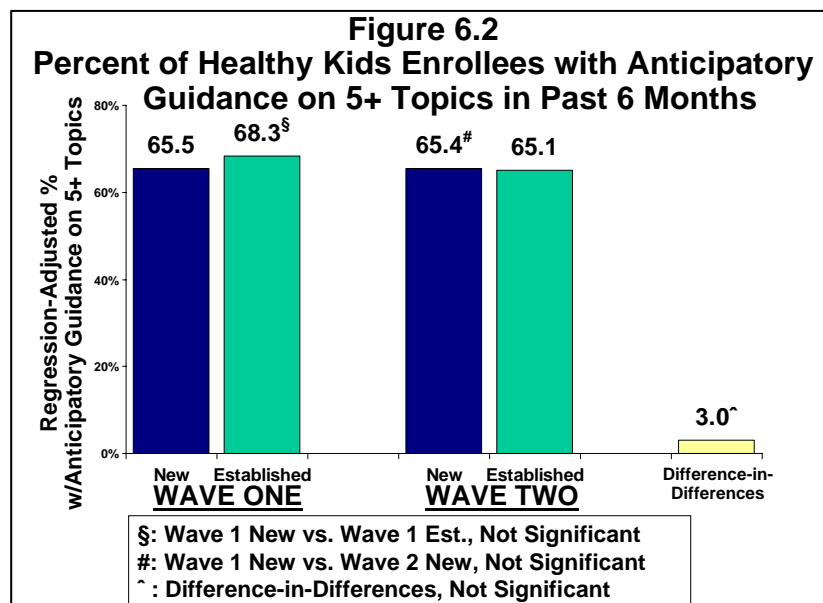
To investigate whether the program affected the availability of these services for Healthy Kids enrollees, we asked parents whether, in the prior six months, their provider performed a developmental assessment (or whether the provider asked the child to perform certain developmentally appropriate tasks such as picking up blocks, or asked the parent if the child could do the task). Figure 6.1 shows that new enrollees were significantly less likely to have had a developmental assessment than established enrollees in Wave One (54.1 percent vs. 61.5 percent, respectively). However, the rates did not climb significantly in either group in the following year.

Given that the reference period was only six months, the rates of developmental assessment seem high (over half) in both groups and are close to the percent of children receiving any preventive care. Perhaps there is little room for improvement in the rate of developmental assessment, at least the type of assessment detected in the parent survey.



We also asked parents if they received “anticipatory guidance” on various topics in the past six months. The topics included behavior, nutrition, discipline, and making the house safe, among others.

Figure 6.2 shows the percentage of parents who received guidance on five or more out of nine possible topics. As was the case for the rate of developmental assessment, the rate of anticipatory guidance was high for both groups (over 65 percent) in both time periods, but there was no apparent effect of the program on this measure.



## **CHAPTER 7: SATISFACTION WITH QUALITY OF CARE, CONFIDENCE IN GETTING CARE, AND FINANCIAL DIFFICULTIES**

Parents who are pleased with the care their child is receiving, who feel confident they can get good care when they try, and who are not worried about paying for care are more likely to bring a child for care regularly. In addition, in the absence of more rigorous clinical studies, parents can provide important impressions of the quality of their child's care that are useful for monitoring quality.

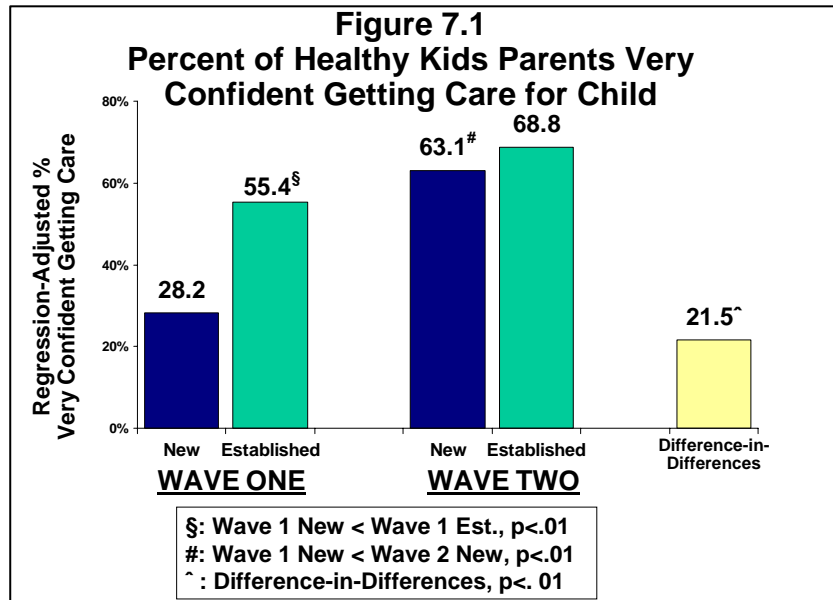
The Healthy Kids client survey asked parents several questions to assess both confidence in getting care and the parent's perception of the quality of care. We asked:

- During the past six months, how confident were you that your child could get health care if he/she needed it? (Possible responses were very confident; somewhat confident, not very confident, and not at all confident.)
- During the past six months, how satisfied were you with the quality of health care your child received? (Possible responses were very satisfied; somewhat satisfied; somewhat dissatisfied; or very dissatisfied.)
- During the past six months, how often did your child's health care need create financial difficulties? (Possible responses were a lot; somewhat; a little; or not at all.)

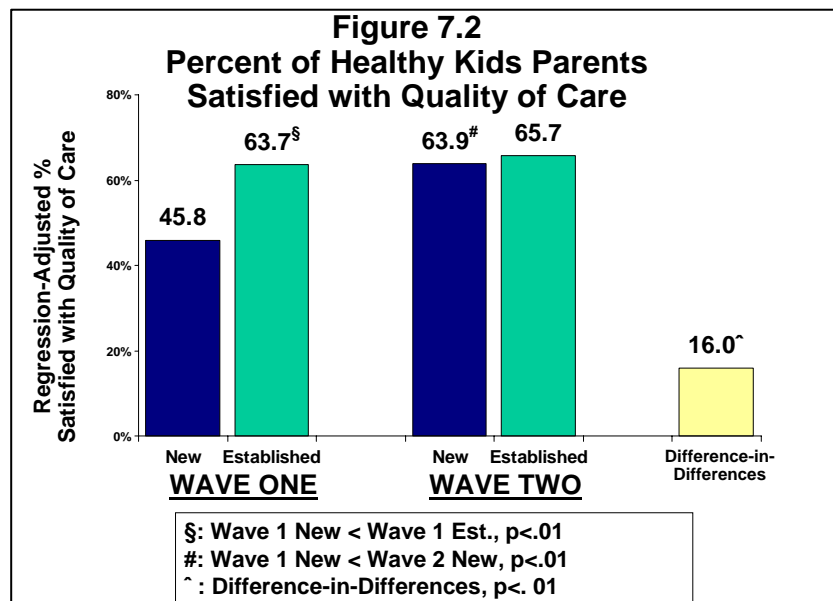
Figures 7.1 and 7.2 show that, indeed, the Healthy Kids program dramatically increased the likelihood that parents feel very confident in their ability to get care for their children and that parents are very satisfied with the quality of their children's care.

In Wave One, after adjusting for age and other demographic characteristics, only 28.2 percent of parents of new enrollees had been very confident they could get care for their child during the six months before they enrolled, compared to 55.4 percent of parents of established enrollees. By Wave Two, after enrollment for one year, the level of confidence in getting care for their children had increased significantly, rising to 63.1 percent among new enrollees. The rise among the newly insured children was significantly higher by 21.5 percentage points,

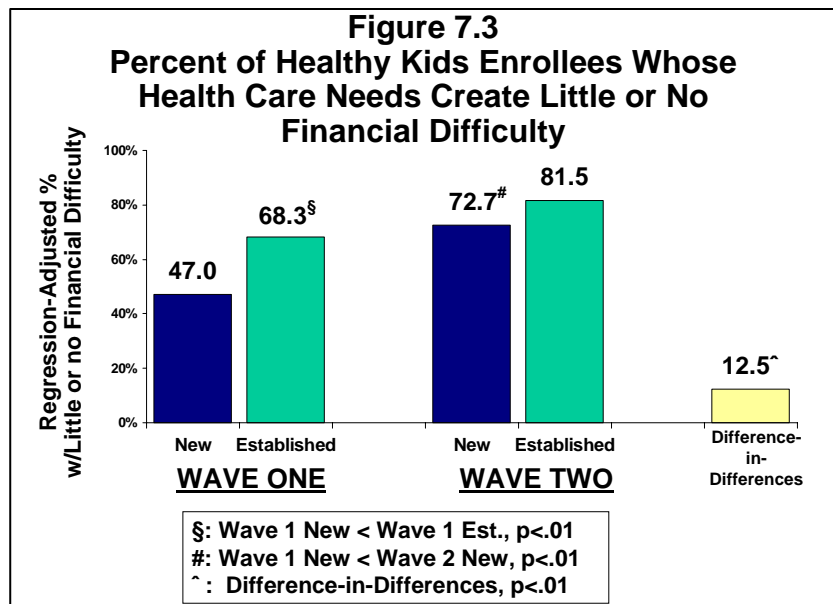
indicating that the Healthy Kids insurance was likely responsible for this increase and not other systems changes.



Very similar results are shown for parents’ satisfaction with the quality of their children’s care. Only 45.8 percent of new enrollee parents were very satisfied with the quality of the care their children received before enrolling, compared to 63.7 percent of established enrollee parents. One year later, there was little difference between the two groups (63.9 percent and 65.7 percent respectively). The difference-in-differences, 16.0 percent, was highly significant.



As Figure 7.3 shows, large improvements were also found in parent’s perceptions of the financial difficulties caused by meeting the health care needs of their child. While only 47.0 percent of parents of new enrollees felt that meeting their child’s health care needs caused little or no financial difficulties in Wave 1, by Wave 2 more than 70 percent of parents felt this way, an increase of 25.7 percentage points. When improvements for the established enrollees were netted out of those for new enrollees, the impact of enrollment in the Healthy Kids program was found to have increased the probability that the parent reported that meeting their child’s health care needs produced little or no financial difficulties by 12.5 percentage points.



## **CHAPTER 8: HEALTH STATUS AND CHILD DEVELOPMENT**

The purpose of providing preventive and curative health care to children is to improve their health, both now and in the future. A child who is in excellent health in the first five years of life should be more likely to do well in school from the beginning, and to be prepared for a successful future.

All would agree that the Healthy Kids program is designed to improve child health, but measuring whether this has been accomplished is extremely challenging. First, much of the health care provided to children—especially in the early years—is for identifying developmental issues and preventing future illness. Since the time horizon is very long for achieving these benefits (indeed a whole lifetime), measuring the full effect of a program requires a longitudinal study with a very long time horizon, which this study lacks. In addition, without clinical examinations, studies often rely on impressions of the child's health from a key informant, usually the parent.

Nonetheless, it may be possible to demonstrate short-term health status improvements for disadvantaged children in relatively poor health when they obtain insurance. The evaluation of the Santa Clara Children's Health Initiative found effects of that county's Healthy Kids program on the health status of enrolled children using three health status indicators (perceived health, activity limitations, and school days missed) using a cross-sectional design (Howell and Trenholm, 2007).

Studying health status changes in the Los Angeles Healthy Kids evaluation is even more challenging than the Santa Clara study, because only the youngest children (ages 1 to 5) are included. Since younger children are in generally better health than older children, it is more difficult to detect improvements in their health. In addition, many children in the 1-5 age group

are not yet regularly in school, eliminating one good measure of health – missed school days. On the other hand, the Los Angeles evaluation has the advantage of a longitudinal design, tracking children for one year and allowing for an examination of the change in health status over time.

We examined four measures of health status:

- *Perceived health status*: “In general, would you say your child’s health is excellent, very good, good, fair or poor?”
- *Activity limitations*: “Does (he/she) currently have any physical, behavioral, or mental conditions that limit or prevent (his/her) ability to do childhood activities usual for (his/her) age?”
- *Acute episodic health conditions*: “In the past month has your child had a very high fever or any other condition?”
- *Developmental concerns*: “Are you concerned a lot, a little, or not at all about:...” The parent is then asked about a list of nine potential areas of concern such as “How your child talks and makes speech sounds.”

Since Healthy Kids may have continued to affect health status in the child’s second year of enrollment in the program, for this analysis we tested for significant improvements in both new and established enrollees between Waves One and Two.

### **Baseline Health Status Differences**

It is especially important to assess “baseline” health status (before enrolling in Healthy Kids) when studying health status impacts. If the two groups being compared (new and established enrollees) were already different before enrolling, then some of the comparisons could be biased. This potential bias emphasizes the importance of examining longitudinal changes within each cohort.

We asked two types of questions that allow us to assess whether the two groups had different health status before enrolling:

- “Thinking back to the first year of (CHILD’s) life, would you say that (his/her) health was better than other infants, the same as other infants, or worse than other infants?”
- “Why did you enroll your child in Healthy Kids?” The parent is asked if they enrolled the child because he/she was sick or injured, needed medical care, or needed a prescription medicine. The parent was also asked to name any other reason they enrolled the child; these open-ended responses were recoded when they indicated that the parent enrolled the child for a medical reason.

Table 8.1 shows that the proportion of new enrollees who were in worse health in infancy (6.7 percent) is significantly lower than the proportion of established enrollees (10.3 percent), suggesting differences between the health status of the two groups prior to enrolling in Healthy Kids. By contrast, there was no significant difference in the proportion of children whose parents reported they enrolled their child in the program for medical reasons.

**Table 8.1**  
**Health Status Before Enrolling in Healthy Kids**

	New Enrollees	Established Enrollees
	Percentage	
Health worse than others in infancy	6.7	10.3*
Enrolled for medical reasons	40.0	36.5

\* $\chi^2$  test significant,  $P < .10$

While this latter finding is reassuring, there is some additional evidence that new enrollees were in better health before enrolling in the program, based on a comparison of data for new enrollees in Wave Two (after they had been enrolled in Healthy Kids for about a year) to data for established enrollees in Wave One (who had also been enrolled about a year at that time). This comparison is necessary because it is difficult to use clinical conditions as a means of comparing the health status of two groups of children, one with health insurance and one without insurance. For example, rates of asthma may be different just because the asthma has not yet

been diagnosed in the uninsured children. However, having two waves of data allows us to compare rates of certain conditions for established enrollees in Wave One (after one year of enrollment) to new enrollees in Wave Two (after one year of enrollment). According to several measures (for example, the percent of children with asthma and the percent who used or needed prescription drugs), the established enrollees were in poorer health than new enrollees after one year of enrollment in Healthy Kids.

Qualitative evidence from this evaluation's case studies suggests why the established enrollees may have been in somewhat worse health when they enrolled. These children enrolled during mid-2004 when the program was about a year old, while the new enrollees enrolled a year later. Early in the program, many outreach workers reportedly enrolled children who were already in systems of care because of their health problems, since it is easier to connect with such families (Hill, Courtot, and Wada, 2005). Children with greater healthcare needs would be more likely to seek care and consequently enroll earlier than those in better health.

We control for these differences between the cohorts by including health status in infancy as a control variable in the models, and by analyzing data separately for those who enrolled for medical reasons and those who did not. These variables may not completely control for the underlying health status differences in the two cohorts. The result is a "conservative" estimate of Healthy Kids impact on health status, especially for the Wave One comparison between new and established enrollees, since a difference between the two groups at Wave One cannot be as easily detected.<sup>13</sup>

Another analytical concern is "regression to the mean." This is a concern if the new enrollee group has a larger component (than the established group) of children with episodic

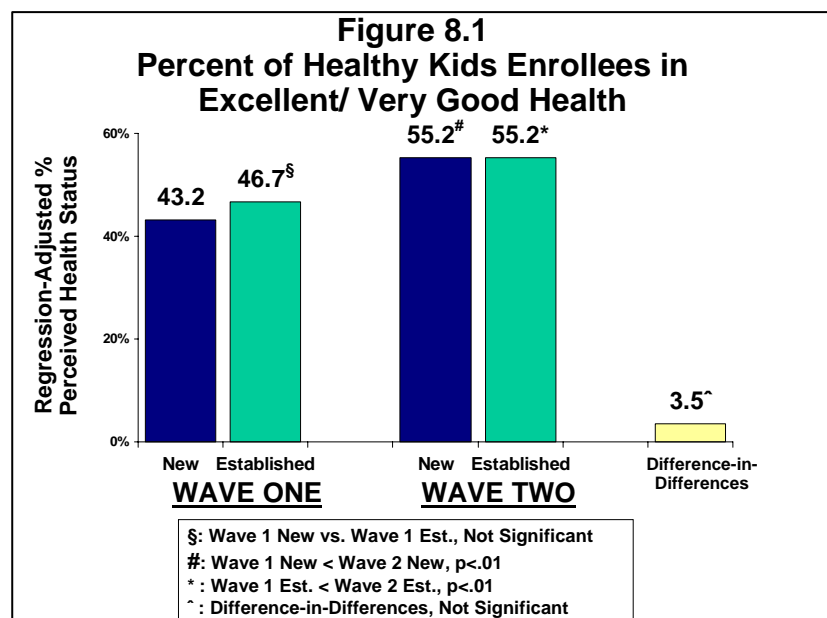
---

<sup>13</sup> This conservative bias also likely effects the comparisons in utilization between the two cohorts, since established enrollees likely needed more services due to somewhat poorer health.

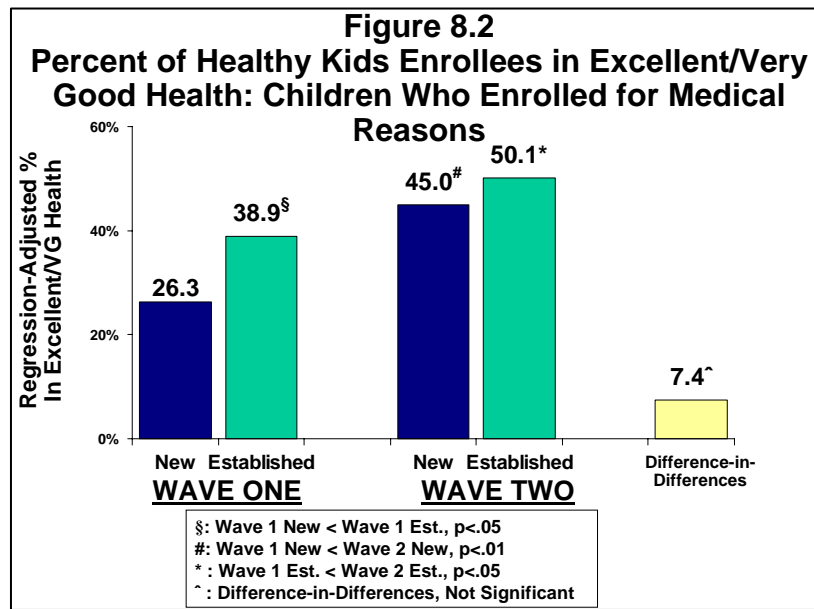
health conditions around the time of the Wave One survey, conditions leading their parents to enroll them in health insurance at that time. We asked a question about whether the child had an episodic health event in the month before the interview (a high fever or any other condition). The baseline rates for those types of conditions were very similar in Wave One for new enrollees (27.9 percent) and for established enrollees (25.8 percent).

### Perceived Health Status

Figure 8.1 shows the regression-adjusted mean percent of children reported to be in excellent or very good health, separately for new and established enrollees and by survey wave. The perceived health status of new and established enrollees did not differ significantly at Wave One, but we should take into account the discussion above in interpreting the lack of difference in this measure. The perceived health of both new and established enrollees improved significantly during the one year between the survey waves. Because the cohorts had similar health status levels in Wave One, the difference-in-differences estimate was insignificant. The significant improvement in health status over time is a hopeful sign that Healthy Kids improves health (as perceived by parents).

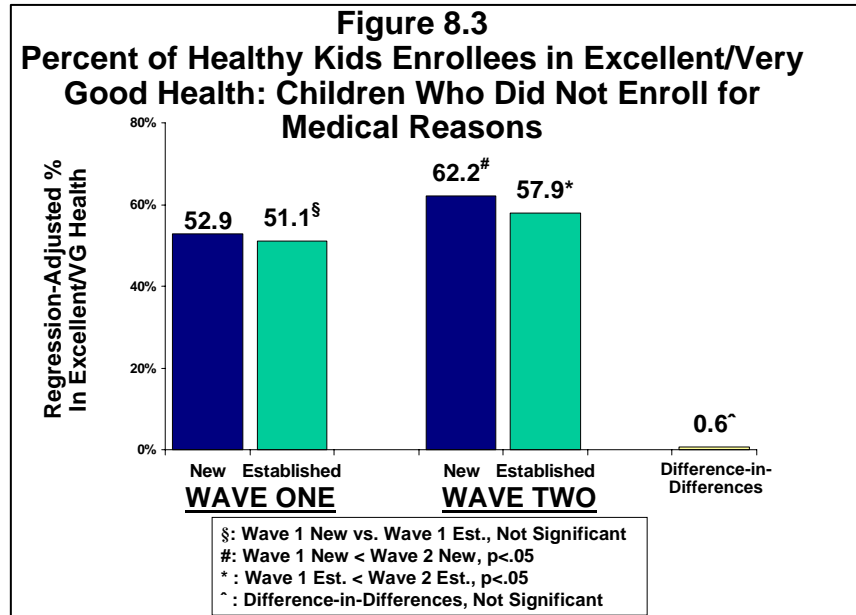


It is also possible that regression to the mean is affecting these results. To investigate this issue, we separated children by whether they were enrolled in Healthy Kids for a medical reason, as shown in Figures 8.2 and 8.3. Only 26.3 percent of new enrollees who enrolled for a medical reason were in excellent or very good health in Wave One, compared to 38.9 percent of established enrollees (a significant difference). One year later, the health of this new enrollee group improved dramatically (45.0 percent in excellent/very good health compared to 50.1 percent of established enrollees one year later).



Since regression to the mean may explain some of the improvement among new enrollees who enrolled for a medical reason, a more reliable measure may be perceived health for those children who were not enrolled for a medical reason. As shown in Figure 8.3, this measure also improved significantly for this group over time. In Wave One, 52.9 percent of new enrollees and 51.1 percent of established enrollees who did not enroll for medical reasons were in excellent/very good health. One year later, the percentages were 62.2 and 57.9 percent respectively. The difference-in-differences was substantially larger in the group that enrolled for

medical reasons (7.4%, although still not statistically significant). Among those who did not enroll for medical reasons, the difference-in-differences was positive but small (0.6%) and also not statistically significant.

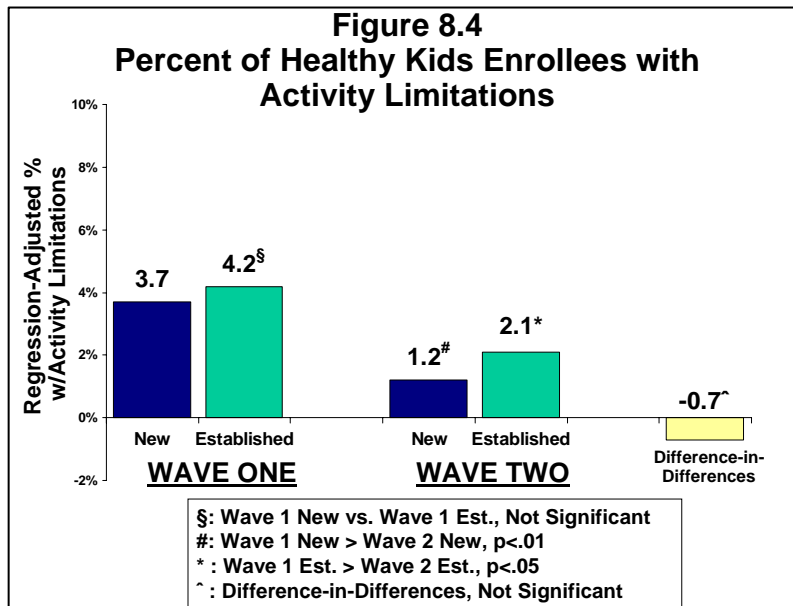


### Activity Limitations

Another measure of chronic health problems is the presence of a condition that limits a child from his or her regular activities (for example, play or school attendance). Figure 8.4 shows the regression-adjusted percentage of children with activity limitations by cohort and survey wave.

Although very few young children had any activity limitations, the results from this analysis are consistent with the finding above concerning improved perceived health status. For new enrollees, 3.7 percent of parents reported that their child had an activity limitation in Wave One, while only 1.2 percent reported such a limitation in Wave Two, a highly significant decline (at the p<.01 percent level). The levels for established enrollees also declined but remained higher than for new enrollees in both waves, differences that—while not statistically

significant—are consistent with the finding that the established cohort was in somewhat poorer health at enrollment. The difference-in-differences was not statistically significant. Dividing the cohorts by whether the child enrolled for medical reasons, both groups showed a decline in the likelihood of having a activity limitation (data not shown).



One might think that changing conditions causing activity limitations might be very difficult in a year’s time. However, Table 8.2 shows the reasons that parents gave for their child’s activity limitations. These reasons suggest that many conditions causing activity limitations in young children can be treated with regular medical care. These include asthma, hyperactivity, heart problems, orthopedic problems, developmental delay, and various emotional and behavioral problems.

**Table 8.2**  
**Example Reasons for Activity Limitations**  
**According to Parent Reports**

Conditions Reported in Wave One	Conditions Reported in Wave Two for Children with no Condition in Wave One
New Enrollees	
Asthma Behavior problems Does not eat much Down syndrome Flat feet Head banging Heart problems Hyperactivity Incontinent Severe mental retardation Trouble speaking/understanding Weakness in hand and leg	Broken elbow Cannot walk well Hyperactivity Learning difficulties
Established Enrollees	
Asthma Autism Behavior problems Cannot sit up or walk yet Convulsions Developmental delay Does not walk or speak Down syndrome Emotional problems Epilepsy Flat feet Frequent pneumonia Mental retardation Overweight Sleeping problems/depression	Behavioral problems Broken arm; not yet healed Cerebral palsy (parent previously reported only symptoms) Hearing problems Hyperactivity Neck surgery from car accident Slow learner

We compared the reported reasons for activity limitations in Wave One and Wave Two, for the same children. About half the parents of children with activity limitations in Wave One did not report any activity limitations in Wave Two, but some new children with activity limitations were identified. Of the children with activity limitations in both waves, most parents identified the same problem causing the limitation in Wave One (for example, autism, Down’s syndrome, or epilepsy) or a similar problem but with a firmer diagnosis (for example, cerebral palsy instead of symptoms, such as “cannot sit by herself”). The problems that were identified in both waves as causing activity limitations were generally more serious ones, while the ones that did not appear again were milder conditions that are potentially subject to improvement through health care. While the numbers are small, this information provides qualitative evidence that some of the improvements for the children with activity limitations, including among those who enrolled for medical reasons, are likely due to a child’s enrollment in Healthy Kids.

### **Episodic Health Events**

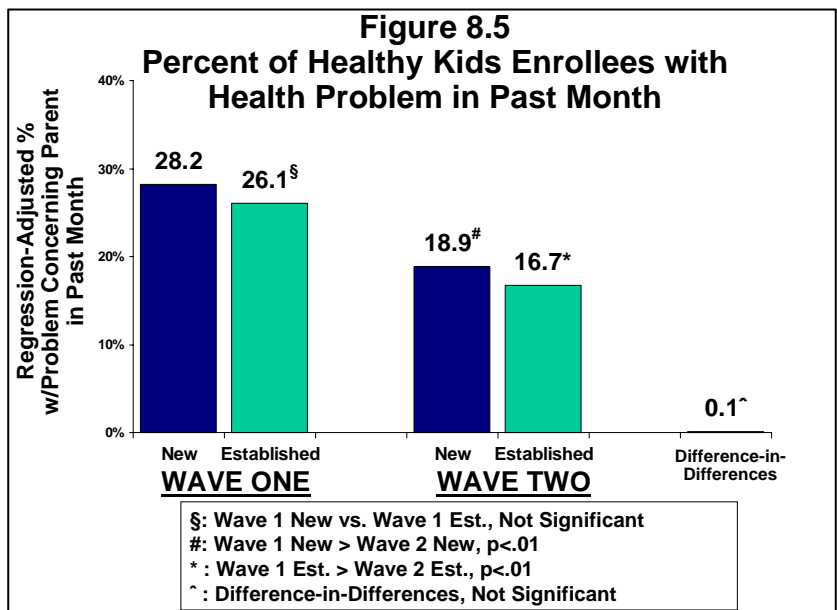
We asked parents whether their child had a health problem in the past month, such as a high fever.<sup>14</sup> Some of these acute health problems could possibly be avoided by good primary and preventive health care.

Figures 8.5-8.7 show the regression-adjusted percentage of children in each cohort by wave who had a condition in the past month. The results are shown first for all children and then separately for children who enrolled for medical reasons and those who did not. The results are consistent across all three analyses. New and established enrollees were very similar in their rates of such health episodes in the month before the Wave One survey (about one quarter of children). In addition, there were significant declines between Wave One and Wave Two in the types of such conditions, for both new and established enrollees, regardless of whether they

---

<sup>14</sup> Accidents were excluded from this measure.

enrolled for medical reasons or not. For example, in the entire sample of new enrollees, 28.2 percent had such a health episode in the month before the Wave One interview but only 18.9 percent did in the month before Wave Two. Comparable percentages for established enrollees were 26.1 percent and 16.7 percent.



One might think that affecting the rates of such episodic health conditions with better health care might be difficult, since exposure to colds and flu is affected by many other factors. However, as Table 8.3 shows, many of the reported health problems—such as anemia, urinary tract infections, skin rashes, heart problems, and orthopedic problems—could be prevented with continuous primary care. As with the types of conditions causing activity limitations, this qualitative information lends credibility to the results concerning the impact of Healthy Kids on the rate of episodic health conditions.

### Developmental Concerns

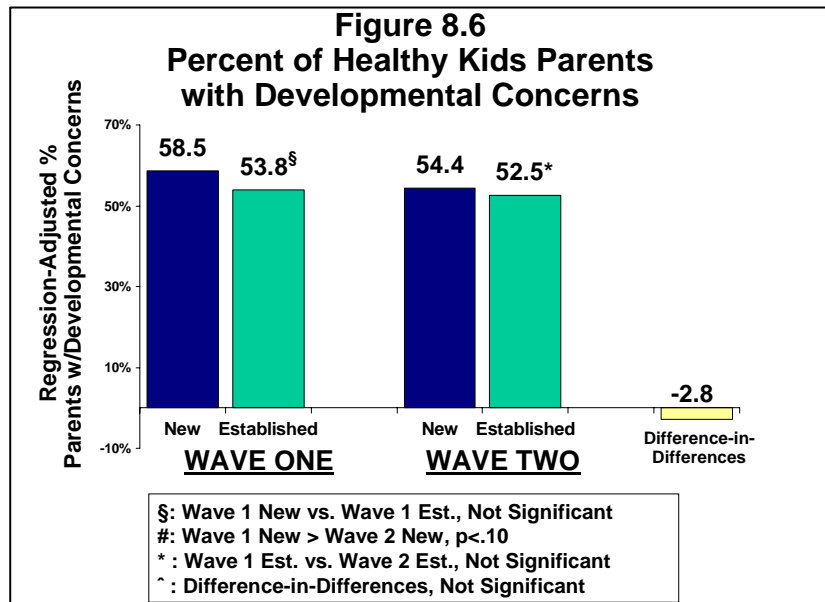
Even though young children may have few diagnosable chronic physical or mental health conditions, parents may be noticing some early problems (for example, growth delays,

communication problems, or behavioral problems) that may eventually lead to a diagnosis of a serious problem. We examined whether the provision of new insurance through Healthy Kids reduced parents' developmental concerns through identification, counseling, and referral to services.

**Table 8.3**  
**Health Problems**  
**Experienced by Healthy Kids in Month Prior to Survey**

Wave One		Wave Two	
<b>New Enrollees</b>			
Anemia	Knee hurts a lot	Accident/injury to head	Hearing problem
Back pain	Lump on neck	Allergies	Leg pain
Bone pain	Nipple infection	Anemia	Nose bleeds
Bruise from accident	Nose bleeds	Asthma	Nose inflammation
Burn	Positive TB test	Behavior problems	Overweight
Chicken pox	Possible tumor in mouth	Breathing problem	Palate surgery
Constipation	Skin rash	Bronchitis	Pneumonia
Cyst under ear	Sleep walking	Cyst or hernia	Positive TB test
Dehydration	Stomach infection	Eating problems	Stomach aches
Diarrhea	Urinary tract infection	Eye infection	Tonsillectomy
Fainting spells	Vaginal discharge	Fever	Urinary tract infection
Fever	Vomiting	Foot pain	Vision problems
Heart problem	Warts	Headaches	
Insect bites			
<b>Established Enrollees</b>			
Allergies	Nose bleeds	Allergies	Still sucks thumb
Anemia	Positive TB test	Anemia	Stomach aches
Appendicitis	Rubella	Behavior problems	Urinary tract infection
Autism	Seizures	Bronchitis	Vaginal swelling
Black eye	Sixth finger on hand	Eye infection	Vomiting
Dehydration	Skin rash	Gum inflammation	
Diarrhea	Stomach aches	Headache	
Dizziness	Stomach virus	Hearing problems	
Eye Condition	Swallowed battery	Hepatitis B	
Fire in home	Undescended testicles	Injury to finger	
Flat feet	Urinary tract infection	Nose bleeds	
Heart condition	Vision surgery	Positive TB test	
High fever	Vomiting	Skin condition/rash	
Hives	Warts	Spider bites	

Figure 8.6 shows that at Wave One, parents of new enrollees were not significantly more likely to have a developmental concern about their children than those of established enrollees, but that the rate for new enrollees did decline some between waves, from 58.5 to 54.4 percent, significant at the 0.10 level. Consequently, there is some limited evidence of a reduction in parental developmental concerns as a result of enrollment in Healthy Kids.



## **CHAPTER 9: CONCLUSIONS**

These results concerning the impact of the Healthy Kids program on its youngest enrollees, those ages 1 to 5 at the time they enrolled, provide strong evidence of a positive effect on several key outcomes, and more modest evidence of an impact on other key outcomes. In particular, it is evident that, in spite of the strong safety net for young children in Los Angeles County, enrollment in Healthy Kids provided the additional benefits of connecting children to a usual source of care, reassuring parents that they could get good care for their children when they needed it, and reducing children's unmet need for care.

Referring back to the logic model in Chapter 1, Healthy Kids improved access to care by providing a usual source of care, which in turn increased the use of needed health services, and thus reduced unmet need for services. The impact on use of ambulatory care was more modest than for obtaining a usual source of care, but nonetheless of practical importance. Moreover, a sub-analysis revealed that for children who acquired a usual source of medical care after enrolling in Healthy Kids, both ambulatory and preventive care services also improved substantially.

Enrollment in Healthy Kids also increased the children's use of specialty care. There were also large improvements in use of dental care services. Since the comprehensive safety net is especially strong for preventive care for young children (through the CHDP program, for example), the availability of new insurance appears to have particularly affected the use of specialty and dental care services. These findings concerning increased use of specialty and dental care are consistent with case study findings revealing barriers to specialty and dental services for the uninsured in Los Angeles.

The new insurance coverage reduced unmet need for all the services examined. The results for specialty and dental care are consistent with significant increases in use for such services, and with qualitative information on systems barriers.

In spite of declines in parents' reports of unmet need for preventive care, the rate of unmet need for such services remains high. According to survey results provided in the Wave One report, much of the unmet need for preventive care is related to parents' difficulties making and keeping appointments for their children, due to competing priorities, and to lack of accessible after-hour services. Addressing these issues requires more outreach, parent education, and systems change, all of which do not occur immediately after insurance is provided.

There was also a significant decline in the use of the emergency room visits between Waves One and Two, with a larger decline for new enrollees, resulting in a significant impact. This positive change likely reflects improved access to care and use of ambulatory services, particularly specialist services, as described above. There was no impact on use of hospital services.

The impact of the program on health status was not detected using the difference-in-differences approach for two important reasons. The difference-in-differences approach assumes that change for the established enrollees reflects only secular trends unrelated to the program. Yet, after controlling for other key factors such as age and length of time living in Los Angeles County, the health of both new and established enrollees continued to improve during the year between Wave One and Wave Two. This general trend is consistent across three of the four health status measures examined (perceived health, activity limitations, and presence of a health problem in the past month). In addition, the established enrollees appear to have been in poorer health when they enrolled, making it likely that they had continuing health problems or newly

emerging health problems that were not addressed in the first year they enrolled. Qualitative information from parent reports on the kinds of conditions their children had show that many of them could be addressed by newly accessible health services.

Referring back to the logic model, health status is affected by Healthy Kids only after children obtain a usual source of care and receive preventive and specialist care addressing their health problems. It is reasonable to assume that such a process often takes longer than a year, even when the child's conditions can be addressed with medical care. For example, tuberculosis was still being detected and treated in the second year of enrollment for some children, showing that many conditions were not detected in the first year.

In conclusion, it is clear that Healthy Kids has had an impact on access to medical and dental services and on the use of specialty and dental services. Preventive service use also improved greatly among children who did not have a usual source of care before enrolling. Healthy Kids also increased parents' confidence in getting care, and their satisfaction with the quality of the care their children received. There is also substantial evidence that Healthy Kids improved the health status—as perceived by parents—of children both in their first and into their second year of enrollment in the program. Among these primarily immigrant children, who were in much poorer health than other children of the same age across the U.S., this new health insurance program improves the chances of a healthy life as they enter school and continue to develop and learn.

## REFERENCES

- Bethell, C, C Peck, and E Schor. "Assessing Health System Provision of Well-Child Care: the Promoting Healthy Development Survey." Pediatrics 107 (2001): 1084-1094.
- Chunrong, Ai, and Edward Norton. "Interaction Terms in Logit and Probit Models." Economics Letters 80 (2003): 123-129.
- Dubay, L, and E Howell. Los Angeles Healthy Kids Improves Access to Care for Young Children: Early Results From the Healthy Kids Evaluation. The Urban Institute. Washington, DC, 2006.
- Glascoc, FP. Parents' Evaluations of Developmental Status: A Method for Detecting and Addressing Developmental and Behavioral Problems in Children. Nashville, TN: Ellsworth & Vandermeer P LLC, 1997.
- Hill, I, B Courtot, and E Wada. A Healthy Start for the Los Angeles Healthy Kids Program: Findings from the First Evaluation Site Visit. The Urban Institute. Washington, DC, September 2005.
- Hill, I, B Courtot, P Barreto, and E Wada. What Do Parents Say About the Los Angeles Healthy Kids Program? Findings from the First Evaluation Focus Groups. The Urban Institute. Washington, DC, March 2006.
- Howell, E, D Hughes, G Kenney, J Sullivan, and J Rubenstein. Evaluation of the San Mateo County Children's Health Initiative: Second Annual Report. Submitted to San Mateo County Children's Health Initiative Coalition. August 2005.
- Howell, E, L Dubay, G Kenney, L Palmer, I Hill, M Inkelas, and M Kovac. A Profile of Young Children in the Los Angeles Healthy Kids Program: Who Are They and What Are Their Experiences on the Program? The Urban Institute. Washington, DC, 2006.
- Howell, E, and C Trenholm. "The Effect of New Insurance Coverage on the Health Status of Low-Income Children in Santa Clara County." Health Services Research 42 (2007): 867-889.
- Kenney, G. et al., "The Experiences of SCHIP Enrollees and Disenrollees in Ten States: Findings from the Congressionally Mandated SCHIP Evaluation, Final Report." Urban Institute and Mathematica Policy Research. Princeton, NJ, October 2005.
- Lave, JR, CR Keane, CJ Lin, EM Ricci, G Amersbach, and CP La Vallee. "The Impact of Lack of Health Insurance on Children." Journal of Health Social Policy 10 (1998): 57-73.
- Newacheck, P, D Hughes, Y Hung, S Wong, and J Stoddard. "The Unmet Health Needs of America's Children." Pediatrics 105 (2000): 989-997.

Starfield, B. Primary Care: Concept, Evaluation, and Policy. New York: Oxford UP, 1992.

Trenholm, C, E Howell, D Hughes, and S Orzol. The Santa Clara County Healthy Kids Program: Impacts on Children's Medical, Dental and Vision Care: Final Report. Mathematica Policy Research. Princeton, NJ, 2005.

Wooldridge, J, G Kenney, and C Trenholm. Congressionally Mandated Evaluation of the State Children's Health Program: Final Report to Congress. The Urban Institute and Mathematica Policy Research. Washington, DC: Submitted to US Dept. of Health and Human Services, 2005.