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**The Santa Clara County
Healthy Kids Program:
Impacts on Children's
Medical, Dental, and
Vision Care**

Final Report

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I. INTRODUCTION

Health insurance coverage for children remains a serious policy issue throughout the United States. In the past 10 years, a number of coverage expansions have been put in place to address this concern. These include major expansions in Medicaid eligibility and the creation of the State Children's Health Insurance Program (SCHIP). Even with these expansions, however, more than eight million children (11 percent) were without health insurance in 2003 and, among certain groups, such as Latino children, the proportion of uninsured children exceeded 20 percent (DeNavas-Walt et al. 2004). Policymakers at the national, state, and local levels continue to focus on extending coverage to these children.

The Santa Clara County Children's Health Initiative (CHI), launched in January 2001, is an ambitious effort to close gaps in health insurance coverage for children. The program consists of two parts. The first is a new insurance product, Healthy Kids, which eliminates significant gaps in existing public coverage by extending eligibility to all uninsured children in the county with household incomes below 300 percent of the federal poverty level (FPL).¹ As Table I.1 shows, this group includes children who are not eligible for existing programs because their family income is too high (between 250 and 300 percent of the FPL) and children below the 250 percent threshold who are not eligible for existing programs because they do not meet legal residency requirements. The second part of the CHI is a comprehensive outreach campaign designed to enroll eligible children not only in Healthy Kids but also in Medi-Cal and Healthy Families.

¹ For a family of four, the FPL in 2005 is \$19,350 (*Federal Register* 2005). This corresponds to an income eligibility threshold for Healthy Kids of \$58,050 for a family of four.

TABLE I.1
CHILDREN’S INSURANCE OPTIONS IN SANTA CLARA COUNTY

Age	Income Limit as Percent of Federal Poverty Level (FPL)	Immigration Status	Program Eligibility
< 1 year	0 to 200 percent	Documented (Legal)	Medi-Cal
	200 to 250 percent	Documented	Healthy Families
	0 to 250 percent 250 to 300 percent	Undocumented Any	Healthy Kids
1 to 5 years	0 to 133 percent	Documented	Medi-Cal
	133 to 250 percent	Documented	Healthy Families
	0 to 250 percent 250 to 300 percent	Undocumented Any	Healthy Kids
6 to 18 years	0 to 100 percent	Documented	Medi-Cal
	100 to 250 percent	Documented	Healthy Families
	0 to 250 percent 250 to 300 percent	Undocumented Any	Healthy Kids

Located at the southern end of San Francisco Bay, Santa Clara County is home to nearly 1.8 million residents, about half of whom live in the city of San Jose. The county’s population is racially and ethnically diverse; approximately 44 percent are non-Latino white, 26 percent are Asian, and 24 percent are Latino. While the county has high per capita income, about 10 percent of children in the county live below the FPL and nearly 40 percent live in households below 300 percent of the FPL (the income threshold for Healthy Kids). Among those children living in poverty, nearly 70 percent are Latino and nearly all have at least one non-citizen parent, characteristics closely associated with low rates of insurance coverage.

CHI and Healthy Kids grew out of a campaign by several local organizations. One is People Acting in Community Together (PACT), an affiliation of congregations in San Jose. Another is Working Partnerships (WPUSA), a think tank associated with labor unions, educators, and other

community-based organizations. Other major partners in CHI include the County Board of Supervisors, the Santa Clara Family Health Plan (SCFHP), the Santa Clara Valley Health and Hospitals Systems (SCVHHS), and the Social Services Administration (SSA). These organizations formed the nucleus of CHI, designing and implementing the program plan and raising millions of dollars from public and private sources to support premiums and to finance outreach and an administrative infrastructure (Howell and Hughes 2003).

Healthy Kids' benefits, premiums, and cost sharing are modeled on those of the state's SCHIP program, known as Healthy Families, which offers coverage to children with legal residence status in income-eligible households (see Table I.1). The program includes a comprehensive health, dental and vision insurance plan with monthly premiums from \$4 per child to a maximum of \$18 per family (assistance is available for families experiencing financial hardship). Enrollees choose their own health, dental, and vision providers when they sign up and receive a wide range of benefits, including preventive care visits, inpatient and outpatient services, health education services, and vision, dental, and prescription drug coverage.

This report profiles the children and families who participate in Healthy Kids and examines the impacts of the program on children's medical care and on their dental and vision care. The report is based on a survey of Healthy Kids families conducted from fall 2003 through summer 2004. It is part of a larger evaluation of the Santa Clara County CHI and its Healthy Kids program.

Importance of Health Insurance Coverage for Children. Prior research has shown the many potential benefits of health insurance coverage for children's health care. Children with health coverage are more likely than uninsured children to have a regular source of care for both primary and dental care and to receive regular preventive care, as well as receiving acute care (Newacheck et al. 1996 and 1998; Dubay and Kenney 2001; Shulman et al. 2004). In turn,

children with coverage are more likely to receive the appropriate services when needed, which can lead to fewer unmet preventive and acute care needs and greater confidence and satisfaction on the part of parents (Davidoff et al. 2000; Simpson et al. 1997).

Despite this research, the impact of the Healthy Kids program is difficult to predict. Except for the children in the 250 to 300 percent of the FPL range, Healthy Kids serves a population of children that has undocumented immigration status. Traditionally, this population of children has had very little access to public or private health insurance coverage, and the effects of extending coverage to these children have not been well studied. In Santa Clara County and elsewhere in California, these children are not eligible for the major state programs, Medi-Cal and Healthy Families. However, they do have access to other, more limited forms of health care financing, most notably the state's Child Health and Disability Prevention (CHDP) program that provides free periodic health screenings and Emergency Medi-Cal, a program that pays for emergency-related care. In addition, they may be able to receive some health care on a charitable basis through the county and community-based clinic system.

Taken together, these services offer undocumented children in Santa Clara County some opportunity to obtain needed health care. However, given the potential difficulties that the families of these children may still face in seeking care, including cultural barriers and concerns about their immigration status, the children might still be expected to access health care services at a low rate. This suggests that a comprehensive health insurance program such as Healthy Kids could significantly effect these children's use of medical and dental care. At the same time, with no reliable information on the care that children receive without Healthy Kids, let alone how this population might seek care once they are covered by the program, it is difficult to predict the impact that it might have.

Overview of Report. Findings presented in this report underscore the unique characteristics of children taking part in Healthy Kids and identify many significant improvements in their medical care and dental and vision care as a result of participating in the program. Among the key results are:

- Children enrolled in Healthy Kids are predominantly from two-parent working households that have lived in the county for at least two years. However, most lived below the FPL, and two-thirds did not have any health insurance coverage for six months or longer before enrolling.
- Participation in Healthy Kids leads to dramatic increases in the medical care that children receive. These improvements include large gains in access to, and use of, care; sizable reductions in unmet need; and improvements in parents' confidence in, and satisfaction with, care.
- Participation in Healthy Kids leads to dramatic improvements in dental and vision care, including a roughly threefold increase in whether children have a usual source of care for these services, receive a recent checkup, and receive a dental procedure such as a cavity filling or tooth extraction.

In the next chapter, we summarize the data and methods used to conduct the analysis. We then present findings on the characteristics of Healthy Kids children and their families (Chapter III), the impact of Healthy Kids on children's medical care (Chapter IV), and the impact of Healthy Kids on children's dental and vision care (Chapter V). Finally, Chapter VI briefly discusses these findings and their implications for policy and future research.

II. DATA AND METHODS

Our analysis focuses primarily on the group of children whose household income is below 250 percent of the FPL. These children, who account for more than 85 percent of Healthy Kids enrollees, are distinct from children in the 250 to 300 percent of the FPL range because their program eligibility for Healthy Kids is based on their undocumented immigration status, not solely on their income level. This status makes them ineligible for other public health insurance programs, leading to health care experiences that may be very different from other low-income children.¹

Healthy Kids Survey. The data for this analysis are drawn from a survey of 1,235 Healthy Kids families conducted over one year—from August 2003 to July 2004.² The survey focused on two groups: (1) “established enrollee” children, who had been enrolled in Healthy Kids for roughly one year and who successfully renewed their coverage when they were selected for the sample; and (2) “recent enrollee” children, who had recently been made eligible for Healthy Kids when they were selected for the sample. The total sample includes 626 in the established enrollee group and 609 in the recent enrollee group. For both groups, the sample reflects a response rate to the survey of 89 percent.

¹ In contrast, children from households in the 250 to 300 percent range of the FPL reflect a population similar to children in the state’s Healthy Families program, which has an income limit of 250 percent of the FPL. Several prior studies have examined the Healthy Families program and other SCHIP programs—in general, these studies have found that the programs have positive impacts on children’s use of, and access to, health care (Szilagyi et al. 2000; Damiano et al. 2002; Dick et al. 2004). Since this literature already exists, we chose to interview only a few households in the 250 to 300 percent of the FPL range (solely for descriptive statistics) and to focus most of our survey resources on children from households in the lower-income range. As described below, this approach allowed for a sample large enough for us to conduct a credible analysis of the program’s impact on these children.

² A separately bound methods appendix provides complete details on the survey, the methods for measuring impacts of the program, and the sensitivity tests conducted.

We administered the survey by telephone to the parent or guardian of selected children enrolled in the Healthy Kids program. (The response rate by telephone was high, so no in-person followup was required.) The survey averaged 26 minutes, and we paid \$35 to each respondent who completed it. Most survey interviews were conducted in Spanish (85 percent), followed by English (12 percent), Vietnamese (2 percent), and a few cases in Korean and Mandarin Chinese (1 percent). Of the sampled families, only six could not be interviewed because of a language barrier—that is, they spoke languages that none of our interviewing staff spoke, such as Tagalog or Urdu.

The survey included an extensive battery of questions related to the child’s health care, including the child’s use of primary, dental, and vision care; the child’s access to these services; and the extent of any unmet need for these services. In addition, the survey included questions on the characteristics of the family and the child, as well as on the family’s experiences applying for the program.

Based on the responses to these survey questions, we created a long series of outcome measures of the medical care and dental and vision care that children in the sample received (Table II.1). The topics these measures cover include whether the child has a usual source of care, the type of source, the use of care, whether the child has an unmet need for care, and the families’ confidence in, and satisfaction with, the care they receive.

Method for Estimating Healthy Kids Impacts. To measure the impacts of Healthy Kids, we use a quasi-experimental design that compares the outcome measures of the two groups sampled for the survey—established enrollees and recent enrollees (both limited to households below 250 percent of the FPL). The established enrollee sample serves as the treatment group for the study, providing a measure of the health care outcomes among children *with Healthy Kids coverage*. Survey questions about the access, use, and other health care outcomes of these

TABLE II.1

OUTCOME MEASURES FOR ESTIMATING HEALTHY KIDS IMPACTS

Medical Care Outcomes
<p>Access to Primary Health Care</p> <ul style="list-style-type: none"> Child has a usual source of primary health care Type of usual care source (private physician, health clinic) Child sees same/regular provider at usual care source
<p>Use of Medical Care</p> <ul style="list-style-type: none"> Any visit to physician in past six months (well-child, sick-child, or specialist) Any visit for well-child care in past six months Any visit for sick-child care in past six months Any visit for specialist care in past six months Any immunization (shot) in past six months Any difficulty obtaining an immunization (shot) in past six months
<p>Unmet Need for Medical Care (Care That Child Reportedly Needed and Did Not Get)</p> <ul style="list-style-type: none"> Any unmet need for care in past six months (well-child, sick-child, specialist, or prescription) Any unmet need for well-child care in past six months Any unmet need for sick-child care in past six months Any unmet need for specialist care in past six months
<p>Confidence and Satisfaction with Medical Care</p> <ul style="list-style-type: none"> Very confident about child getting needed care in past six months Worried about meeting child health care needs in past six months Child's health care needs created financial difficulty in past six months Satisfied with the quality of the health care that child received in past six months
Dental and Vision Care Outcomes
<p>Access to Dental and Vision Care</p> <ul style="list-style-type: none"> Child has a usual source of dental care Child has a usual source of vision care
<p>Use of Dental and Vision Care</p> <ul style="list-style-type: none"> Any preventive visit to dentist or dental hygienist (in past six months) Any visit to dentist/dental hygienist for cavity filling or extraction (in past six months) Any visit to eye doctor/optometrist/optician for eye exam or vision check (in past six months)
<p>Unmet Need for Dental and Vision Care</p> <ul style="list-style-type: none"> Any unmet need for dental care (in past six months) Unmet need for dental is due to cost (in past six months) Any delay for dental care (in past six months) Any delay for vision care (in past six months)

children pertain to their past six months on the program. The recent enrollee sample serves as the comparison group for the study, providing a measure of the health care outcomes among children *without Healthy Kids coverage*. Survey questions about these outcomes focus on the six-month period before they enrolled in Healthy Kids. By focusing on this preenrollment period, we obtain our measure of the counterfactual—that is, what the experiences of established enrollee children would have been without the Healthy Kids program.

This design has been used in several recent studies on the effects of children’s health insurance programs (Lave et al. 1998; Szilagyi et al. 2000; Dick et al. 2004). It has several benefits over alternatives. First, because the design requires only one wave of data collection, it avoids sample attrition, which is likely in a longitudinal design. Second, because the comparison group lives in the same community as the program group and has elected to enroll in the program, the design avoids unobserved differences that might be present in comparison groups obtained from other communities or from a population of eligible but not enrolled children. Finally, the design is particularly well suited for this study because the counterfactual is based on a recent enrollee population that, as described in Chapter III, is rarely covered by health insurance before enrolling—precisely the situation that the established enrollee children would be expected to find themselves in without Healthy Kids.

We estimate the impact of Healthy Kids on a given outcome using a simple linear regression model. A dummy variable in the model is used to identify whether the outcome measure reflects a child without Healthy Kids (recent enrollee) or with Healthy Kids (established enrollee). The estimated coefficient on this variable measures the impact of the program on a given outcome. The regression model controls for a number of demographic characteristics of the children and their families, as well as their location of residence in the county (zip code) and their month of program enrollment (Table II.2). The treatment sample of established enrollees and the

TABLE II.2
SUMMARY OF COVARIATES USED IN REGRESSION MODELS

Child Characteristics
Age (at Interview)
Gender
Race/Ethnicity
Month of Program Enrollment
Family/Household Characteristics
Income (Percent of FPL)
Employment Status
Primary Language Spoken
Household Composition (Number of Parents, Children)
Highest Education Level of Parent/Guardian
Length of Residence in Santa Clara County (at Interview)
Location of Residence (Zip Code)

Note: See Appendix Table 1 at the end of the report for details on these measures, including a comparison of mean values between the established enrollee (“with Healthy Kids”) and recent enrollee (“without Healthy Kids”) samples.

comparison sample of recent enrollees are generally quite similar across these characteristics (see Appendix Table 1). The most notable difference is in their mean income, which is about 10 percent higher among the established enrollee sample than the recent enrollee sample.

Findings presented in the report are robust to a number of alternative specifications. They differ little whether they are based on regression models or on a simple comparison of mean differences between the two samples. They also differ little when using alternative specifications that explore several sources of potential bias in the estimated impacts. These include models exploring possible bias due to “regression of the mean” that could result, for example, from children enrolling in Healthy Kids because of a temporary health care need due to illness or some other problem. For details on these specifications and their results, see the separately bound methods appendix, which details the design and collection of the survey data, as well as the data analysis that supports the information in this report.

III. CHARACTERISTICS OF HEALTHY KIDS CHILDREN AND THEIR FAMILIES

As described previously, the Healthy Kids program serves two distinct groups of children. The first is “lower-income” children—those with household income below 250 percent of the FPL, who would ordinarily qualify, based on income, for coverage through one of the major state programs, Medi-Cal or Healthy Families, but their undocumented immigration status makes them ineligible. The second is “higher-income” children—those with household incomes between 250 and 300 percent of the FPL, who are ineligible for state coverage because their household income is higher than the threshold for the state’s Healthy Families program.

Below, we discuss the characteristics of these two groups of Healthy Kids participants, paying particular attention to the children in the lower-income group.¹ These children account for roughly 85 percent of all Healthy Kids enrollees and are the focus of the impacts analysis presented in Chapters IV and V.

A. CHARACTERISTICS OF HEALTHY KIDS CHILDREN

Age. As the first column of Table III.1 shows, children ages 6 to 12 make up the largest proportion of Healthy Kids enrollees in the lower-income group (44 percent). Children under age 6 make up a much smaller proportion (21 percent), which is probably related to their greater likelihood of being born in the United States, making them eligible for one of the state programs. The rest of the children in the lower-income group (35 percent) range in age from 13 to 18. This is a sizable proportion, and perhaps a surprisingly large number given that teenagers are more

¹ This summary is based on the characteristics of the established enrollee sample, who had been on the program for a little over one year at the time of the survey interview (see Chapter II). The established-enrollee sample serves as the treatment group for the impact study and provides our measures of outcomes for children participating in Healthy Kids.

TABLE III.1

SELECTED CHARACTERISTICS OF SURVEYED HEALTHY KIDS PARTICIPANTS

Measure	Lower-Income Enrollees (Percentage)	Higher-Income Enrollees (Percentage)
Child Characteristics		
Age (at interview)		
0 to 5	21	46
6 to 12	44	31
13 to 18	35	23
Race/Ethnicity and Household Language		
Latino, non-English-speaking	71	43
Latino, English-speaking	13	13
Non-Latino, non-English-speaking	8	24
Non-Latino, English-speaking	8	20
Reported Health Status		
Fair/Poor Health	16	15
Condition That Limits Usual Activities	5	7
Asthma	7	9
Coverage During the Six Months Before Enrolling		
Uninsured (full six months)	63	30
Emergency Medi-Cal (any)	13	1
Private insurance (any)	16	48
Other insurance (any)	8	21
Family Characteristics		
Parental Work Status		
Two parents, both working	19	30
Two parents, one working	54	48
Two parents, none working	3	1
One parent, working	19	20
One parent, not working	5	0
Income (Percent of Poverty)		
<100	53	0
100 to 199	39	0
200 to 249	8	0
250 to 300	0	100
Months Family Lived in Santa Clara County (at Enrollment)		
<6 months	19	1
6 to 11 months	16	11
12 to 23 months	14	10
24 to 35 months	8	4
36+ months	43	74
Sample Size	626	89

Source: 2003-2004 Survey of Healthy Kids Enrollees by Mathematica Policy Research, Inc.

Notes: Statistics shown reflect children in the “established enrollee” sample, who have been enrolled in Healthy Kids for roughly one year. Lower-income enrollees include children from families with income less than 250 percent of the Federal Poverty Line (FPL). Higher-income enrollees include children from families with income between 250 and 300 percent of the FPL.

likely than other children in California to go without insurance coverage (Holtby et al. 2004). One plausible explanation is that teenagers are more likely than younger children to have been born outside the United States, making those in the lower-income group eligible more often for Healthy Kids.

Ethnicity and Language. Nearly all lower-income children in the Healthy Kids program are Latino (84 percent), and nearly three of four are Latinos who live in non-English-speaking households. Both these characteristics differ notably from higher-income children (shown in Table III.1, column 2), who display greater racial and ethnic diversity. For example, about 20 percent of the children in the higher-income group are non-Latino and live in English-speaking households—a percentage similar to children in the state’s Healthy Families program (UCLA 2005).

Reported Health Status. Sixteen percent of lower-income children are reported by their parents to be in fair or poor health. This is high, compared to national estimates of immigrant and non-immigrant children. For example, one recent study found that seven percent of young children of immigrants are reported in fair or poor health, compared to three percent of children of native-born parents (Capps et al. 2005). On the other hand, five percent of lower-income children on Healthy Kids have conditions that limit their activities of daily living, and seven percent have been told by a physician that they have asthma—both of these rates are slightly below those for children statewide (Holtby et al. 2004; Mendez-Luck et al. 2004).

Prior Insurance Coverage. An exceptionally high percentage of lower-income children (63 percent) were uninsured at least six months before enrolling in Healthy Kids. This is in sharp contrast to the six percent of children statewide in California who reported being uninsured for part of the year in 2003 (Brown and Lavarreda 2004). In addition, 13 percent of Healthy Kids children had only Emergency Medi-Cal in the six months before enrolling, which provides

short-term coverage strictly for immediate health care needs. Only 16 percent had private insurance, while 8 percent reported other types of coverage, most often insurance from their country of origin. The high percentage of children without coverage, or with only Emergency Medi-Cal, before enrolling underscores the potential importance of Healthy Kids as a source of coverage for eligible families. In fact, of the children without insurance in the six months before enrolling in Healthy Kids, two of three were reported to have never had health insurance.²

Prior insurance coverage is much more common among higher-income children on Healthy Kids (Table III.1, column 2). While 30 percent were without coverage for the full six months before enrollment in Healthy Kids, 48 percent had private coverage and 21 percent had other coverage, typically from Medi-Cal or Healthy Families.³ This again shows how different higher-income children are from the lower-income children on Healthy Kids, few of whom have access to other sources of coverage beyond Emergency Medi-Cal.

B. HOUSEHOLD CHARACTERISTICS

Household Structure and Working Status. Three of four lower-income children on Healthy Kids live in a two-parent household. Of these children, nearly all have at least one working parent, and most have two working parents. In total, more than 90 percent of Healthy Kids children live in a household with a working parent.

Family Income. Despite the high rate of parental employment among children in the lower-income group, 53 percent of them live in households below the FPL. An additional 40 percent

² This estimate may be overstated to the extent that some children had access to free public health care in their country of origin and the family does not report this as insurance coverage.

³ The high proportion of children with private coverage before enrolling in Healthy Kids may indicate some degree of substitution of private health insurance for Healthy Kids coverage (called “crowd-out”) among the higher-income group. However, because this group was not a main focus of the evaluation, no information was collected on the survey to assess the extent of substitution among these children. This issue is being examined in a separate evaluation of the Healthy Kids program in San Mateo County.

have reported incomes between 100 and 199 percent of the FPL, while only eight percent have incomes between 200 and 250 percent of the FPL. This suggests that, although most parents work, they typically hold low-paying jobs. Those jobs most likely offer few benefits, so parents have little opportunity to insure their children through private coverage.

Time in Santa Clara County. Almost half the lower-income children on Healthy Kids (43 percent) are from households that had lived in the county for three or more years when they enrolled in the program. An additional eight percent have been in the county for two to three years. About one in five (19 percent) had been in the county less than six months at the time of enrollment, and 17 percent had been in the county 6 to 11 months. These figures only reflect time in the county, not in the country, so some of these households could have been in the country much longer. These findings should lessen concerns that Healthy Kids has acted as a “magnet” for large numbers of families, leading them to move to the county simply to insure their children.

IV. THE IMPACTS OF HEALTHY KIDS ON MEDICAL CARE

Access to high-quality medical care (primary and specialist care) remains a top priority of the public health community, and many studies underscore the potential benefits of such care for children and their families. According to the American Academy of Pediatrics, children with a medical home, where a group of regular providers delivers or directs all aspects of medical care, receive care that is less costly and often more beneficial than care available through urgent-care facilities and other irregular sources (American Academy of Pediatrics 2002). In addition, a long-term relationship between a medical provider and a child and family can cultivate a level of trust necessary for compliance and for seeking needed health care (Charistakis et al. 2001). For example, children who receive care from a regular provider are more likely to have their immunization status reviewed and their parents are more likely to be reminded when their child's vaccinations are due (Briss et al. 2000). Children with regular preventive care have fewer adverse health care events (such as fewer emergency room visits) and fewer avoidable hospitalizations (Leatherman and McCarthy 2004). In addition, not receiving needed health care, or delaying it, can lead to poorer health, increase the overall cost to the health care system, and reduce productivity (American College of Physicians 2000a).

Latino children, who comprise the large majority of Healthy Kids enrollees, are a group of particular policy concern and interest in terms of medical care. Latino children are much more likely than other children to be uninsured and to experience language and other access barriers to medical care. These factors likely contribute to low use of medical care among these children. For example, Latino children are more likely than other children to report no contact with the health care system in the past six months (Dey et al. 2004; Trevino et al. 1991). Access barriers are particularly severe among uninsured Latino children. For example, uninsured Latino

children are more than twice as likely as similar Latino children with either public or private insurance to have an unmet medical need (Scott and Ni 2004). In addition, uninsured Latino children with common childhood health problems (such as earaches, tonsillitis, and asthma) are less likely than insured Latino children to receive care for these problems (American College of Physicians 2000b). These barriers may, in turn, lead to poorer health outcomes for Latino children, particularly those who are uninsured (American College of Physicians 2000b).

Outcomes for undocumented Latino children have not been well investigated. What evidence is available suggests, not surprisingly, that their access to care is particularly limited (Flores et al. 1998; Ku and Matani 2001). This may be due to several factors, including low income, lack of coverage for extended periods, language difficulties, and a lack of familiarity and comfort with the local health care system. In Santa Clara County, some of these barriers may have been reduced before the advent of Healthy Kids, as the local health care system was already serving large numbers of Latino children and families in publicly funded clinics throughout the county. Given the importance of health care coverage in reducing access barriers, however, it seems likely that Healthy Kids would have at least some impact on children's access to medical care.

Medical Care Under Healthy Kids. When filling out the application for Healthy Kids coverage, families can select a physician or clinic that will be the primary care provider for their child(ren) after eligibility has been approved and they have been officially enrolled. The SCFHP, which administers the Healthy Kids program, offers families a wide selection of primary care providers—both public and private—around the county. One popular network—Valley Medical Plan—includes physicians employed by the county, community clinics, and the Lucile Packard Children's Hospital physicians. Another network is made up of private physician groups and the Stanford medical group.

Information from local stakeholders and focus groups with families suggests that many Healthy Kids families prefer the public health clinics. These clinics are either county facilities or community-based health centers, and they are well regarded in the county (Howell and Hughes 2003). Given the high proportion of recent immigrant families in the county, the clinics emphasize providing culturally appropriate services in the immigrants' language. The clinics also take other steps to support families who might be eligible for Healthy Kids. For example, the county system clinics allow appointments for uninsured children and, before appointments, call families and ask them to bring the materials needed to apply for insurance coverage.

A. ACCESS TO MEDICAL CARE

As noted earlier, the medical home is seen as an ideal place to provide children access to high-quality medical care on a needed basis (American Academy of Pediatrics 2002). The medical home consists of a provider or group of providers who address a child's primary care needs, such as preventive visits and sick visits, and direct and facilitate the remaining aspects of pediatric care, such as visits to specialists. Children and families with a medical home are better able to have a close relationship with their provider(s), developing a high degree of trust and effective communication with them.

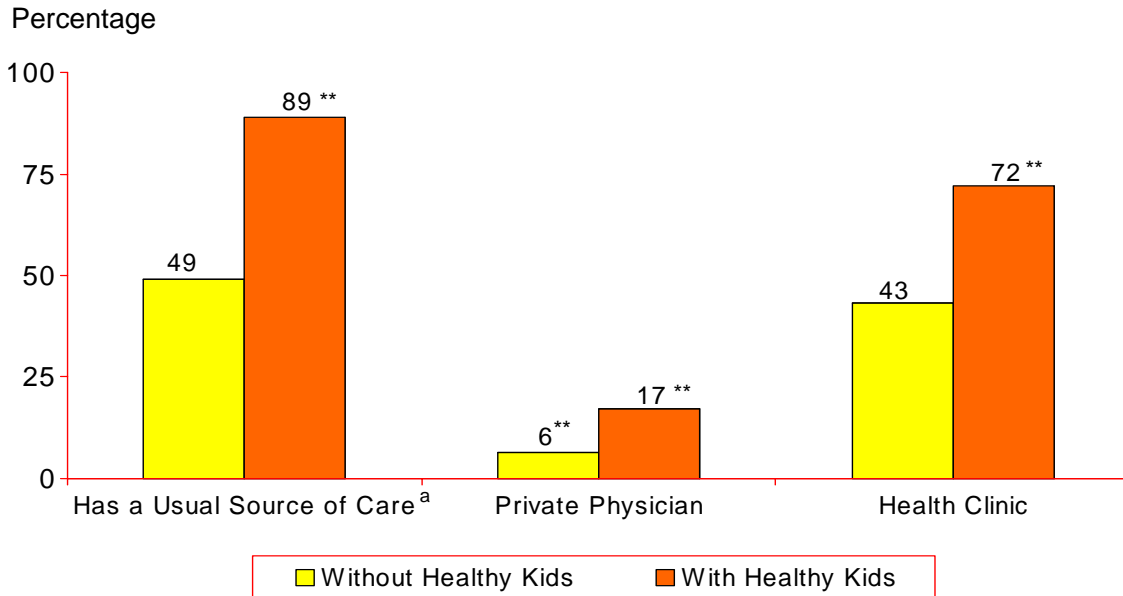
To measure the impact of Healthy Kids on access to care and, ultimately, the opportunity of families to secure a medical home for their children, we examined two main questions. First, does the Healthy Kids program increase the proportion of children with a usual source of medical care (defined in our survey as a place that a child would usually visit for preventive or sick care)? Second, does the program increase the proportion of children who see the same (regular) provider at their usual care source? We also examined the qualities of the usual care source and its providers, which are important features of a medical home, such as whether providers communicate effectively with families and are available after hours.

Healthy Kids has a significant impact on children's access to care and the potential for families to secure a medical home for their children. First, the program dramatically increases the proportion of children who have a usual source of medical care (Figure IV.1). Without Healthy Kids, only about half (49 percent) of children had a usual source of medical care. With Healthy Kids, 89 percent of children had a usual source of medical care—an increase of 40 percentage points as a result of participating in the program. This increase results from large gains in both health clinics and private physicians as usual sources of medical care—from 43 to 72 percent for clinics and from 6 to 17 percent for private physicians.

With or without Healthy Kids, the health clinic is reported most often as the child's usual care source (among those who have such a source). This heavy reliance on clinics is relatively uncommon among insured children. For example, 41 percent of publicly insured Latino children nationwide have a clinic as their usual source of care, far lower than the 72 percent rate seen among Healthy Kids children (Dey et al. 2004; Scott and Ni 2004). As mentioned, the health clinics in the county have emphasized providing culturally appropriate services in the immigrants' language, making them attractive to Healthy Kids families. In addition, given their immigration status and potential language barriers, many of the families that Healthy Kids serves may feel more comfortable in a clinic setting than in a private physician setting that is frequented less often by families of their socioeconomic background.

FIGURE IV.1

IMPACT OF HEALTHY KIDS ON HAVING A USUAL SOURCE OF PRIMARY CARE



Source: 2003-2004 Survey of Healthy Kids Enrollees by Mathematica Policy Research, Inc. (N = 1,235).

Notes: Findings reflect children from households with income below 250 percent of the FPL. Estimates are based on regression models. Children “Without Healthy Kids” have recently been found eligible for the program and their outcomes were measured prior to enrollment. Children “With Healthy Kids” have been enrolled on the program for approximately one year and their outcomes were measured in the six months prior to interview. See Chapter II for additional details.

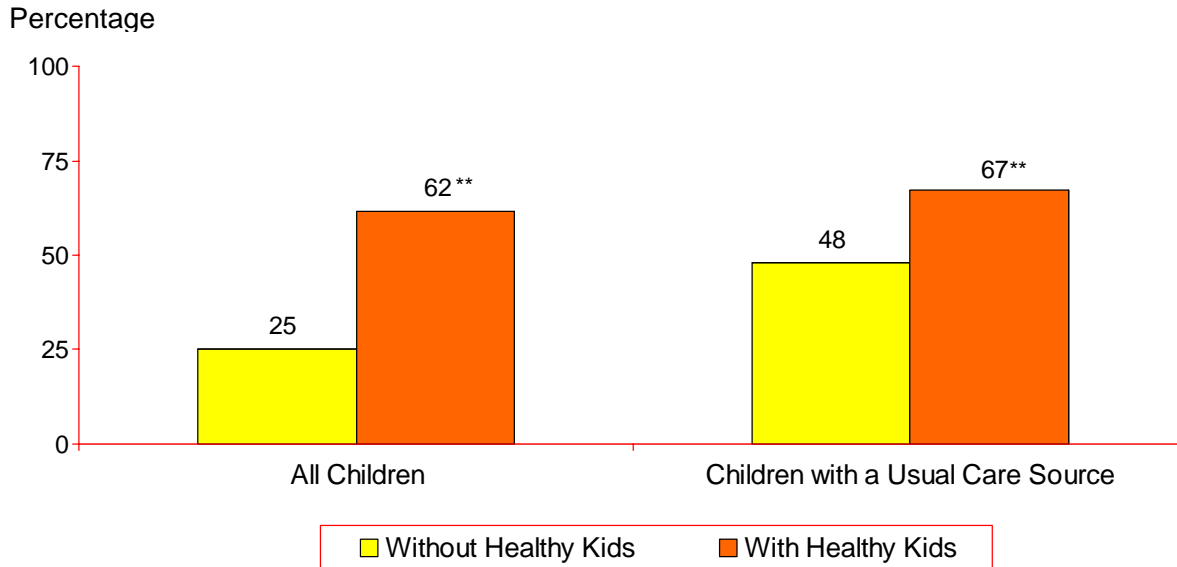
^aExcludes emergency room.

**Difference is statistically significant at p-value < .01; * significant at p-value <.05.

Healthy Kids also dramatically increases the proportion of children seen by the same provider when they go for care, a further indication of improved access among Healthy Kids children (Figure IV.2). The percentage that sees the same provider more than doubled, from 25 percent without Healthy Kids to 62 percent with Healthy Kids. Much of this increase can be traced to the gains in having a usual source of medical care. When we limit the sample to only those children reported to have a usual care source, however, an impact on seeing the same provider is still evident—from 48 to 67 percent. This suggests that, even among children who had a usual source of medical care without Healthy Kids, the program improved access by developing a stronger relationship between the family and a single provider.

FIGURE IV.2

IMPACT OF HEALTHY KIDS ON HAVING A REGULAR PROVIDER
AT USUAL SOURCE OF PRIMARY CARE



Source: 2003-2004 Survey of Healthy Kids Enrollees by Mathematica Policy Research, Inc. (N = 1,235).

Notes: Findings reflect children from households with income below 250 percent of the FPL. Estimates are based on regression models. Children “Without Healthy Kids” have recently been found eligible for the program and their outcomes were measured prior to enrollment. Children “With Healthy Kids” have been enrolled on the program for approximately one year and their outcomes were measured in the six months prior to interview. See Chapter II for additional details.

**Difference is statistically significant at p-value < .01.

Additional descriptive data suggest that Healthy Kids families who have a usual source of medical care for their children are very satisfied with its quality (Table IV.1).¹ Eighty percent of families reported that their child’s provider(s) always or usually explained things in understandable ways, and 93 percent reported that the provider(s) always or usually treated the family with courtesy and respect. About two-thirds (66 percent) reported that they could reach their provider(s) at the usual source after hours. Likewise, about two-thirds (69 percent) of

¹ Reported quality is significantly higher across all measures for children with Healthy Kids than for children without Healthy Kids. We do not report these differences, however, because they do not reflect reliable estimates of the impact of Healthy Kids. The two groups of children have very different rates of having a usual source, leading to potentially serious selection bias that could either overstate or understate the true impacts of the program. For example, if families who obtained a usual source of care because of Healthy Kids are more easily satisfied than those who would have had a usual source regardless of the program, any differences on quality between children with and without Healthy kids are likely overstated.

TABLE IV.1
PERCEIVED QUALITY OF USUAL CARE SOURCE
AMONG HEALTHY KIDS PARTICIPANTS

Measure	Percentage of Healthy Kids Participants
Provider(s) always or usually explains things in understandable ways	80
Provider(s) always or usually treat the family with respect	93
Can reach provider(s) after hours	66
Provider(s) always or usually speak in household's native language	69
Communication is not a problem because of language	94
Would recommend usual source to family and friends	94
Sample Size	626

Source: 2003-2004 Survey of Healthy Kids Enrollees by Mathematica Policy Research, Inc.

Notes: Findings reflect children from households with income below 250 percent of the FPL and have been enrolled approximately one year (see Chapter II for details).

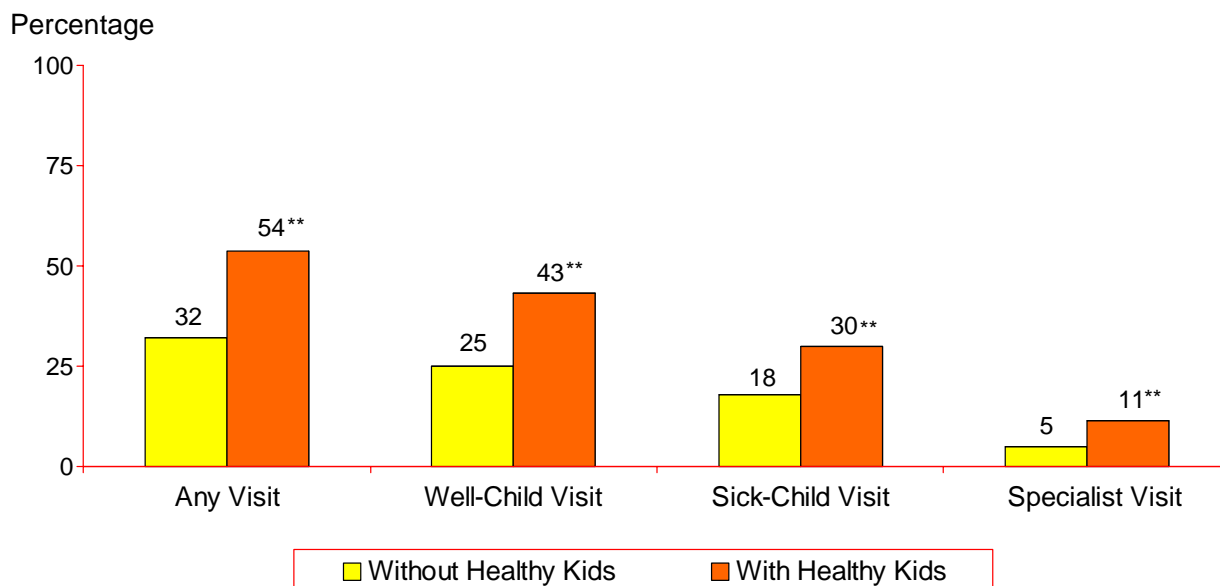
Healthy Kids children had provider(s) at the usual source who always or usually spoke the household's native language, and 94 percent did not have communication problems due to language. Finally, on a more general measure, 94 percent reported that they would recommend their usual care source to family or friends.

B. USE OF MEDICAL CARE

The use of medical care—preventive visits, “sick” visits for acute illness and injuries, and visits to specialists for more focused health care needs—is essential for avoiding preventable health problems and minimizing the effects of health limitations or chronic conditions like asthma. As Figure IV.3 shows, Healthy Kids significantly increased the proportion of children who received medical care in the past six months. Overall, the proportion of children receiving

FIGURE IV.3

IMPACT OF HEALTHY KIDS ON USE OF MEDICAL CARE
(PAST SIX MONTHS)



Source: 2003-2004 Survey of Healthy Kids Enrollees by Mathematica Policy Research, Inc. (N = 1,235).

Notes: Findings reflect children from households with income below 250 percent of the FPL. Estimates are based on regression models. Children “Without Healthy Kids” have recently been found eligible for the program and their outcomes were measured prior to enrollment. Children “With Healthy Kids” have been enrolled on the program for approximately one year and their outcomes were measured in the six months prior to interview. See Chapter II for additional details.

**Difference is statistically significant at p-value < .01.

any of these medical visits (well-child, sick-child, or specialist) rose dramatically, from 32 percent without Healthy Kids to 54 percent with Healthy Kids—an increase of 22 points. This increase reflects a near-doubling in the share of children who received a preventive visit (from 25 to 43 percent), a near-doubling in the share who received a sick visit (from 18 to 30 percent), and more than a doubling in the share who received a specialist visit (from 5 to 11 percent).

This 22 point increase in having a medical visit is similar to the percentage difference found in more general populations between uninsured and insured children receiving medical visits (Dey et al. 2004; Holtby et al. 2004). However, the proportion of Healthy Kids children with a medical visit (54 percent) is much closer to that of uninsured children. For example, data from

the 2002 National Health Interview Survey find that 53 percent of uninsured children had a visit in the past six months, nearly identical to Healthy Kids children, compared to 77 percent of privately insured children and 79 percent of publicly insured children (Dey et al. 2004). Among Latino children, 48 percent of the uninsured had a visit in the past six months, again close to the number for Healthy Kids children, compared to 73 percent of Latino children who were insured (Centers for Disease Control and Prevention 2005).

Impacts of Healthy Kids on medical care visits are evident for all age groups, although, not surprisingly, visits are much more common among younger children than older ones, whether or not the child is enrolled in this program (Table IV.2). Specifically, among children under age 6, the proportion with a physician visit rises from 52 to 73 percent; among children ages 6 to 12, it rises from 34 to 52 percent; and among teenagers, it rises from 23 to 44 percent. Each of these differences is similar to those seen between uninsured and insured children more generally

TABLE IV.2
IMPACT OF HEALTHY KIDS ON PHYSICIAN VISITS, BY AGE

Age Group	Percentage with a Physician Visit (Past Six Months)	
	Without Healthy Kids	With Healthy Kids
Less than 6 Years Old	52	73**
6 to 12 Years Old	34	52**
13 and Older	23	44**
Sample Size	609	626

Source: 2003-2004 Survey of Healthy Kids Enrollees by Mathematica Policy Research, Inc.

Notes: Findings reflect children from households with income below 250 percent of the FPL. Estimates are based on regression models. Children “Without Healthy Kids” have recently been found eligible for the program and their outcomes were measured prior to enrollment. Children “With Healthy Kids” have been enrolled on the program for approximately one year and their outcomes were measured in the six months prior to interview. See Chapter II for additional details.

**Difference is statistically significant at p-value < .01.

(Centers for Disease Control and Prevention 2005). As with the overall results, however, the percentage of Healthy Kids children with a visit is closer to uninsured children within each age group than it is to insured children (Centers for Disease Control and Prevention 2005).

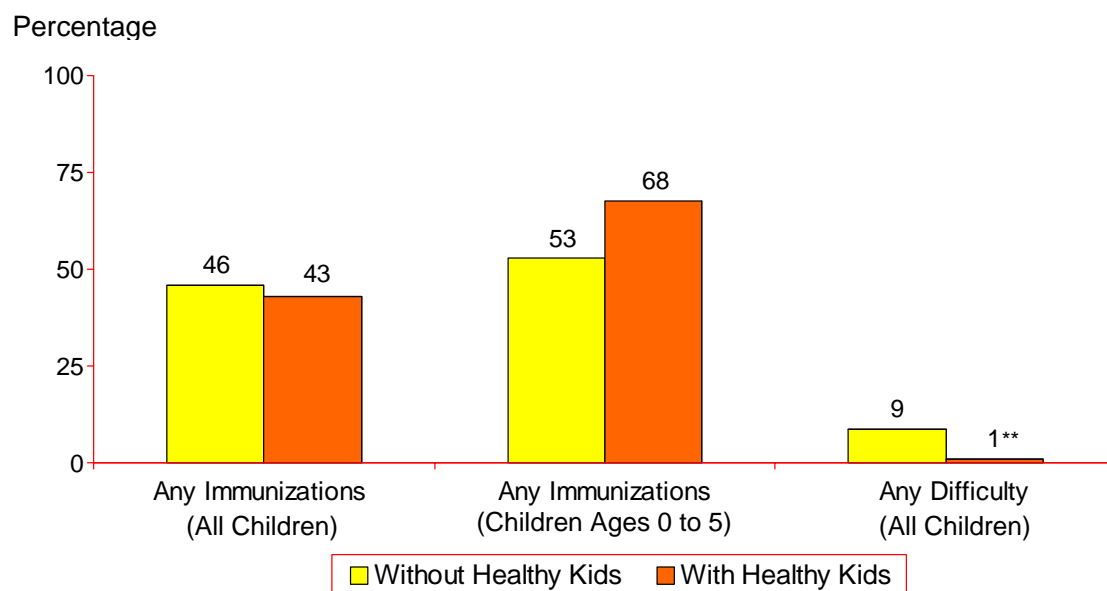
C. IMMUNIZATIONS

Childhood immunizations are an essential component of preventive services, particularly for children under age 6. Overall, children with Healthy Kids were not significantly different than children without Healthy Kids in the proportion with an immunization in the past six months (43 and 46 percent, respectively; Figure IV.4). Likewise, among children under age 6, there is no significant difference between the two groups ($p = 0.06$). Although the difference is not statistically significant, it is nevertheless notable—53 percent of children without Healthy Kids are reported to have had an immunization in the prior six months, compared to 68 percent of children with Healthy Kids. Because of the relatively poor statistical power afforded by analyzing a subsample of children under age 6, it is unclear whether or not the program had an impact on immunization rates for these children.

While there is no clear evidence of an impact on receiving an immunization, Healthy Kids does appear to have made the process significantly easier for some. When asked if they had difficulty getting their child immunized, the percentage of families responding “yes” declined from nine percent without Healthy Kids to just one percent with Healthy Kids. This decline was similar and significant in children under age 6 as well as in older age groups (not shown in the figure).

FIGURE IV.4

IMPACT OF HEALTHY KIDS ON IMMUNIZATIONS (PAST SIX MONTHS)



Source: 2003-2004 Survey of Healthy Kids Enrollees by Mathematica Policy Research, Inc. (N = 1,235).

Notes: Findings reflect children from households with income below 250 percent of the FPL. Estimates are based on regression models. Children “Without Healthy Kids” have recently been found eligible for the program and their outcomes were measured prior to enrollment. Children “With Healthy Kids” have been enrolled on the program for approximately one year and their outcomes were measured in the six months prior to interview. See Chapter II for additional details.

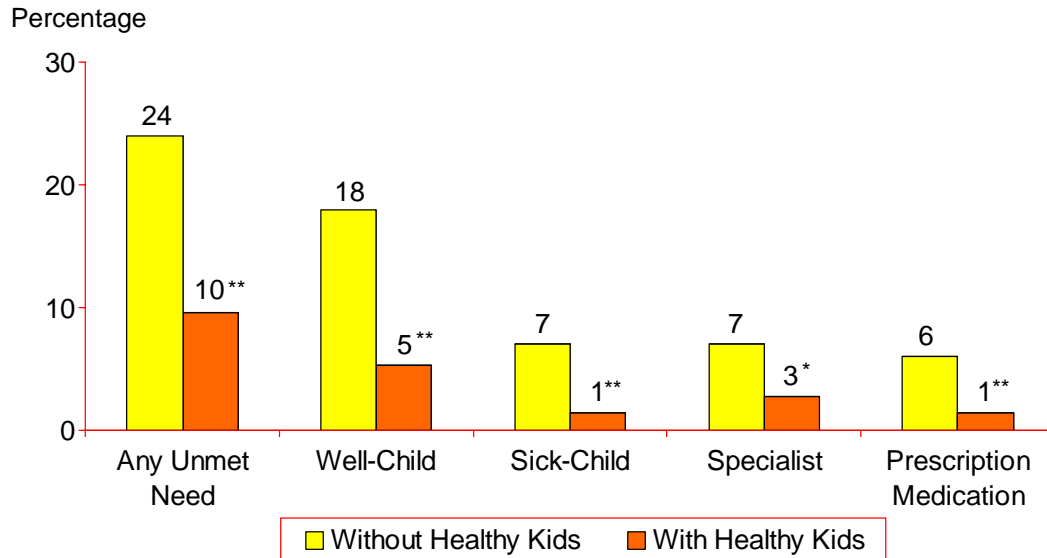
**Difference is statistically significant at p-value < .01.

D. UNMET NEED

Given the improvements in access to, and use of, medical care, it is not surprising that Healthy Kids significantly reduced the proportion of children reported to have unmet need for care (Figure IV.5). Overall, Healthy Kids reduced the proportion of children who needed medical care in the past six months and did not get it by more than half—from 24 percent for those without Healthy Kids to 10 percent with Healthy Kids. This reduction reflects a significant decline in unmet need across all four types of services investigated: well-child visits, sick-child visits, specialty care, and prescription medications.

FIGURE IV.5

IMPACT OF HEALTHY KIDS ON REPORTED UNMET NEED FOR PHYSICIAN CARE
(PAST SIX MONTHS)



Source: 2003-2004 Survey of Healthy Kids Enrollees by Mathematica Policy Research, Inc. (N = 1,235).

Notes: Findings reflect children from households with income below 250 percent of the FPL. Estimates are based on regression models. Children “Without Healthy Kids” have recently been found eligible for the program and their outcomes were measured prior to enrollment. Children “With Healthy Kids” have been enrolled on the program for approximately one year and their outcomes were measured in the six months prior to interview. See Chapter II for additional details.

**Difference is statistically significant at p-value < .01; * significant at p-value <.05.

These impacts on unmet need appear even more pronounced when focusing on children with various health limitations or chronic conditions (not shown in the figure), although the sample sizes associated with some conditions limit our statistical power to establish significance.² For example, among children reported to be in fair or poor health, 37 percent of those without Healthy Kids reported an unmet need for medical care, compared to just 11 percent of those with Healthy Kids ($p < 0.01$). Similarly, for children reported to have asthma, 21 percent of children

² In addition to the modest size of these subgroup samples, the extent to which children are reported to have various health conditions may be a function of their access to, and use of, care. As a result, any analysis that compares children with and without Healthy Kids based on subgroup samples defined by health status may be subject to selection bias. Thus, particular caution must be used in interpreting any estimated impact by health status.

without Healthy Kids reported an unmet need for specialist care, compared to just 3 percent of those with Healthy Kids ($p = 0.09$).

E. CONFIDENCE AND SATISFACTION

Many families may lack confidence that they can obtain health care for their children as needs arise, due either to limited access to care or to financial concerns. Healthy Kids addressed these concerns for many families. As Table IV.3 shows, Healthy Kids nearly doubled the proportion of parents who expressed confidence that they could obtain health care for their child as needed—from 41 to 75 percent. In addition, the program reduced the proportion of children whose parents reported worrying about meeting their child’s health care needs—from 83 to 58 percent. It also reduced the proportion whose parents reported that their child’s health care needs created financial difficulties—from 50 to 29 percent. While this latter impact is large, the

TABLE IV.3
IMPACT OF HEALTHY KIDS ON CONFIDENCE AND SATISFACTION WITH CARE

Measure	Without Healthy Kids	With Healthy Kids
Very Confident Child Can Get Health Care as Needed	41	75**
Worried About Meeting Child's Health Care Needs	83	58**
Child's Health Care Needs Created Financial Difficulties	50	29**
Satisfaction with the Quality of Child's Health Care		
Very satisfied	48	78**
Somewhat satisfied	37	20**
Not very satisfied	9	2**
Not at all satisfied	7	1**
Sample Size	609	626

Source: 2003-2004 Survey of Healthy Kids Enrollees by Mathematica Policy Research, Inc.

Notes: Findings reflect children from households with income below 250 percent of the FPL. Estimates are based on regression models. Children “Without Healthy Kids” have recently been found eligible for the program and their outcomes were measured prior to enrollment. Children “With Healthy Kids” have been enrolled on the program for approximately one year and their outcomes were measured in the six months prior to interview. See Chapter II for additional details.

**Difference is statistically significant at p -value $< .01$.

29 percent figure among Healthy Kids families is still surprising, since the program's benefits largely protect families from any financial risk associated with their child's health care. This might simply be an artifact of a fragile financial situation for many Healthy Kids families, but it might also suggest that families are unsure about the extent of the Healthy Kids benefit.

Satisfaction with care also improved under Healthy Kids (Table IV.3). Without Healthy Kids, 48 percent of parents reported being very satisfied with the health care that their children received, and 37 percent of parents reported being somewhat satisfied. Only 16 percent reported being unsatisfied. These rates are impressive for a population whose children are largely uninsured, and it indicates that the public health care system in the county is viewed favorably. Nevertheless, when children are covered by Healthy Kids, these rates still improve significantly. The percentage that report being very satisfied increases from 48 to 78 percent, and the percentage that report being unsatisfied falls from 16 percent to only 3 percent.

F. SUMMARY

The Healthy Kids program in Santa Clara County has had a substantial, positive impact on the medical care of children who participate. By participating in Healthy Kids, children can better access the health services they need. In turn, this has significantly reduced the percentage of children with an unmet need for care, helping raise parents' confidence that they can provide for their children's health care needs and greatly improving their overall satisfaction.

At the same time, some concerns remain for children on the program. Most notably, despite the broad-based impacts on their access to, and use of, medical care, only half have had a medical visit in the past six months, which is below the rate for insured children nationwide. In addition, about 10 percent of children still experience an unmet need, which is well below the level estimated without the program but still high enough to warrant attention.

V. THE IMPACTS OF HEALTHY KIDS ON DENTAL AND VISION CARE

Dental disease is the most common chronic disease of childhood, with nearly 60 percent of children ages 5 to 17 having decayed, filled, or missing permanent teeth (U.S. Department of Health and Human Services 2000). Many dental problems, particularly those of poor children, go untreated (Vargas et al. 1998). The disparity is most pronounced for poor Mexican American children, 70 percent of whom have untreated decayed primary teeth (U.S. Department of Health and Human Services 2000). Poor dental health can lead to declines in physical health and extended absences from school (Shulman et al. 2004; Gift et al. 1992).

Disparities in dental disease are mirrored by disparities in screening and treatment. Many studies show that poor children are less likely than nonpoor children to have a dental exam, see a dental hygienist, or have sealants on their teeth (Goodman et al. 2005; Mouradian et al. 2000; Yu et al. 2002; U.S. General Accounting Office 2000a). These findings are more pronounced for Latino children, especially Mexican Americans (Wall and Brown 2004; Yu et al. 2001).

Insurance coverage improves children's access to dental care, including increased use of services and reduced unmet need (Yu et al. 2002; Blackwell et al. 2003; Newacheck et al. 1999; Kenney et al. 2005; Szilagyi et al. 2004). However, many low-income children, even those with public insurance, have limited access to dental care, due to low provider supply in some areas and low rates of participation by dentists in public programs (Seal and Casamassimo 2003; U.S. General Accounting Office 2000b; Mofidi et al. 2002; Savage et al. 2004). Only 38 percent of low-income children with dental insurance coverage had a dental visit in 1996, compared to 64 percent of high-income children with coverage (Manski et al. 2001). In particular, children enrolled in Medicaid have low rates of dental service use. For example, only 22 percent had a dental visit in Alabama during 1999, and only 39 percent had one in Georgia in 1997

(Van Landeghem et al. 2003), even though preventive dental care has been shown to be cost saving (Weintraub et al. 2001).

Vision care also is critical for children, especially for school performance. One prospective study of children ages 5 to 17 found that about a quarter of children had a vision problem needing correction and that the prevalence of vision problems in Latino children was higher than for white children (Kleinstejn et al. 2003). Unmet need is lower for vision services than for dental services, perhaps because the overall need among children for vision care is lower than for dental care (Newacheck et al. 2000). For those children who do need vision care, however, lack of health insurance is a barrier to obtaining it. The RAND health insurance experiment found that free care for vision services significantly increased eye exams and use of glasses (Lurie et al. 1989). The ethnic disparity in dental care also pertains to eye care. A Michigan study of children enrolled in Medicaid found that Latino children were less likely than white children to receive eye care or corrective lenses (Kemper et al. 2004a).

Many policy options have been proposed to increase access to dental and vision services. In addition to federal, state, and local efforts to increase health insurance coverage, proposals have been made to expand the number and types of providers that offer screening and preventive care (American Dental Association 2004; American Academy of Ophthalmology 2002; Edelstein 2005; Kemper et al. 2004b; Centers for Disease Control and Prevention 2001; American Academy of Pediatrics 1996; dela Cruz 2004). Other proposals have suggested increasing dental school enrollment, especially among minorities (Mertz and O'Neil 2002; Valachovic et al. 2001; Mertz et al. 2004).

Dental and Vision Care Under Healthy Kids. The Healthy Kids program provides coverage for dental and vision services to previously uninsured children, many of whom have never had any insurance coverage. Because the benefits for Healthy Kids were deliberately

chosen to mirror those in the Healthy Families program, they include relatively generous dental and vision care, compared to most private insurance. The only limits on dental care are for cleanings (up to two per year) and orthodontics (excluded). There is no limit on vision care.

When the program was implemented, the SCFHP contracted with Delta Dental to manage and reimburse for dental care on a capitated basis. The monthly capitation rate was low (\$7 per month) and, as a result, only a small number of dental sites accepted Healthy Kids enrollees countywide. There were widespread complaints from parents, advocates, and providers about the capitated approach. Effective May 2003, the Healthy Kids program began using a preferred provider approach (also through Delta Dental), with a greatly expanded network (now 421 dentists in 269 offices) and an increased reimbursement rate (about \$2 more per month). As soon as the new approach was adopted, local stakeholders reported that dental access improved dramatically. There was no comparable information about whether the supply of vision care also might be limited, although the plan has not had complaints about access to vision services.

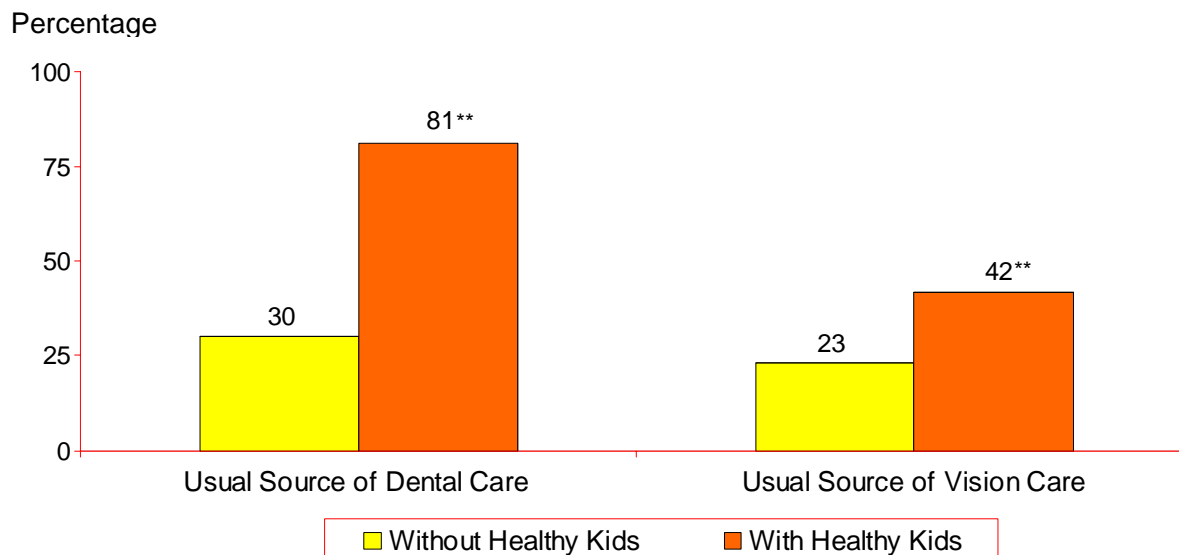
A. ACCESS TO DENTAL AND VISION CARE¹

Consistent with the information from stakeholders, we find that Healthy Kids substantially improves access to both dental and vision care as measured by whether the child has a usual care source for these services (Figure V.1). Without Healthy Kids, only 30 percent had a usual source of dental care, and only 23 percent had a usual source of vision care. With Healthy Kids, the percentage with a usual source for these services increased dramatically—to 81 percent for dental care and 42 percent for vision care.

¹ The analysis of dental and vision care is restricted to children age three and older.

FIGURE V.1

IMPACT OF HEALTHY KIDS ON HAVING A USUAL SOURCE OF DENTAL CARE AND VISION CARE



Source: 2003-2004 Survey of Healthy Kids Enrollees by Mathematica Policy Research, Inc. (N = 1,235).

Notes: Findings reflect children age three or older from households with income below 250 percent of the FPL. Estimates are based on regression models. Children “Without Healthy Kids” have recently been found eligible for the program and their outcomes were measured prior to enrollment. Children “With Healthy Kids” have been enrolled on the program for approximately one year and their outcomes were measured in the six months prior to interview. See Chapter II for additional details.

**Difference is statistically significant at p-value < .01; * significant at p-value <.05.

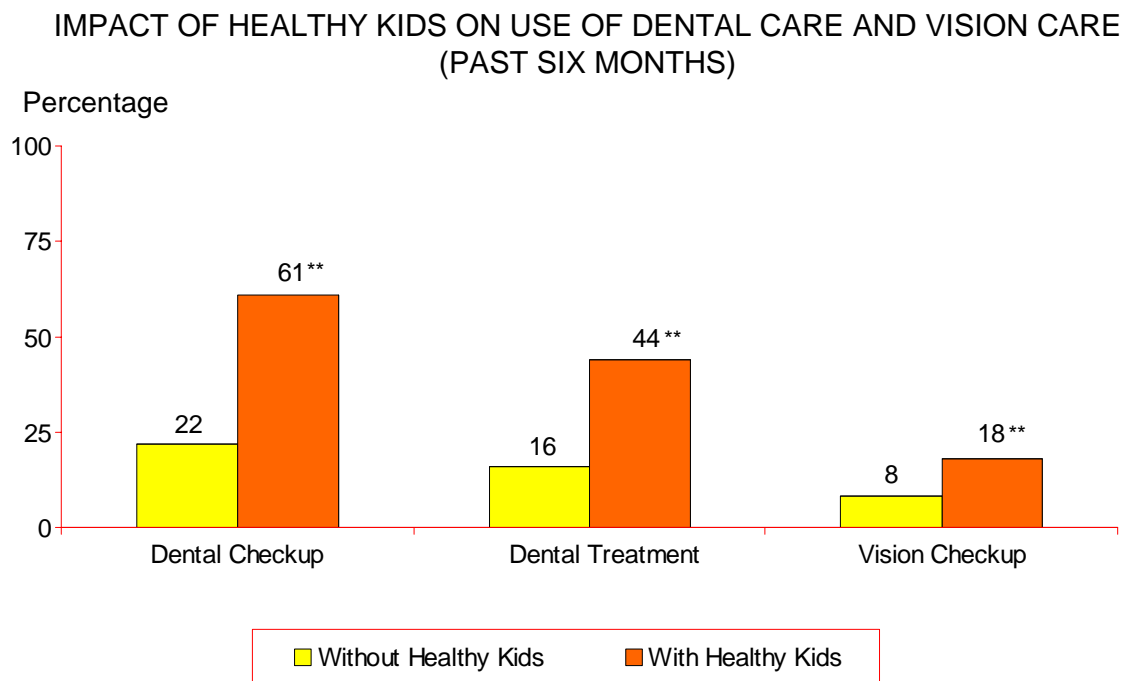
Cost often was cited as the reason for not having a usual source of care among children without Healthy Kids, a reason given by 32 percent of those without a dental source and 27 percent of those without a vision source (not shown). It was cited by less than one percent of those with Healthy Kids.

The fact that many more Healthy Kids children have a usual source of dental care than vision care may reflect how the two types of care are provided. For example, unlike preventive dental care, preventive vision care often is provided in primary care or school settings (through screening and other routine procedures). Alternatively, it may be related to the importance that families place on these services. For example, many parents may wait until their child is having difficulty seeing before taking them for an eye exam but want their child to receive regular dental checkups.

B. USE OF DENTAL AND VISION CARE

The improvements in access to dental and vision care coincide with a large increase in the use of these services (Figure V.2). The proportion of children with a preventive dental visit in the past six months increased from 22 percent without Healthy Kids to 61 percent with Healthy Kids. Similarly, the proportion who had a cavity or tooth pulled in the past six months increased from 16 to 44 percent. This latter result strongly suggests that Healthy Kids provides services that improve the oral health—and, consequently, the overall health—of the children it serves. In addition, it may reflect a substantial level of pent-up demand for dental care among children on the program. Likewise, use of vision care increases with the program. Without Healthy Kids, just eight percent of children had formal vision care in the past six months.² With the program, 18 percent received such services.

FIGURE V.2



Source: 2003-2004 Survey of Healthy Kids Enrollees by Mathematica Policy Research, Inc. (N = 1,235).

Notes: Findings reflect children age three or older from households with income below 250 percent of the FPL. Estimates are based on regression models. Children “Without Healthy Kids” have recently been found eligible for the program and their outcomes were measured prior to enrollment. Children “With Healthy Kids” have been enrolled on the program for approximately one year and their outcomes were measured in the six months prior to interview. See Chapter II for additional details.

**Difference is statistically significant at p-value < .01; * significant at p-value < .05.

² More may have had preventive screens in other settings, such as primary care or school.

The large gains in service use are evident across age groups. For example, for preventive dental services, the proportion of children ages three to five with a visit in the past six months increased nearly fivefold, from 13 to 62 percent (Table V.1). Likewise, among school-age children, the proportion with a visit more than doubled—from 26 to 66 percent for children ages 6 to 12, and from 19 to 54 percent for children 13 and older.

TABLE V.1
IMPACT OF HEALTHY KIDS ON DENTAL VISITS, BY AGE

Age Group	Percentage with a Dental Visit (Past Six Months)	
	Without Healthy Kids	With Healthy Kids
3 to 5 Years Old	13	62**
6 to 12 Years Old	26	66**
13 and Older	19	54**
Sample Size	550	599

Source: 2003-2004 Survey of Healthy Kids Enrollees by Mathematica Policy Research, Inc.

Notes: Findings reflect children age three or older from households with income below 250 percent of the FPL. Estimates are based on regression models. Children “Without Healthy Kids” have recently been found eligible for the program and their outcomes were measured prior to enrollment. Children “With Healthy Kids” have been enrolled on the program for approximately one year and their outcomes were measured in the six months prior to interview. See Chapter II for additional details.

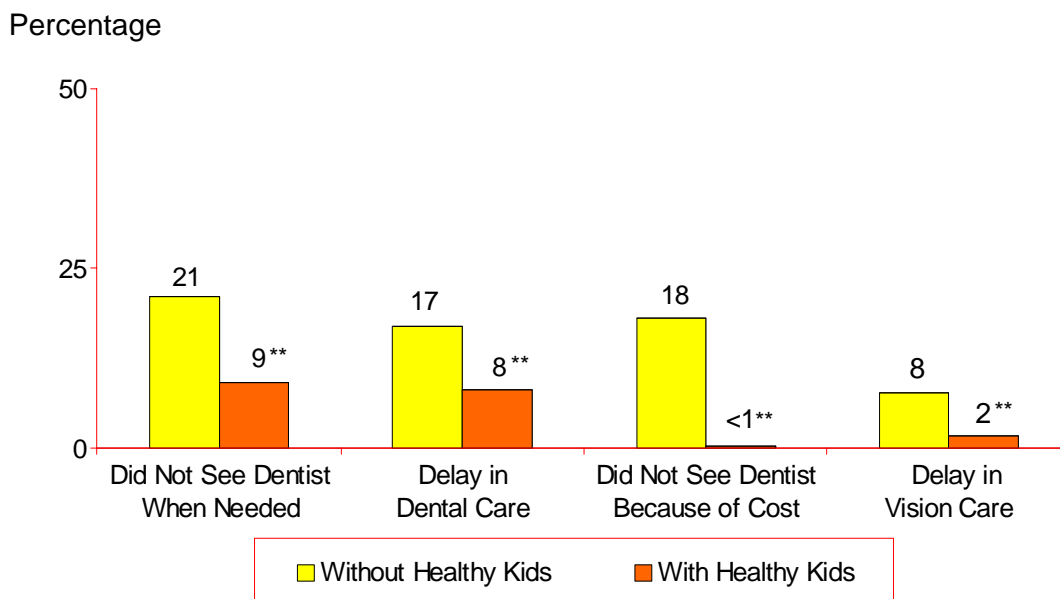
*Difference is statistically significant at p-value < .01.

C. UNMET NEED FOR DENTAL AND VISION CARE

The improvements in access and use likely contributed to significant reductions in unmet need for, and delay in, these services (Figure V.3). Based on parent self-reports, about 21 percent of children without Healthy Kids did not see a dentist when they needed to, and about 17 percent delayed dental care. Healthy Kids lowered these rates by roughly half, to nine and eight percent, respectively. More telling, about 18 percent of children without Healthy Kids did not use dental care because of cost, while less than 1 percent of children on Healthy Kids

FIGURE V.3

IMPACT OF HEALTHY KIDS ON UNMET NEED FOR AND DELAY IN DENTAL CARE AND VISION CARE (PAST SIX MONTHS)



Source: 2003-2004 Survey of Healthy Kids Enrollees by Mathematica Policy Research, Inc. (N = 1,235).

Notes: Findings reflect children age three or older from households with income below 250 percent of the FPL. Estimates are based on regression models. Children “Without Healthy Kids” have recently been found eligible for the program and their outcomes were measured prior to enrollment. Children “With Healthy Kids” have been enrolled on the program for approximately one year and their outcomes were measured in the six months prior to interview. See Chapter II for additional details.

**Difference is statistically significant at p-value < .01; * significant at p-value < .05.

reported this as a barrier. The impact on vision care is also large; eight percent of those without Healthy Kids delayed vision care, compared to only two percent of those on the program.

D. SUMMARY

Healthy Kids significantly increased the likelihood that a child has a usual source of dental and vision care. It increased use of preventive dental care, dental treatment, and vision care, and it eliminated cost as a barrier to these services. The program also reduced unmet need for, and delay in, these services. All impacts were large, underscoring the value that families place on dental and vision services and the lack of access that families had to these services before the program.

VI. DISCUSSION

The Healthy Kids program serves a unique population. Despite the undocumented immigration status of most enrolled children, the families the program serves are nearly all working, and most include two parents. Most of these families have lived in Santa Clara County for some time, which suggests that the program has not impelled families who wish to insure their children to move to the county. The children themselves are generally healthy, although a sizable percentage is reported to be in fair or poor health.

Findings offer strong evidence that Healthy Kids significantly improves the health care that children receive. These gains are widespread. They include improvements in access to a usual source of care and a regular provider; increases in the use of services, including dental treatments that have a direct link to the child's health status; reductions in unmet needs, most notably among children in fair or poor health; improvements in parents' confidence that the child can receive needed care; and an increase in the satisfaction with the quality of care. Many of these gains are larger than those typically seen in evaluations of health insurance expansions. This is most likely due to the population that Healthy Kids serves, which may have had little or no access to other forms of health insurance in the past.

Despite these significant gains, the use of medical care among Healthy Kids children is lower than that of the general population of insured children, including publicly insured Latinos. This is not simply due to parent choice, since parents continue to report some unmet needs, (roughly 10 percent for both medical and dental care). Given that most Healthy Kids families report having access to a usual provider, and the public health clinics in the county (that most families rely on) are well regarded, this relatively low rate of medical care use may be rooted in the special circumstances of the families and children who participate. For example, the

inexperience that so many Healthy Kids families have with insurance coverage may limit their understanding of the value of regular preventive care and of obtaining primary medical care more generally. In addition, some families may not seek medical care, despite having Healthy Kids coverage, because they are afraid of the possible consequences of exposing their (or their child's) undocumented immigration status. Both these factors may explain why, without Healthy Kids, a mere 32 percent of these children had a medical visit in the past six months, far lower than for uninsured children in the general population. In addition, some families may not understand the insurance benefit being offered to them or how to take advantage of it. The health plan has offered an orientation to all new Healthy Kids families, but the orientation is sparsely attended. This suggests that additional steps may be needed to improve the use of medical care by Healthy Kids children, including, for example, person-to-person outreach to educate parents about the value of seeking appropriate preventive care for their children.

Attention to Healthy Kids continues to grow. Since the time that Santa Clara County implemented Healthy Kids in early 2001, nine other counties have adopted similar programs. Together, these programs currently insure more than 70,000 children across the state. This figure is expected to grow significantly, as another 20 counties are developing their own Healthy Kids programs. A recent poll of likely voters in California suggests that this momentum will continue, as 78 percent support efforts to provide health insurance coverage to every child in the state (California Endowment website 2005). The rapid growth and popularity of Healthy Kids programs have led state policymakers to pay increasing attention to them as they seem to have the potential to fill an important gap in health insurance coverage for children.

Findings from this analysis suggest that, by filling this gap, the adoption of Healthy Kids may have many important benefits. Indeed, given the size of the estimated impacts found in Santa Clara County, it seems almost certain that Healthy Kids would have beneficial effects for

eligible children across the state. At the same time, there are several reasons why the findings presented in this report might differ from those in other communities, and the direction of any potential differences is unknown. On the one hand, for example, Santa Clara County is in a strong position to operate the program effectively and, therefore, to maximize its gains. It has a single, existing health plan to operate the program (which was already serving Medi-Cal and Healthy Families children), a high-quality public health system to serve the new enrollees, and a diverse, broad-based set of advocates and stakeholders to facilitate outreach and ensure the program delivers high-quality care. This suggests that the impacts shown in this report might be large relative to those in other portions of the state. On the other hand, the public health system in the county already offers health care access to uninsured children that may be better than that offered in many other parts of the state, suggesting that the benefits of Healthy Kids could be even greater elsewhere.

Evidence to inform how these results generalize will come from two other important evaluations of Healthy Kids programs that are currently under way. The first is looking at the program in San Mateo County (Howell et al. 2004); the second is looking at the program in Los Angeles County. Both these studies include a similar impact analysis designed to measure the impact of Healthy Kids on a variety of health-related outcomes, offering significant insight into whether and how the findings from Santa Clara County generalize.

As the evaluation of the Santa Clara County CHI continues, we will examine additional aspects of the Healthy Kids program and its potential effects on the children and families who participate. Each of these studies will blend data from the survey used in this study with information from administrative records and qualitative data from the companion process and implementation analysis. Examples include an in-depth study of outreach in the county, focusing on families' experiences applying for and obtaining coverage, an analysis of the impact

of Healthy Kids on hospitalization and emergency room use, and an analysis of children's health status and the potential effects of Healthy Kids on this important outcome. This latter analysis will be a challenge because measures of health status based on survey data are not very precise. Regardless, the significant gains seen in children's access to care and use of care, coupled with the substantial reductions in unmet need, establish a strong foundation for Healthy Kids to maintain or even improve the health of children who enroll.

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APPENDIX TABLE 1

COMPARISON OF RECENT ENROLLEE (WITHOUT HEALTHY KIDS) AND ESTABLISHED ENROLLEE (WITH HEALTHY KIDS) SAMPLES

	Recent Enrollees (Without Healthy Kids)	Established Enrollees (With Healthy Kids)
Age at Interview (Percentage)		
0 to 5	27	21 *
6 to 12	43	44
13 to 18	31	35
Female (Percentage)	43	48
Race, Ethnicity, Language (Percentage)		
Latino, Spanish speaking	77	71 *
Latino, non-Spanish speaking	14	13
Non-Latino, English speaking	4	8 **
Non-Latino, non-English speaking	6	8
<i>Age at Interview (mean)</i>	9	10 *
<i>Age at Enrollment (mean)</i>	10	9
Income (Percentage)		
Less than 100% of the FPL	59	53 *
100 to 149% of the FPL	24	25
150 to 199% of the FPL	10	15 *
200 to 249% of the FPL	6	8
<i>Income; %FPL (mean)</i>	90	103 **
Parents' Employment Status (Percentage)		
One Parent, working	17	19
One Parent, not working	7	5
Two parents, neither working	6	3 *
Two parents, one working	54	54
Two parents, both working	16	19
Number of Children in Household (Percentage)		
One child	20	21
Two children	31	31
Three or more children	49	48
Highest Education Level of a Parent (Percentage)		
Less than high school, grades 0 to 5	19	12
Less than high school, grades 6 to 11	49	45
High school graduate	20	22
Any college	22	21
Missing education	0	0
Months Living in County at Interview (Percentage)		
Less than 12 months	34	1 **
12 to 24 months	9	18 **
24 to 36 months	8	18 **
36 to 48 months	7	12 **
48 months or more	41	51 **

APPENDIX TABLE 1 (continued)

	Recent Enrollees (Without Healthy Kids)	Established Enrollees (With Healthy Kids)
<i>Months Living in County at Interview (mean)</i>	50	68 **
<i>Months Living in County at Enrollment (mean)</i>	48	53
Month of Enrollment (Percentage)		
August	7	10
September	12	10
October	17	12
November	11	13
December	13	12
January	8	11 *
February	12	8 *
March	10	13
April	10	11
Zip Code of Residence (Percentage)		
94040	2	3
94043	1	2
94086	2	2
95020	6	5
95035	2	3
95050	2	3
95051	2	2
95110	3	4
95111	6	6
95112	5	4
95116	13	12
95117	4	4
95121	3	4
95122	16	12 *
95123	2	2
95126	1	3
95127	6	9
95128	4	2
Other zip code	20	19
Sample Size	626	609

Source: 2003-2004 Survey of Healthy Kids Enrollees conducted by Mathematica Policy Research, Inc.

Notes: Except for variables shown in italics, all variables were used as covariates in the regression models for estimating program impacts. Italicized variables are provided to assist in comparing the similarity of the two samples. Both the age of the children and the time in county are similar at the time of enrollment (although they differ at the time of interview).

*Difference between recent and established enrollees significantly different from zero at the .05 level, two-tailed test.

**Difference between recent and established enrollees significantly different from zero at the .01 level, two-tailed test.