

**Utilization of Medi-Cal Services by  
Current and Former Foster Care Children**

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# Executive Summary

Foster care children comprise a particularly vulnerable population, facing a number of hardships including what are often temporary, impoverished, or unsafe living situations. These circumstances are not only likely to increase their risks for mental and physical health problems, but they also place this group in the spotlight among policymakers. In California, for example, three recent policy reforms have been implemented with the intention of increasing the delivery of health services and improving the overall well-being of foster care children. First, the State Budget Act of 1999 allocated approximately \$2.5 million – which was matched with federal funds to total almost \$10 million – to provide public health nurses to promote access to comprehensive preventative health and specialty services for children in foster care. Second, the California Legislature responded to the federal Foster Care Independence Act of 1999 by extending no-cost Medi-Cal eligibility to former foster youth aged 18 through 20 years as of October 1, 2000. Lastly, California policymakers established the Kinship Guardianship Assistance Payment program (Kin-GAP) in 1999 to provide financial aid to children whose relatives become their legal guardians.

While these three new programs, which represent a major legislative effort and require significant expenditures of public funds, underscore California's dedication to the support of foster care children and the promotion of their health and well-being, little is known about whether the actions taken by the State have had any impact on the circumstances of foster care children and in particular, on the effectiveness of Medi-Cal in meeting their physical and mental health needs. Moreover, our understanding of the health services utilization and expenditures of foster care children in California is incomplete. Such information is crucial to the success of current and future programs tailored to the welfare of foster care children, and this study funded by the California HealthCare Foundation seeks to fill many of the gaps in our knowledge.

## Methodology

The two primary data sources used in this study are the Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims data files. These sources furnish a wealth of information about the enrollment status and medical services utilization of Medi-Cal beneficiaries. Because foster care children are presumptively eligible for Medi-Cal, these data contain the entire foster care population in California during a given time period. We also refer to the statewide Child Welfare Services Case Management System (CWS/CMS), which describes the characteristics of the foster care population by county. The study period is from 1999 to 2001, and the study population is foster care children aged 0 to 18 ½ years. The report also considers three comparison groups: CalWORKs beneficiaries of the same age, children aged 18 to 20 years who have aged out of the foster care system, and children participating in the newly-created Kin-GAP program.

## **Findings: Foster Care Children's Use of Medi-Cal**

*Characterizing Foster Care Children.* Who are foster care children? What are their ethnicities, how old are they, and where do they live? How similar or different are they to other groups of vulnerable children – those receiving CalWORKs payments and those who recently left the foster care system due to age or the new Kin-GAP program? How likely are they to participate in a Medi-Cal managed care plan? Our research carefully characterizes this population and relates its demographic profiles to those of the three comparison groups noted above. We find that rates of foster care were highest in Los Angeles and lowest in the Bay Area and the Southern California (excluding Los Angeles). Between 1998 and 2002, rates in every region but the North and Mountain region decreased. Foster care children were primarily white, although higher rates of Hispanic foster care children were found in the Farm Belt and higher rates of black foster care children were found in the Bay Area. Approximately 40 to 50% of foster care children were at least twelve years old, with the percentages ranging across regions. About 40% of foster care placements were in relative homes, while 15% were in non-relative foster families. Approximately 10% of foster care children lived in group homes, organizations providing 24-hour supervision in a structured environment. While approximately 80% of foster care children had the choice between enrollment in a Medi-Cal managed care plan and receiving health services through fee-for-service Medical, the vast majority of these children chose the latter model of service delivery. In fact, only 12% of foster care children in 2000 were enrolled in a managed care plan. This contrasts to the 68% of CalWORKs children who participated (primarily through mandate) in an official Medi-Cal managed care plan. In comparing foster care children with some managed care experience to those who never participated in such a plan, we find that those with no experience were more likely to be white and aged zero to two years.

*Medi-Cal Utilization.* Our report presents a detailed account of the Medi-Cal utilization of 90% of the foster care population. In particular, we carefully classify the medical events of those foster care children receiving fee-for-service Medi-Cal into five mutually exclusive types of health episodes: well-being visits, mental health, substance abuse, acute, and chronic episodes. We also assess the frequency of emergency department trips, visits to specialty providers, prescription drugs, and pediatric ambulatory care sensitive conditions among these episodes. To place the Medi-Cal experiences of foster care children into context, we compare their utilization to former foster care children (due to age or the Kin-GAP program) and CalWORKs children receiving fee-for-service Medi-Cal.

We find substantial demographic and regional differences in the Medi-Cal utilization of foster care children. For example, older teenagers (older than 15 years), blacks, and foster care children living in the Bay Area and Los Angeles were more likely to have no health care episode. This finding could reflect lower medical needs, greater barriers to access, or a combination of both among these groups. Well-being visits, which largely represent general medical and preventative care, were lowest for foster care infants aged zero to one year and teenagers at least 16 years old. Sixty-two percent of foster care infants aged zero to one year old had a chronic health episode. In relation to CalWORKs children, we find some evidence that foster care children were more likely to have a health episode of any type. Moreover, the percentage of foster care children with a mental health episode was three times higher than the analogous percentage of CalWORKs children. Comparing the utilization of current and former foster care children, we find that Kin-GAP children were the most likely to experience any type of health

episode. Lastly, current foster care children had higher rates of mental health episodes than former foster care children.

*Medi-Cal Expenditures.* We also assess the Medi-Cal expenditures of foster care children across different types of health episodes, beneficiaries, regions, and in relation to the equivalent costs accrued by CalWORKs children. Mental health and chronic episodes were the most expensive, requiring average episode expenditures of \$592 and \$573, respectively, in 2000. Well-being visits, on the other hand, cost only \$22 per episode on average. Expenditures varied across foster care children according to age and location. For example, substance abuse episodes were much more expensive for older foster care children than younger children. Average health episode expenditures were highest in the North and Mountain region and lowest in the Bay Area, a comparison that does not account for the composition of services delivered across regions. In comparison to the expenditures of analogous CalWORKs children, foster care children's health episodes tended to be much more expensive, irrespective of the type of episode.

### **Findings: Impact of Recent Policy Changes**

The California Legislature passed three reforms in 1999 to support foster care children and improve the delivery of medical services to this population. Despite the substantial funds dedicated to these efforts, little information has been gathered about the impacts of these policy changes on the Medi-Cal utilization of foster care children. Such information is crucial for evaluations of current policy reforms and for future policy development. To fill this gap in our knowledge, we estimate the effects of the three recent pieces of legislation on the Medi-Cal experiences of foster care children since 2000.

*Health Care Program for Children in Foster Care (HCPCFC).* The Health Care Program for Children in Foster Care was created to provide public health nurses to promote access to comprehensive preventative health and specialty services for children in foster care. Since the program's inception on January 1, 2000, the federal and local expenditures devoted to this program have varied substantially across California counties, as has the concentration of foster care children per public health nurse. Using this variation to control for confounding factors, we isolate the effect of this new program on the Medi-Cal utilization of foster care children. We find that the HCPCFC had limited impacts on the Medi-Cal utilization of long term foster care children. However, we also find it increased the likelihood that short term foster care children had specialty visits and decreased the probability that they had well-being visits and chronic episodes, possibly reflecting a shifting of care from clinics to public health nurses.

*Kinship Guardianship Assistance Payment (Kin-GAP) Program.* The Kinship Guardianship Assistance Payment Program provides financial aid to children whose relatives become their legal guardians, offering relative caregivers of foster care children a new option for providing these children with a permanent home. Beginning on January 1, 2000, children who leave the juvenile court dependency system to live with a relative legal guardian have received a subsidy equivalent to the basic foster care reimbursement. Using a model that adjusts for a number of potentially confounding demographic and regional factors, we find that children participating in Kin-GAP had higher rates of Medi-Cal utilization of any type than foster care children in 2001. Differences between the two groups were larger for children involved in the child welfare system for one or two quarters of the year than they were for those who participated in the system for three or four quarters. In addition to medical use of any type, Kin-

GAP children were also more likely than their foster care counterparts to have a well-being visit, a finding that suggests that the Kin-GAP program may have increased the prevalence of preventative care among its beneficiaries.

*Extended Medi-Cal Eligibility for Former Foster Care Children 18-20 Years.* Following from the passage of the federal Foster Care Independence Act of 1999, California extended Medi-Cal eligibility for all children who are in foster care on their 18<sup>th</sup> birthday. Effective October 1, 2000, this new provision automatically extended zero share-of-cost coverage to former foster care children until they reach 21 years of age, regardless of income or assets. In our analysis of its impacts on the delivery of medical services to former foster care children, we find that the creation of the new Medi-Cal aid code increased the probability of a former foster care child of having a well-child visit by about 5% and of having a mental health episode by 2%. At the same time, it decreased the probability of having an episode including a visit to the emergency department by 8% among chronic beneficiaries.

## **Conclusion**

We find substantial regional and demographic variation in the Medi-Cal utilization and expenditures of foster care children. Moreover, we find systematic differences among the Medi-Cal experiences of current and former foster care children and child recipients of CalWORKs, some of which can be attributed to recent policy reforms passed by the California Legislature. Our results have several implications for policymakers and members of the health care and social service communities concerned with the well-being of foster care children. First, the substantial Medi-Cal expenditures incurred by this population suggest that attention to the financing of health care for foster care children may be particularly relevant during the current budgetary shortage. Second, the Medi-Cal experiences of foster care children suggest that they might have unique medical needs that should be considered in the case that managed care plans – which typically restrict the types and frequency of medical services provided – are used for this population. Third, our study is not able to explicitly examine medical use in the context of clinical need for services; however, this information would be invaluable to such analyses and we recommend that it be the subject of future research.

# I. Introduction

## A. Background

Foster care children are at risk of poor physical and mental health due to their experiences in what are often temporary, impoverished, or unsafe living situations.<sup>1</sup> In comparison to children who are not removed from their homes, foster care children have been shown to experience higher rates of asthma, neurological problems, dental problems, and developmental delay. One study estimated that approximately 70% of children in out-of-home care arrangements exhibit moderate to severe mental health problems and that fewer than five percent of these children are without any psychological symptoms. Despite the importance of appropriate physical and mental health services to the health and well-being of foster care children, several researchers have highlighted that many of the basic health requirements of this vulnerable population are not met.

Deficiencies in access to health services by foster children have been documented across the United States, even in states such as California, which has a formal presumptive Medi-Cal eligibility policy for children entering out-of-home care. This problem was formally acknowledged in 1998 by the California Foster Children's Health Task Force, which submitted a report concluding that foster care children often fail to receive needed health services because of factors such as frequent moves across county lines and limited access to care.<sup>2</sup> Other potential contributing factors include the frequency of multiple placements by foster care children, the difficulty of finding participating Medi-Cal physicians, and the possibility that foster care parents or caregivers may be less likely than other guardians to establish health care provider relationships for the children under their care. Thus, children in foster care not only tend to require more health and mental health services than average, but also their needs are often complex, difficult to identify, and closely related to their placement situation.

In recent years, California officials have devoted considerable attention to inadequacies in the delivery of health services to foster care children. For example, the State Budget Act of 1999 allocated approximately \$2.5 million – which was matched with federal funds to total almost \$10 million – to provide public health nurses to promote access to comprehensive preventative health and specialty services for children in foster care. This budget augmentation was approximately doubled in fiscal year 2000-2001. In response to the federal Foster Care Independence Act of 1999, the California Legislature also extended no-cost Medi-Cal eligibility to former foster youth aged 18 through 20 years, an extension that became effective on October 1, 2000.<sup>3</sup> Lastly, California policymakers established the Kinship Guardianship Assistance Payment (Kin-GAP) Program in 1999 to provide financial aid to children whose relatives become their legal guardians; under this law, children exit the child welfare system but remain eligible to receive funds equivalent to current foster care reimbursements.

These programs not only represent a major legislative effort and require significant expenditures of public funds, but their creation also underscores California's dedication to the support of foster care children and the promotion of their health and well-being. However, little is known about whether the actions taken by the State have had any impact on the circumstances

of foster care children, and in particular, on the effectiveness of Medi-Cal in meeting their physical and mental health needs. For example, if Medi-Cal utilization and access problems are as significant as some observers believe, then the relatively small increase in public health nurses may not be sufficient to make a large impact and may not be the most cost-effective way to accomplish its objective. Similarly, if problems other than financial factors impede the receipt of health care services by former foster care children, then the extension of Medi-Cal to youths aged 18 to 20 years may bring about few changes in the delivery of health services to these individuals. On the other hand, if access to medical services is hampered primarily by the chaotic and unstable circumstances of foster children and the need to interact and coordinate with multiple agencies (i.e. Child Welfare Services, Medi-Cal, among others), then the additional funds allocated to enhance family preservation through the Kinship Guardianship Assistance Payment program could improve the access of health care by these children. Such uncertainty about the impacts of these programs on the Medi-Cal utilization of foster care children necessitates a careful examination of the delivery of health care services to children living in out-of-home care, both before and after these substantial policy changes.

Before assessing the impact of these important policies on the use of Medi-Cal services by foster care children, it is valuable to document patterns of health care utilization and expenditures by this group. In addition to looking at differences in the receipt of health care services by various groups of foster care children, such as those distinguished by age and ethnicity, it is also useful to consider regional differences in Medi-Cal experiences. Potential variations across regions are particularly relevant to the analysis because Medi-Cal policies differ across counties with respect to the voluntariness of managed care enrollment, which clearly plays a role in the experiences of children in this program. Lastly, a comparison of Medi-Cal utilization by current foster care children to that of other groups of children also eligible for Medi-Cal – CalWORKs recipients, 18 to 20-year olds who have aged out of foster care, and children in the Kin-GAP program – offers a useful context for understanding the role of Medi-Cal in the health of foster care children.

This report meets the goals noted above by presenting a detailed description of the foster care population and its participation in Medi-Cal, followed by a rigorous analysis of a number of policy changes implemented to improve the delivery of health services to foster care children. The remainder of the report is organized as follows. In Section I.B, we provide a brief overview of the foster care and Medi-Cal programs, paying particular attention to how Medi-Cal regulations differ for foster care and CalWORKs children. In Section II, we describe our data and methodological approach. Section III presents our findings on foster care children's experiences with Medi-Cal. In particular, Section III.A characterizes the foster care population, concentrating on demographic and regional differences within this group and in relation to children receiving CalWORKs and children who previously lived in an out-of-home placement. In Section III.B, we describe the Medi-Cal utilization of foster care youths and contrast it to the medical service utilization of the three comparison groups noted above. In Section III.C, we present a similar comparison for Medi-Cal expenditures. In Section IV, we examine the impacts on foster care children's use of Medi-Cal of providing public health nurses to this population, extending Medi-Cal eligibility to foster care children aged 18 to 20 years, and providing reimbursement to relative guardians of former foster care children.

## **B. Foster Care and Medi-Cal**

The child welfare system involves the interaction of multiple services, stakeholders, and individuals. It is a complex arena that must address an array of sensitive issues, including how to balance children's rights to remain in the custody of their families with the safety of youth in questionable circumstances. While the operation of the system requires well-defined regulations and standards, it must carefully appreciate the influential role it plays on the lives of children already facing a number of hardships and recognize the sensitivity of the issues at hand. The child welfare system must also interact with other service givers, such as health care providers and educators, to ensure that the full range of children's needs is met. To establish a foundation for the analysis that follows, this section provides a brief overview of California's foster care and Medi-Cal systems.

### **California's Foster Care System**

Children typically enter the foster care system when it is not safe for them to remain with their families.<sup>4</sup> The circumstances leading up to the removal of a child from the home can include physical or sexual abuse, neglect, and a parent struggling to overcome an addiction to alcohol or drugs, illness, destitution, or other difficulties. When removed, the majority of children become dependents of the court, while a smaller number are made wards of the juvenile justice system. Foster care is a "rescue strategy" for dependent children – protecting them from parents who are unwilling or unable to care for them sufficiently – while it is a "punishment system" for wards of the juvenile justice system – acting as a mild sentence for children on probation whose actions necessitate punishment.<sup>5</sup> In California, there are four primary types of out-of-home placements: 1) family homes with relatives, 2) licensed foster family homes, 3) foster family agencies, and 4) group homes. Kinship homes are given preference over other types of placements, which can take place either in the child's home county or across county lines.

The living arrangements of foster care placements vary substantially. For example, kinship homes are likely to provide a feeling of familiarity for a child who is removed from his biological parents. Kinship and non-kin foster care families allow a child to live in a "normal" way – that is, a child lives in a family, in a neighborhood, and he or she interacts with other children living the same way. Group homes, on the other hand, offer a much different living environment by providing 24-hour non-medical care and supervision to children in a structured environment. These licensed organizations are the most restrictive foster care option, and they are employed only when such services are required (e.g., in the case of a child with severe emotional or behavioral problems). Foster Family Agencies (FFAs) are an alternative to group homes for children with developmental disabilities. These agencies are privately-operated organizations that are licensed by the Community Care Licensing Division of the State Department of Social Services to care for children up to age 18 in certified foster family homes. There are two types of FFA programs: "treatment or therapeutic foster care" and "nontreatment foster care." An agency providing treatment service to a child has determined that the child has service needs that cannot be provided in an available family home and would require group home placement if the child was not referred to an FFA. In contrast, a FFA providing nontreatment services is responsible for the recruitment, training, and certification of families to provide alternative homes for children. FFAs monitor and provide oversight for the homes they have certified, and they have the authority to decertify homes when necessary. In addition,

through the use of professional staff such as social workers, FFAs provide ongoing support to certified parents and the children who live with them.

## **Medi-Cal**

Foster care children in California are automatically eligible for Medi-Cal, California's version of the state and federally-funded entitlement program that pays for medical treatment, services, and medicines required by certain categories of low-income persons. This program also applies to child recipients of California's welfare program CalWORKs and children who have recently exited foster care due to age or the Kin-GAP program. Medi-Cal eligibility for these youth populations provides a number of basic benefits, including physician services, inpatient and outpatient hospital services, prenatal care and family planning assistance, vaccines, rural health clinic services, laboratory and x-ray services, and EPSDT (Early and Periodic Screening, Diagnostic, and Treatment) services. These services are covered entirely by Medi-Cal, with no cost-sharing provisions for these children. All beneficiaries are also eligible for medically-necessary mental health services.

While current and former foster care children have access to the same range of Medi-Cal services available to CalWORKs children, the medical service delivery systems relevant to each group differ markedly. On the whole, foster care children have more flexibility in choosing their preferred delivery system, which depends on a combination of a Medi-Cal enrollee's designated eligibility aid code (e.g. CalWORKs recipient or foster care child) and his or her residential county. Eight counties – Monterey, Napa, Orange, San Mateo, Santa Barbara, Santa Cruz, Solano, and Yolo – currently deliver Medi-Cal services through county-run managed care plans known as County Organized Health Systems (COHSs). Enrollment in these plans is mandatory for almost all Medi-Cal beneficiaries, including both CalWORKs and foster care children.<sup>6</sup> In contrast, twelve of the largest counties in the state – Alameda, Contra Costa, Fresno, Kern, Los Angeles, Riverside, San Bernardino, San Francisco, San Joaquin, Santa Clara, Stanislaus,<sup>7</sup> and Tulare – deliver services under the Two-Plan Model, which mandates enrollment in one of two designated Medi-Cal managed care plans for CalWORKs recipients but allows foster care children to choose between enrollment in one of these plans and receiving services through the more traditional delivery system of fee-for-service. Similarly, Sacramento and San Diego provide Medi-Cal services largely through Geographic Managed Care plans (GMCs), which require participation by CalWORKs-qualifying Medi-Cal beneficiaries but do not mandate enrollment for foster care children. In the remaining counties, Medi-Cal is almost completely delivered through fee-for-service.

These regulations imply that while CalWORKs children have little choice in whether they receive care through a managed care plan or through fee-for-service, foster care children in fourteen of the largest counties can select their preferred delivery method. In the other counties, however, foster care children are restricted to a specific model of care. In particular, most foster care children are required to receive care through managed care in those counties operating a COHS, while foster care children living in counties that do not operate any Medi-Cal managed care plans must receive care through fee-for-service by default. In a subsequent section, we examine how different Medi-Cal policies regarding managed care for foster care and CalWORKs children translate into rates of managed care enrollment among these populations.

## II. Methodology

This section first describes the three primary sources of information that we use. Then, it discusses our analytical approach.

### A. Data Sources

#### **Child Welfare Services/Case Management System**

To characterize foster care placements, we employ data from the statewide Child Welfare Services Case Management System (CWS/CMS), a quarterly data set accessible from the Child Welfare Research Center (CWRC) at the University of California at Berkeley. This data set furnishes a rich description of California's foster care population at the county level from 1998 to 2002. In addition to supplying foster care prevalence rates, the CWS/CMS also provides information on the type of living arrangement in which a child was placed, distinguishing between kinship care, foster family agencies, group homes, foster families, and several other less common arrangements. The data also indicates if a child was deemed a dependent of the court (a child welfare case) or was placed in probation supervised care. The placement data is reported for individual counties by year, child age, and child ethnicity.

#### **Medi-Cal Eligibility Data System**

The Medi-Cal Eligibility Data System (MEDS) maintains monthly information for all Medi-Cal eligible persons, including programmatic basis for eligibility (e.g. foster child or CalWORKs recipient), county of eligibility, and health care delivery model (e.g., managed care or fee-for-service). It also includes basic demographic information, such as date of birth, ethnicity, and gender. Because foster children are categorically eligible for Medi-Cal, MEDS can be used to identify foster care children, as well as their enrollment in Medi-Cal subsequent to exiting the foster care system.

#### **Medi-Cal Paid Claims**

The Medi-Cal paid claims data files contain comprehensive enrollment and utilization data submitted to the California Department of Health Services (CDHS) for beneficiaries enrolled in fee-for-service Medi-Cal. The files include five types of Medi-Cal data: inpatient services, nursing home services, physician and other ambulatory services, pharmaceuticals, and a personal summary record of Medi-Cal eligibility. The inpatient record includes dates for admission and discharge, a principal and secondary diagnosis and procedure, total charges, amounts paid by Medi-Cal and third-party payers, and a state-assigned provider identifier. These data also identify the type of provider – hospital, emergency department, or physician – associated with each service.

While the Medi-Cal claims data are a rich source of information describing the utilization of medical services by foster care children, there are a few limitations of the data for this study. First, they do not allow us to identify the actual need for services. While we can examine the utilization of services by children who received care in great detail, we can not assess any unmet needs and are unable to directly measure the appropriateness of service utilization relative to the

need for services. Moreover, the data do not allow us to assess the extent to which (if any) variations in the level of service use are due to overutilization of certain groups or underutilization of other groups. A second limitation is the absence of claims for children enrolled in managed care plans, which are paid on a prospective, capitated basis and do not submit claims to Medi-Cal for reimbursement for individual services. This restriction means that analyses of Medi-Cal utilization and expenditures must be based on the subset of children receiving care through fee-for-service. Thus, to the extent that there are systematic differences between the Medi-Cal use of children enrolled in managed care and children obtaining fee-for-service coverage, our report cannot capture the variation. This feature of the data is less of a concern for the foster care population – which primarily received health care through fee-for-service between 1999 and 2001 – than it is for CalWORKs beneficiaries, who were much more likely to enroll in a managed care plan. In subsequent sections, we address this restriction in more detail.

## **B. Analytical Approach**

This report can be classified into two major analyses, one describing the Medi-Cal utilization and expenditures of foster care children in relation to three comparison groups and one assessing the impact of three recent policy reforms on the delivery of medical services to foster care children.

### **Medi-Cal Utilization and Expenditures**

We combine cohort and longitudinal analyses to develop a comprehensive profile of the Medi-Cal experiences of foster care children. In comparing the Medi-Cal experiences of foster care children to CalWORKs recipients, we follow two fixed cohorts of foster care children and two analogous cohorts of welfare beneficiaries, identified by their status in January of each year, 1999 and 2000. This strategy allows us to trace the patterns in Medi-Cal usage for these particular groups of foster care and CalWORKs children, making statements about the health experiences of a group of children that comprise the caseload in a given month. By tracking individuals over time, we can identify the transitions they make into and out of various enrollment and health states and thereby incorporate the complexity of dynamic populations and changing circumstances. Moreover, we use the cohorts as a control mechanism for establishing relationships between individual and county characteristics and Medi-Cal experiences.

We augment the cohort analysis with a longitudinal analysis of the Medi-Cal utilization of foster care children in comparison to that of children who recently exited the foster care system due to either age or participation in the Kin-GAP program. The sample for this analysis is all current and former foster care children in 2001. In this case, we examine the experiences of children who were in the foster care system, Kin-GAP, or had recently aged out of foster care at any point during the year. This approach allows us to consider differences in the Medi-Cal use of children according to the length of time spent in foster care during the year. In particular, we classify children living in an out-of-home placement during one or two quarters of the year as short term, and those living out of the home in three or four quarters as long term.

We primarily use descriptive statistics to summarize the Medi-Cal experiences of foster care children; however, to gain a richer understanding of the determinants of medical use, we also employ multivariate regression models. In particular, we use logistic models of health care

event on beneficiary demographics and county characteristics. In each model that we run, we calculate robust standard errors, to account for multiple observations per beneficiary.

### **Impacts of Policy Reforms on Foster Care Children’s Medi-Cal Experiences**

The second major analysis of this report concerns the impact of three recent policy changes related to the health services receipt of foster care children.

*Health Care Program for Children in Foster Care (HCPCFC).* In evaluating the impact of the Health Care Program for Children in Foster Care, we exploit cross county variation in the number of public nurses allocated by this program relative to the total number of foster care children. To isolate the effect of this policy on the probability of a certain health episode, we must control for systematic differences in county utilization that are correlated with the size of the HCPCFC but are not caused by them. Thus, we apply several controls. First, we include regional fixed effects. Second, we include county caseload characteristics, including prevalence rates and group placement rates. Lastly, we include demographic characteristics and previous enrollment experiences in our estimation to control for variations in the composition of children across counties. After controlling for these systematic differences, we estimate the effect of the program on the incidence of various health events by comparing changes in the relative outcomes between foster care children who live in counties with high concentrations of public health nurses (fewer than 330 foster care children per public health nurse and 330 to 500 foster care children per nurse) and foster care children who live in counties with low concentrations of public health nurses (more than 500 foster care children per public health nurse) from 1999 to 2001. The latter group is the control group, while the former are the “treatment” groups. Using this method, we are able to isolate unmeasured systematic differences in health utilization across counties that would prevail even in the absence of the program.

*Kinship Guardianship Assistance Payment (Kin-GAP) Program.* To measure the impact of Kin-GAP enrollment on the probability of a health episode occurring, we exploit multivariate probabilistic models that control for the effects of other variables that might have had an impact on the utilization of health services simultaneously. We implement logistic regressions to predict the probability of particular health episodes for foster care and Kin-GAP children individually, controlling for ethnicity, age, county, and number of quarters previously enrolled in foster care and CalWORKs. To control for other unobserved characteristics, we use estimates from the logistic model to forecast the probability of a certain outcome assuming all children were Kin-GAP and leaving the remaining observed characteristics unchanged. Similarly, we calculate these probabilities assuming all individuals were enrolled in foster care, again leaving the remaining observed characteristics unchanged. We report the mean of the differences of these two values over all families in the sample, statistics that represent differences in the probabilities that an episode will occur in the foster care population relative to the Kin-GAP population, controlling for all potential confounding factors.

*Extended Medi-Cal Eligibility for Former Foster Care Children 18-20 Years.* To measure the impact of the creation of a new Medi-Cal aid code for former foster care children on the likelihood of health episodes, we perform a multivariate analysis comparing the experiences of foster care children aging out of foster care children to those who are just below the transition age threshold before and after the reform. In particular, our analysis is based on two samples of children: 1) foster care children aged 17 years old in 1999 who were eligible for Medi-Cal in all

four quarters of that year, and 2) foster care children aged 17 years old in 2001 who were eligible for Medi-Cal in all four quarters of that year. Using the children who remained in foster care for all four quarters of the year as a control, we estimate the difference in the relative probability of a foster care child who aged out of foster care (by turning 18 years during the second, third, or fourth quarter) of having a health episode of a particular type before and after the Medi-Cal extension. We compute these probability differentials in the same way that those computed for the Kin-GAP analysis are computed, as described above. Implicit in this analysis is the assumption that all types of Medi-Cal eligibility remained equally attractive between 1999 and 2001, with the only change being the creation of a new option called “Former Foster Care.”

### III. Findings: Foster Care Children’s Use of Medi-Cal

#### A. Characterizing Foster Care Children

Foster care children comprise one of the most vulnerable populations, facing a number of hardships unknown to their counterparts living with birth parents or legal guardians. The factors leading to children’s entrances into the foster care system, as well as the traumas of being separated from their biological parents and the uncertainty of many placements, distinguish foster care children from other groups of children. At the same time, heterogeneity within the foster care population is large, with foster care children differing across demographic characteristics such as age, ethnicity, and language abilities, among others. In California, foster care populations also differ across regions, which themselves exhibit substantial variation in economic conditions, cultures, and to a smaller degree, welfare policies. Lastly, there is not a universal foster care experience; instead, children are situated across a range of placements that differ by factors such as living arrangement (e.g. foster family, group home, foster family agency, or kinship guardian) and dependency status (welfare court or juvenile probation).

In this section, we first describe the prevalence of foster care in California. While statewide statistics provide a useful summary of participation in the foster care system, they can mask important differences within the state; therefore, we also explore regional patterns to gain a richer understanding of the population. We then characterize the foster care population, accounting for region and making comparisons to three other vulnerable populations – children receiving CalWORKs, 18 to 20 year-olds who have aged out of foster care, and children in the Kin-GAP program. Next, we describe variations in the types of foster care placements in California at large and across regions. To conclude the section, we consider the likelihood of foster care and CalWORKs children to enroll in a Medi-Cal managed care plan. Moreover, we look at the demographic profiles of foster care children who never enrolled in a managed care plan in comparison to those who were enrolled in such a plan during at least one quarter of the year. As a whole, the descriptive analyses presented in this section establish the foundation for subsequent analyses of the Medi-Cal experiences of foster care children.

## How Prevalent is Foster Care in California?

Figure 1 illustrates the prevalence of foster care in California between 1998 and 2002. Each bar of the figure represents the number of children per 1000 youth aged 0 to 18 years who were placed in out-of-home care in that year. For example, about 10.6 in 1000 children participated in the foster care system in 1998. Over the next four years, this rate fell slowly, yet continuously; in 2002, approximately 8.8 in 1000 children were placed out of their home. This 1.75 percentage point decline is statistically significant at the 95% confidence level, and it is likely attributable to a number of factors. For example, the prevalence of foster care placements reflect the frequency with which child abuse and neglect are reported, the length of time children remain in foster care placements, the capacity of the child welfare system (i.e. the availability of foster care homes and agencies), and economic conditions. While we can not attribute the decrease to any factor in particular without an in depth analysis, we speculate that improvements in the economy – for example a declining unemployment rate between 1998 and 2001<sup>8</sup> – may have had an impact on activity in the foster care system during this time period. Furthermore, the some of the decline in the rate of foster care placements between 2000 and 2002 is likely attributable to the Kinship Guardianship Assistance Payment (Kin-GAP). As discussed in detail below, this program moved certain children living with relatives out of the foster care system. [CALL OUT: Figure 1 goes here. END CALL OUT]

In addition to looking at statewide rates of foster care placements, it is also valuable to look at prevalence by region since there are notable differences in the economic conditions, demographics, and cultures across the state. Accordingly, we divide California into five regions: the Bay Area, North and Mountain, Farm Belt, Los Angeles, and Other Southern California. Figure 2 maps these five regions and also lists the counties falling into each area. While there are many ways to divide the state, we believe this classification allows for regions that differ along characteristics that matter for child welfare. For example, three of the regions – the Bay Area, Los Angeles, and Other Southern California – are large, densely populated urban areas. In contrast, the two remaining regions – the Farm Belt and North and Mountain – are less populated and rural areas. Rates of welfare receipt have been historically lower in the Bay Area and Southern California, and traditionally higher in the North and Mountain and Farm Belt regions. Likewise, rates of unemployment in the two rural regions have substantially exceeded those in other California regions. [CALL OUT: Figure 2 goes here. END CALL OUT]

Figure 3 shows how the rates of foster care placements varied across regions and over time, revealing a number of interesting patterns. First, between 1998 and 2002, rates of foster care were substantially higher in Los Angeles than in any other region – exceeding those in Southern California, the region with the lowest overall rates, by as much as 9.2 children per 1000 in 1998 and 7.5 children per 1000 in 1999. Moreover, the difference in the prevalence rate for each pair of regions in 1998 was statistically significant at the 95% confidence level. Los Angeles also experienced the greatest change in the foster care rate, which fell from nearly 17 per 1000 children in 1998 to about 11 in 1000 children in 2002, a statistically significant decline of more than 30%. The Farm Belt, which had the second highest level of foster care placements until 2001 and the second largest decline in the prevalence rate during this time period, saw its rate of foster care fall a statistically significant 6% from 9.7 per 1000 children in 1998 to approximately 9.1 per 1000 children in 2002. In contrast, the rate of out-of-home placements increased by about 23% in the North and Mountain region during this time period, leading to a 2002 rate of 10.8 per 1000 children, higher than the rate in every other region except Los

Angeles. Rates of foster care placements were lowest and most stable in the Bay Area and Southern California. Lastly, paralleling statistics for 1998, the difference in the rate of foster care between all pairs of regions in 2002 was statistically significant at the 95% confidence level. [CALL OUT: Figure 3 goes here. END CALL OUT]

### **How do Foster Care Children Differ across Regions?**

As noted above, the prevalence of foster care varied substantially across regions. In this section, we illustrate the regional differences in the demographic characteristics of this population. Table 1 describes the demographics of foster care children in 2001 across the five regions defined above. Looking at ethnicity, the first block of rows shows that foster care children living in Los Angeles and the North and Mountain regions were much more likely to be white (79% and 81%, respectively) than their counterparts in other areas of the state. In the Bay Area, slightly more than one-fourth of the foster care children were white. The Farm Belt had the highest percentage of Hispanic children (30%), while the Bay Area had the greatest percentage of black foster children (50%). Despite these ethnic differences, there were few regional differences in the primary language spoken by foster care children, with all regions having at least 95% of its foster care population speaking English as a first language. With respect to age, foster care children in the Bay Area and North and Mountain regions were slightly older than those in other regions. For example, 46% of Bay Area and 50% of North and Mountain foster care children were at least 12 years old, while the comparable percentages in the Farm Belt, Los Angeles, and Other Southern California were 41%, 37%, and 41%, respectively.

A comparison of the regional demographic distributions of the 2001 foster care population to those of the 1999 and 2000 populations yields few notable patterns. One exception is a slight aging trend, with the percentage of foster children at least 12 years old increasing three or four percentage points in each region. All changes were statistically different at the 95% confidence level.

### **How do Foster Care Children Compare to Other Children Eligible for Medi-Cal?**

This section presents a demographic profile of foster care children and compares their attributes to those of former foster care children (aged 18 to 21 years), Kin-GAP children (those children who transitioned from foster care to official relative guardianship), and CalWORKs children. These three comparison groups are all presumptively eligible for Medi-Cal, either by existing regulations (CalWORKs children) or recent policy reforms (former foster care and Kin-GAP children). After first comparing foster care children to CalWORKs children, this section compares foster care children to former foster care and Kin-GAP children, differentiating the three groups of former and current foster care children by the time spent in the welfare system.

Table 2 shows how foster care children differed demographically from CalWORKs youth in January 2001. Each number in the table represents the percentage of children in a group (e.g., foster care or CalWORKs) falling into a particular category. For example, the first row shows that 20% of all foster care children and similarly 20% of all CalWORKs children were black. In comparison to CalWORKs children, foster care children were much more likely to be non-Hispanic whites (58% vs. 21%) and much less likely to be Hispanic (19% of foster care children vs 47% of CalWORKs children). Moreover, Table 2 shows that a majority of foster care and CalWORKs children were six to eleven years old in 2001. However, it also shows that foster

care children tended to be older their CalWORKs counterparts: 40% of foster care children and 28% of CalWORKs children were 12 to 18 years old. Meanwhile, the percentages of CalWORKs children aged 0 to 2 years, 3 to 5 years, and 6 to 11 years exceed the respective percentages of foster care children by four to five percentage points.

In the two years leading up to 2001, the characteristics of the foster care and CalWORKs populations were quite similar to those depicted by Table 2. As noted above, there was a slight aging of the foster care population between 1999 and 2001. In particular, the percentage of foster care children older than 12 years increased from 37% in 1999 to 40% in 2001, while the percentage younger than 6 years fell from 30% to 25%. The analogous changes in the CalWORKs population were smaller: an increase from 26% to 28% for the 12 years and older group and a decrease from 37% to 34% for the younger age group. Chi-square tests confirm that the age distribution of the foster care population in 1999 was statistically different at the 95% confidence level than the distribution in 2001. Similarly, the 1999 and 2001 age distributions of the CalWORKs population were statistically different.

Tables 3 and 4 compare short and long term foster care children to the analogous former foster care and Kin-GAP youth in 2001. We define a short term participant as a former or current foster care child who participated in the child welfare system in one or two quarters of the year. A long term foster care child is one who was active in the system in three or four quarters of the year. Looking first at long term foster care children, Table 3 shows that former foster care children were much more likely to be white than foster care and Kin-GAP children (70% vs. 60% and 40%, respectively). Kin-GAP children, on the other hand, were more likely to be Hispanic or black than the other groups. Among short term foster care, the ethnical breakdown was similar, although foster care children were slightly more like than former foster care youth to be white (60% vs. 52%). Short term Kin-GAP children were similarly the most likely to be Hispanic or black. With respect to gender, all groups of foster care children, regardless of time spent in the welfare system, were nearly equally divided between the two sexes. Long (short) term foster care children were five (approximately three) times more likely than their Kin-GAP counterparts to be 0 to 2 years old. Kin-GAP children, on the other hand, were much more likely to be 6 to 11 years old, irrespective of time spent in the foster care system. Lastly, former foster care children were heavily concentrated in Los Angeles, with 79% of the long term group and 53% of the short term group living in the county. Likewise, the largest percentages of foster care children (47% of long term and 42% of short term) also lived in Los Angeles. In contrast, no long-term Kin-GAP children and only 1% of short term Kin-GAP youth lived in this region. This group was predominantly located in the Other South and Farm Belt.

### **How do Foster Care Placements vary across Regions?**

Within the foster care population, out-of-home placements can be distinguished by living arrangement – primarily kinship home, foster family home, foster family agency, or group home – and by whether a child is made a dependent of the court (a welfare case) or a ward of juvenile probation (a probation case). Cases can also be classified according to the placement county and its type of Medi-Cal (Two Plan Model, COHS, GMC, or Other). This last factor – where a foster care child lives – indicates whether he or she is required to enroll in a Medi-Cal managed care plan (COHS counties), has the option of enrolling in managed care or selecting fee-for-service

coverage (Two Plan and GMC counties), or is effectively required to participate in fee-for-service coverage by default (Other).

Table 5 describes how foster care placements in 2001 varied across these three dimensions. The first column shows that a vast majority (95%) of foster care cases were welfare cases, in contrast to the small remainder that were assigned to the juvenile probation system. A similarly skewed distribution was found in each of the five regions of the state; however, the percentages of probation cases were substantially higher in the North and Mountain region (11%) and slightly higher in the Bay Area (7%).

With respect to living arrangements, the first column of Table 5 shows that 39% of all foster care children were placed in a relative's home. Placements in non-kin foster families represented 15% of the foster care population, while those in foster family agencies (FFAs) accounted for 19% of the population. Ten percent of foster care children were placed in a group home. Disaggregating this distribution by region, however, reveals substantial differences. For example, only 20% of foster care children in the North and Mountain region and 31% of those in the Farm Belt lived in a kinship home, while almost half (45%) of their counterparts in Los Angeles lived with a relative.<sup>9</sup> The share of children in FFAs was highest in the North and Mountain region (27%) and the Farm Belt (25%). In contrast, only 10% of the foster care population in the Other South lived in a FFA. Considering group homes, Los Angeles had the lowest share of children (8%) in this type of organization, while the share in the Bay Area was nearly two times higher (15%).

The last three rows of Table 5 show that approximately four-fifths of the foster care population lived in counties operating a Geographic Managed Care or the Two Plan Model of Medi-Cal. In these counties, foster care children are allowed to choose between managed care and fee-for-service Medi-Cal. Ten percent of foster care children lived in counties with no official type of Medi-Cal managed care plan, meaning that fee-for-service coverage was the standard delivery model by default. The remaining 7% of foster care children lived in a county running a County Organized Health System (COHS) and were required to receive Medi-Cal services through this managed care plan unless a specific medical exception pertained. By definition, this distribution varied substantially across California regions. For example, 100% of foster care children in the North and Mountain region did not have access to an official Medi-Cal managed care plan. In contrast, 12% of those in the Bay Area and 20% in the Other South were required to enroll in managed care through a COHS unless exempt for particular a reason. In Los Angeles, a county adapting the Two Plan Model of Medi-Cal, the entire foster care population could select either managed care or fee-for-service.

The distribution of foster care placements in 1999 and 2000 were similar to those observed in 2001. However, there were a few notable trends. For example, there was a slight – yet statistically significant – shift away from placements in kinship and non-relative foster family homes towards FFAs and group homes. Between 1999 and 2001, the share of foster care children in kinship and foster family homes fell four and two percentage points, respectively. At the same time, the percentage in FFAs grew by two percentage points and the proportion in group homes grew by one percentage point. This trend was most pronounced in Los Angeles and the Farm Belt, where the share of foster care children in kinship homes fell 6% and 12%, respectively.

While the living arrangements of foster care children are largely similar across ethnicity and age, there are a few demographic distinctions that are depicted by tables in the appendix.<sup>10</sup>

With respect to ethnic variation, Appendix Table A1 describes the living arrangements of foster care children in 2001 according to their ethnicity and region. Most notably, the table shows that blacks were the most likely to be placed in kinship arrangements; in comparison to 32% of white and 41% of Hispanics, 47% of blacks lived with a relative. Whites were the most likely to be placed in a group home and Hispanics were the least likely (10% and 6%, respectively). Appendix Table A2 shows an analogous depiction of living arrangements according to foster care children's age and region. In 2001, roughly 40% of foster care children between one and 15 years old lived in a kinship home. Smaller shares of infants (34%) and children older than 15 years (34%) lived with a relative. Not surprisingly, older children were the most likely to be placed in a group home: approximately 17% of children aged 16 years or older and 13% of those aged 11 to 15 years old were placed in this type of organization.

### **How does Foster Care Children's Enrollment in Managed Care compare to CalWORKs Children's?**

As discussed above, foster care children have the option of choosing to enroll in a Medi-Cal managed care plan or receive fee-for-service coverage in all counties operating the Two Plan Model or a Geographic Managed Care. CalWORKs recipients, in contrast, are mandated to enroll in managed care plans in all counties operating an official Medi-Cal managed care program. In this section, we look at the rates of managed care enrollment among the foster care and CalWORKs populations, distinguished by demographic characteristics and region.

We begin summarizing children's experiences in Medi-Cal managed care by distinguishing enrollment in managed care from participation in fee-for-service coverage. Table 6 shows the distribution of the foster care population across these two types of Medi-Cal delivery systems during 2000; moreover, it indicates the percentage of children with non-foster care Medi-Cal eligibility during the year.<sup>11</sup> These tables also disaggregate the analysis by various demographic and county groups. The first row of the tables shows that the 2000 foster care cohort spent 14% of the time enrolled in a Medi-Cal program other than foster care during the year. This figure was up four percentage points from the analogous percentage in 1999. Foster care children living in the Farm Belt were about five to six times more likely than foster care children in other regions to be enrolled in an alternative Medi-Cal program.

The third and fourth columns of Table 6 show the distribution of the caseload between Medi-Cal delivery models while enrolled in foster care. For example, they reveal that a majority of the 2000 foster care cohort received fee-for-service coverage (88% compared to 12% in managed care). Groups with the largest managed care enrollment rates were children living in Southern California and Hispanics. Notably, a large share (approximately 25%) of foster care children living in counties with COHS plans received care on a fee-for-service basis, despite these counties' more restrictive rules mandating managed care.

Using the same structure as Table 6, Table 7 presents analogous statistics for the 2000 cohort of CalWORKs recipients. This table shows that CalWORKs children were more likely to be enrolled in the welfare program than foster care children were to be enrolled in foster care during 2000. This relationship held across all demographic and regional groups. As a whole, the 2000 CalWORKs cohort spent only 6% of the time enrolled in a Medi-Cal program other than CalWORKs during the year. The table also shows that all groups of CalWORKs children were more likely to be enrolled in managed care than their foster care counterparts. For example, in

comparison to the 12% of the foster care cohort enrolled in managed care, approximately 68% of the 2000 CalWORKs cohort received Medi-Cal through such a health plan. Differences in managed care enrollment rates reflect variations in the rules mandating managed care enrollment for Medi-Cal beneficiaries. The largest difference in enrollment rates was found in the GMC/Two Plan counties, where less restrictive fee-for-service participation rules apply to foster care children than to CalWORKs children. In 2000, the percentage of the CalWORKs population living in GMC/Two Plan counties enrolled in managed care was more than eight times larger than the analogous percentage of the foster care cohort (74% vs. 9%). This difference suggests that without the mandated enrollment applicable to CalWORKs children, foster care children tended to select fee-for-service coverage in lieu of participation in a Medi-Cal managed care plan.

### **How do Foster Care Children differ across Health Service Delivery Models?**

While the majority of foster care children received medical services through fee-for-service Medi-Cal, a small percentage was enrolled in a Medi-Cal managed care plan. In this section, we compare the demographic characteristics of foster care children who always received fee-for-service coverage to those of foster care children who were enrolled in a Medi-Cal managed care plan during at least one quarter of the year. Because our analyses of Medi-Cal utilization are based on children with fee-for-service coverage (the former group) only, our results will not be representative of the entire foster care population if there are nonrandom differences between the medical utilization of children in managed care and those receiving fee-for-service coverage. While this descriptive analysis cannot address the potential difference explicitly, it provides suggestive evidence of the ways in which the Medi-Cal experiences of these two groups might differ.

Tables 8 and 9 compare long term and short term foster care children who were never enrolled in a Medi-Cal managed plan to those who were enrolled in such a health plan during at least one quarter of 2001. Looking first at long term beneficiaries, Table 8 shows that foster care children who were never enrolled in a managed care plan were more likely to be white than those who were enrolled during at least one quarter (60% vs. 44%). On the other hand, youths enrolled in managed care at some point were more likely to be black or Hispanic. These relative relationships also hold for the short term foster care population, as shown by Table 9. The age distributions among the long term foster care population for foster care children with and without an attachment to managed care were similar. In contrast, short term children who never participated in managed care were more likely to be aged 0 to 2 years than their counterparts who had enrolled in managed care during at least one quarter (23% vs. 15%). Lastly, foster care children – both long term and short term – who always received fee-for-service coverage were more likely to live in Los Angeles than those who had some managed care experience (47% vs. 25% for long term and 43% vs. 30% for short term). However, the group who had been enrolled in managed care at some point was more likely to live in the Other South (33% vs. 17% for long and short term). The demographic profiles of foster care children according to managed care experience in 1999 were remarkably similar to those described in Tables 8 and 9 for the 2001 population.

Tables 8 and 9 show that the differences between foster care children with and without experience in Medi-Cal managed care were relatively minor. Nevertheless, to the extent that demographic characteristics are related to medical utilization, interpretations of the analyses of

Medi-Cal utilization described below should be placed in the context of this descriptive information.

### **How do Regional Differences Relate to Medi-Cal Experiences?**

The discussion above highlights a number of regional differences in the demographic characteristics and placements of foster care children. We hypothesize that these differences might play a role in the Medi-Cal experiences of the children across the state. For example, if low rates of foster care in Southern California result from a regional child welfare system that is relatively reluctant to remove children from the home, then we might expect the cases that are filed to involve children facing some of the gravest hardships and potentially requiring the most health services. In this case, we might expect to see higher rates of health care utilization in Southern California. On the other hand, if lower rates of foster care signal an environment with less severe cases requiring lower medical services, then we might anticipate lower Medi-Cal usage in Southern California. Similarly, if the declining rates of foster care in Los Angeles and the Farm Belt are associated with the movement of children from foster care to more stable and preferable living arrangements, then if these children transition to CalWORKs on their exit from the foster care system, we might expect an increase in the Medi-Cal use of the CalWORKs population in these counties, conditional on the hypothesis that instability in the home acts as a barrier to foster care children's receipt of medical services.

Patterns in Medi-Cal usage across counties may also reflect the composition of the foster care population. If whites are more (less) likely on average to seek medical services than blacks, then we would expect to see more (less) Medi-Cal utilization in Los Angeles and the North and Mountain region. Given the higher medical use of children less than one year old, we might expect to see higher Medi-Cal utilization in the Farm Belt and Southern California, the regions with the highest percentage of foster children younger than three years. Furthermore, we might expect rates of statewide Medi-Cal utilization by the foster care population to decrease in accordance with the slight aging trend of this group between 1999 and 2001.

Regional variation in placements could also map into differences in Medi-Cal utilization. For example, if living with a relative increases the likelihood of a child's medical needs being met – because the situation is more stable or familiar – then we might expect higher rates of Medi-Cal utilization in Los Angeles, the Other South, and the Bay Area, where rates of kinship care are higher. On the other hand, if children in group homes and foster family agencies tend to have higher medical needs – medical conditions that led to their particular placements – we might expect higher Medi-Cal usage in the North and Mountain, Farm Belt, and Bay Area regions. In the remainder of this report, we investigate these hypotheses, among others, to gain a better understanding of how foster care children's Medi-Cal experiences varied across individuals and regions.

### **B. Medi-Cal Utilization**

As noted above, foster care children in California are presumptively eligible to receive medical services through Medi-Cal. Nevertheless, an existing need for health services by this group is commonly acknowledged by researchers and policymakers, the latter of whom have recently taken several actions to promote the well-being of foster care children, including their access to required medical services. To facilitate evaluations of a number of these actions, this

section documents the ways in which foster care children experience Medi-Cal. In particular, it looks at service utilization and expenditures across demographically diverse beneficiaries and across regions of the state. Moreover, it compares the experiences of foster care children to those of other groups of children categorically eligible for Medi-Cal, CalWORKs youth, former foster care children, and Kin-GAP children.

Due to the absence of Medi-Cal claims for children enrolled in managed care plans, the analysis described below considers only those children receiving health services through fee-for-service Medi-Cal. This restriction has a few implications for our analysis. First, because we are unable to capture the extent to which the Medi-Cal experiences of children in managed care plans systematically differ from those receiving fee-for-service coverage, we are unable to make statements about the entire population of foster care children. However, as shown above, almost 90% of foster care children were covered by fee-for-service Medi-Cal, so our findings are largely representative of the population. For the utilization of CalWORKs children, however, our results reflect the Medi-Cal experiences of about one-third of the population. Accordingly, in making comparisons between the two groups, we focus primarily on the children living in counties that do not operate a Medi-Cal managed care plan and almost all foster care and CalWORKs children receive fee-for-service coverage.

Before describing Medi-Cal experiences, we explain how we classify medical service use into “health episodes,” a categorization that is useful for understanding how individuals’ multifaceted and complex experiences differ. We use this taxonomy to analyze Medi-Cal utilization using a comprehensive set of descriptive statistics summarizing children’s experiences among health episodes.

### **Classifying Medi-Cal Utilization according to Diagnosed Health Conditions**

Medical services delivered to children encompass a wide range of procedures designed to meet an equally expansive range of needs. To facilitate the analysis and presentation of the Medi-Cal utilization of foster children, we define a “health episode” as a medical event falling into one of five categories. A key criterion of this classification is the date of Medi-Cal covered services, including those obtained as an inpatient at a hospital, an outpatient at a hospital, at a pharmacy, from a physician, and from other health care providers. The start date for a health episode is defined as the first date of service with no Medi-Cal covered services over the previous 90-day period (in calendar years covered in our study). The end date for an episode is defined as the last date of service before the beginning of a new episode. Using these definitions, we categorize health episodes into five mutually exclusive groups: well-child visit, mental health, substance abuse, acute illness, and chronic illness. A well-child episode is defined as an episode lasting less than 30 days in duration and incurring less than \$50 in Medi-Cal expenditures. A mental health episode is any episode (regardless of duration or expenditure level) where services with mental health diagnoses (ICD-9 codes 290.xx to 319.xx, excluding 303.xx to 305.xx) account for at least 20% of episode expenditures. A substance abuse episode is any episode (regardless of duration or expenditure level) where services with substance abuse diagnoses (ICD-9 codes 303.xx to 305.xx) account for at least 20% of episode expenditures. An acute illness episode is defined as an episode lasting less than 30 days in duration and incurring more than \$50 in Medi-Cal expenditures. Finally, a chronic illness episode is defined as an episode lasting more than 30 days in duration.

This functional definition of health episode allows us to distinguish the intensity and duration of Medi-Cal service use among various types of foster care and CalWORKs children. To validate that our definition is also consistent with a more clinical definition of health episode type, Tables 10 and 11 report the most common clinical diagnosis categories for each type of health episode for foster care and CalWORKs children, respectively. We group ICD-9 primary diagnosis codes reported on paid claims into clinical diagnosis categories using the Clinical Classification Software developed by the Agency for Healthcare Research and Quality.<sup>12</sup> The tables report the diagnosis categories that account for the greatest share of visits and of Medi-Cal expenditures for episodes with start dates in 1999 and 2000.

Table 10 reports the top diagnosis categories for foster care children by health episode type. Within each health episode type, the diagnosis categories are sorted by the share of total visits accounted for by that category for episodes starting in 1999. Also reported are the share of Medi-Cal expenditures for episodes starting in 1999, in addition to the share of visits and share of expenditures for episodes starting in 2000. For well-child visits, the most common diagnosis categories were general medical examinations and evaluations, general problems and complaints of the eye and ear, upper respiratory infection, and administrative/social visits. The share of expenditures was consistent with the share of visits, and the shares were stable across years. For the most part, these are the general examinations and types of visits one might associate with well-child and preventative care.

For mental health episodes, nearly one-fourth of the visits and twenty percent of the expenditures were for miscellaneous mental conditions, which might include anything from physical symptoms arising from mental factors to academic underachievement disorder. Another major category was pre-adult disorders, which includes conditions like separation anxiety disorder. Mental retardation accounted for relatively few services, but a significant share (20%) of Medi-Cal expenditures were for this episode type. For substance abuse health episodes, the dominant category was substance-related mental disorders, which includes anything from history of tobacco use to misuse of drugs. A smaller share of visits and expenditures was associated with alcohol-related mental disorders.

Acute illness health episodes, which are of the same duration but more intense than well-child visits, included a larger share of visits and expenditures associated with upper respiratory infections, followed by general medical examinations and administrative/social visits. It also included visits associated with blindness and vision defects, which would include examinations related to the diagnosis and fitting of corrective lenses. Another significant category included services for newborn infants. Chronic illnesses are of longer duration than acute illness, and they included conditions such as upper respiratory infection, rehabilitation, genitourinary symptoms (which includes various findings of an examination of urine), paralysis, pneumonia, and asthma. Each of these conditions requires repeat visits to a physician or prescriptions over an extended period of time, and each may involve an inpatient stay or emergency department visit.

Table 11 reports similar information for the health episodes experienced by CalWORKs children. In general, the diagnosis conditions associated with various health episode types were similar to that of foster care children. One of the most notable differences was the share of visits and expenditures in well-child, acute illness, and chronic illness associated with disorders of the teeth and jaw. This diagnosis category includes anything from cavities and root canals to orthodontics, and it was much more prevalent among CalWORKs children than foster care children. Another difference was the lower prevalence of mental retardation in the mental health

service use of the CalWORKs population. Among the acute and chronic illness, the CalWORKs population had more specific and intense acute illness episodes, including conditions like otitis media (ear ache) and appendicitis, and a slightly different mix of chronic illness episodes, with a greater share of visits associated with rehabilitation and less with asthma and paralysis.

Table 12 uses a variety of summary statistics to characterize health episodes for the universe of foster care and CalWORKs Medi-Cal fee-for-service beneficiaries during 1999 and 2000. Overall, there were 2.2 million episodes defined. Almost 45% of the episodes were well-child visits, 35% were chronic illness episodes, 18% were acute illness episodes, 2% were mental health episodes, and less than 1% were substance abuse episodes. For well-child episodes, the average Medi-Cal payment was \$19, the average episode length was 2.5 days, and the average number of visits per episode was 1.5. For acute illness episodes, the average Medi-Cal payment, length, and visits were \$245, 7.3 days, and 4.9 visits, respectively. For chronic illness episodes, the average Medi-Cal payment, length, and visits were \$950, 136 days, and 19.5 visits, respectively. For mental health episodes, the average Medi-Cal payment, length, and visits were \$898, 152 days, and 26.2 visits, respectively. Lastly, for substance acute episodes, the average Medi-Cal payment, length, and visits were \$916, 138 days, and 31.7 visits, respectively.

Together, the results suggest that our functional definition of health episode is consistent with a health episode definition based on clinical conditions, duration, and intensity. Acute illness episodes, on average, are shorter and more intense than chronic illness episodes. Although chronic illness episodes represented only 34% of episodes, they accounted for over 80% of Medi-Cal expenditures. Medi-Cal beneficiaries in this category are the persistent users of health services, and they are the “high-cost” beneficiaries from the perspective of total program expenditures. Mental health and substance abuse episodes were similar in duration, but even more intense than chronic illness episodes, although they account for only a small share of Medi-Cal expenditures overall. In the next three sections, we use this definition to describe the Medi-Cal experiences of foster care children and their CalWORKs counterparts.

### **Health Episodes of Foster Care and CalWORKs Children**

Using the classification system described above, we examine the health episodes experienced by foster care children in January 1999 and January 2000 and compare these events with those of children enrolled in CalWORKs at these times. Because aggregate patterns often mask important differences for certain groups of individuals, we also compare patterns across counties and individuals.

Tables 13 and 14 summarize the prevalence of health episodes among the fee-for-service foster care children in the 1999 and 2000 cohorts, respectively. The unit of analysis in these tables is a beneficiary-quarter. For example, Table 13 reports that for the 1999 foster care cohort, there were no health episodes among the beneficiaries in 36% of the quarters. The analogous percentage was lowest among the youngest beneficiaries (26% for those under one-year) and highest among the oldest beneficiaries (40% for those ages 16 years and older). The percent with no episodes was slightly higher for blacks than for whites or Hispanics (although we report other race categories, we focus here on the three most common). There were also large regional differences: the percent with no episodes was lowest in the North and Mountain region (31%) and highest in the Bay Area (42%) and Los Angeles (37%). Because the claims

data do not allow us to assess the need for services among foster care children, it is not possible to determine whether the absence of a health episode signals the lack of need for health care services or a barrier to health care services. Nevertheless, the results suggest that adolescents, black enrollees, and Bay Area/Los Angeles beneficiaries were more likely than other recipients to have no health care episodes. The results for the 2000 cohort are similar.

As mentioned earlier, chronic illness episodes accounted for over 80% of Medi-Cal expenditures. According to Tables 13 and 14, chronic illness episodes also accounted for 43% of beneficiary-quarters. Beneficiaries under the age of one year had the most persistent medical use, with 62% having some chronic illness. The percent with chronic illness fell to 44% for ages 2 to 5, and remained steady at 41-42% until age 18. Whites and Hispanics had the highest percent with chronic illness (43-44%), while blacks had the lowest (40%). Finally, the percent with a chronic illness was lowest in the Bay Area (38%) and highest in the North and Mountain and Farm Belt regions (50% and 45%, respectively).

With respect to well-child events and looking at both the 1999 and 2000 cohorts, the percent with this type of health episode was highest for foster care beneficiaries aged 2 to 10 years, Hispanics and blacks, and Southern California and Farm Belt counties. The percent with well-child visits was lowest for foster care children less than one year old, older than 16 years, and living in the North and Mountain region. The percent with mental health episodes was highest for foster care beneficiaries aged 6 to 15 years, whites, and North and Mountain counties. The percent with acute illness did not differ much across subgroups.

Tables 15 and 16 replicate the analysis for CalWORKs children in 1999 and 2000. To make comparisons between the Medi-Cal experiences of foster care and CalWORKs children, the text concentrates on children living in counties without official Medi-Cal managed care programs (classified as “Other” Medi-Cal Model). Almost all foster care and CalWORKs in these areas receive fee-for-service coverage, meaning that the populations receiving health services in this way represent the near universe of the relevant children in these counties. In contrast, the CalWORKs children receiving fee-for-service coverage in counties with an official Medi-Cal managed care plan are likely a select group that are unrepresentative of CalWORKs children in general. Looking at the last rows of Tables 15 and 16 and comparing them to the analogous rows in Tables 13 and 14, we observe a number of differences. First, the overall percent with no health episode was slightly higher for CalWORKs children (36% for CalWORKs children vs. 30% for foster care children in 2000). Second, the percent of beneficiaries with an acute health episode was slightly higher for CalWORKs children than foster care children (10% vs. 7% in 2000), while the percent of recipients with a chronic illness was lower for CalWORKs children (45% vs. 50% in 2001). Third, the percent with a mental health episode was more than three times lower among CalWORKs beneficiaries than foster care beneficiaries (2% vs. 7% in 2000). This lends some support to the hypothesis that foster care children had greater mental health needs than the comparable group of CalWORKs children; however, our data prevents us from drawing clear conclusions about the need for services. Lastly, the health episodes among CalWORKs and foster care children followed similar patterns across age groups, ethnicity categories, and region. This finding supports the hypothesis that some of the differences observed in health service use and health status may be attributable to differences in the populations they serve, rather than in the CalWORKs and foster care programs themselves.

To explore whether the observed variation in the prevalence of health episodes reflects differences between the interaction of Medi-Cal fee-for-service coverage and the CalWORKs and foster care programs, or rather differences among the characteristics of the populations served, we appealed to a multivariate analysis. In particular, we computed logistic models to estimate the impact of Medi-Cal eligibility category (CalWORKs or foster care), age, race/ethnicity, and county health plan type on the likelihood of a particular type of health episode. Similar to the descriptive analysis described above, this analysis considers only those children receiving fee-for-service Medi-Cal.

Table 17 reports the results of the logistic model of health episode type on demographics and county characteristics. Our focus is on the coefficients of the foster care covariate. The number reported is the odds ratio of a foster care beneficiary having an episode of a particular type relative to a CalWORKs beneficiary. The “\*” indicates that the odds ratio is significant at the 95% level. For well-child visits, the odds ratio is 0.205, meaning that a foster care child was 20% as likely as a CalWORKs child to have a well-child visit episode, controlling for age, ethnicity, and location. For mental health, the odds ratio is 2.349, meaning that a foster care child was 2.3 times as likely to have a mental health episode, all else equal. Similarly, a foster care child was 10.4 times more likely than a CalWORKs child to have a substance abuse episode, and 22% more likely to have a chronic illness episode. Finally, the odds ratio for acute illness is 0.716, meaning that a foster care child was 72% as likely to have such an episode relative to a CalWORKs child. The results confirm the implication of the descriptive tables that foster care children had a greater need for health care services than comparable children in CalWORKs with similar demographic characteristics.

### **Health Episodes of Foster Care, Former Foster Care, and Kin-GAP Children**

In this section, we further explore the Medi-Cal utilization of foster care children by refining our medical services classification and making comparisons to two other groups of children who are likely to be similar to foster care children in a number of unmeasurable ways and are also categorically eligible for Medi-Cal. In particular, we use former foster care children who aged out of the welfare system and children who moved from a foster care placement to legal guardianship with a relative (under the Kin-GAP program) as comparison groups. To enhance our health episode taxonomy, we categorize health episodes into six mutually exclusive groups by adding “Labor and Delivery” as a type of episode to the five categories described above. This type of episode is defined as any episode with live-born or normal delivery diagnosis codes (according to categories 196 and 218 in the AHRQ Clinical Classification Software). Previously, such episodes were evenly divided between chronic and acute episodes. Using the six-category taxonomy, this episode makes up for a small share of episodes – approximately 2% of all episodes among foster care and CalWORKs children between 1999 and 2001. However, it is expensive and time intensive, with an average episode payment exceeding \$5,000 and an average episode length of about 143 days.

In addition to expanding the number of episode categories, we also analyze the presence of four types of utilization that can occur in any type of health episode: emergency department visit, prescription drug, pediatric ambulatory care sensitive condition (ACSC), and specialty visit. Occurrences of the first two events are identified explicitly from the Medi-Cal claims files. Table A3 describes the pediatric ambulatory care sensitive conditions, and Table A4 lists the 17 types of medical services we classify as specialties according to Johns Hopkins Children’s

Center (excluding less detailed specialties such as general pediatrics).<sup>13</sup> Table 18 shows the distribution of these types of medical utilization across the six types of health episodes for the universe of foster care and CalWORKs Medi-Cal fee-for-service beneficiaries between 1999 and 2001. Overall, 11% of episodes involved a visit to the emergency department, about 30% involved prescription drugs, 4% included a specialty visit, and only 0.4% referred to a child with a ACSC. For the most part, these types of use were much more concentrated among substance abuse, labor and delivery, and chronic episodes.

Table 19 describes the health episodes experienced by long term foster care children in 2001 (those participating in the child welfare system in three or four quarters of the year) in comparison to those of their former foster care and Kin-GAP counterparts. Each number in the table represents the percentage of children having the particular health episode in 2001. Table 20 provides an analogous description for short term foster care youths, those with one or two quarters of child welfare system activity during 2001. Looking first at long term foster care children, Table 19 shows that Kin-GAP children were the most likely to have at least one (59%) or more than one (12%) health episode of any type. In comparison, 57% of foster care and 38% of former foster care children had at least one health episode, and 8% of foster care and 4% of former foster care children had two or more health episodes. The relative distribution according to type of child (e.g., foster care, former foster care, or Kin-GAP) also held for well-child visits and acute episodes. On the other hand, foster care children were the most likely to have a mental health visit (4% with at least one) and a chronic episode (32% with at least one). Former foster care children were the most likely to have a labor and delivery episode: 6% of this population had at least one, whereas only 1% of foster care and 0% of Kin-GAP youth had such an episode. For the most part, Table 20 shows that the distributions of short term foster care children across the six health episodes followed similar patterns. For example, 65% of Kin-GAP, 44% of foster care, and 40% of former foster care had one or more health episodes of any type. In addition to being the most likely to have a well-child visit and an acute episode, short term Kin-GAP children were also the most likely to have a chronic episode.

Looking at the bottom of Table 19, which describes the frequency of different types of utilization among foster care children and their comparison groups, we find that former foster care children were the most likely to have an episode including an emergency department visit. Seventeen percent of this population had at least one emergency department visit, in comparison to the 13% of the foster care and Kin-GAP populations. Foster care children, in contrast, were the most likely to have episodes requiring prescription drugs. For the short term foster care children described by Table 20, Kin-GAP youths were the most likely to use prescription drugs. Moreover, these Kin-GAP children were equally as likely as their former foster care counterparts to have an emergency room visit (13% of each population). Long term foster care children were more likely than short term foster care children to have an emergency room visit (13% vs. 9%), a specialty visit (6% vs. 3%), and a drug prescription (35% vs. 22%).

### **C. Medi-Cal Expenditures**

In this section, we compare Medi-Cal expenditures across health episodes and describe differences in the costs incurred by foster care children and their CalWORKs counterparts. In this section, we refer to the less-specific classification that does not isolate the small percentage of labor and delivery episodes. Similar to the format of Tables 13 and 14, the unit of analysis in these tables is a beneficiary-quarter. For example, Table 21 reports that for the 1999 foster care

cohort in fee-for-service Medi-Cal, the average Medi-Cal expenditure per quarter was \$22 for well-child visits, \$581 for mental health, \$375 for substance abuse, \$176 for acute illnesses, and \$517 for chronic illnesses. Likewise, these tables reflect the average intensity of services – measured by expenditures – by episode type and demographic and county characteristics. There is little difference in average Medi-Cal expenditures for well-child visits across these characteristics, a result that is due to the construction of this episode type (e.g., less than 30 days in duration and less than \$50 in costs).

Looking first at average costs for the 1999 foster care cohort, Table 21 shows that mental health and chronic illness were the most expensive health episodes for this group of children (average cost of \$581 and \$517, respectively). The table also reveals large variations in average costs across demographic groups and regions, even within the same health episodes. For example, the average cost of a chronic illness episode among children younger than one year was \$734 per quarter, while the average cost of such an episode among children 1 to 5 years old was \$498. The average cost of a substance abuse episode ranged from \$79 for children 1 to 5 years old to \$401 for children 11 to 15 years old. Comparing average costs across counties, Table 21 shows that the North and Mountain region had the highest costs per episode: the average cost per episode in this region was 28% higher than the average in all counties (\$542 compared to \$426). This relationship is not surprising, as the North and Mountain region had the highest incidence of the most expensive health episodes, mental health and chronic illness (see Table 13). Nevertheless, regional differences prevail when costs are compared within the same health episode, with the largest regional differences found in substance abuse episodes. The average cost of a substance abuse episode in Bay Area was \$287 compared to an average cost of \$537 in the North and Mountain region. With the exception of a moderate increase in costs from 1999 to 2000, the results are similar for the 2000 cohort, as shown in Table 22.

Tables 23 and 24 present average costs of health episodes for CalWORKs children. Comparisons of Table 21 with Table 23 reveal that the health episodes of foster care children were more expensive than the health episodes of their CalWORKs counterparts. Similar to the analysis of Medi-Cal utilization, we concentrate on the CalWORKs and foster care children living in counties without an official Medi-Cal managed care program, represented by the last rows of the tables. For example, the quarterly average cost of a health episode for foster children was almost twice that of CalWORKs children (\$505 vs. \$278 in 2000). Larger average costs among foster care children were partially determined by differences in the composition of health episodes between these two groups. In previous sections, we showed that CalWORKs children were more likely to experience low-cost episodes (well-being visits) and less likely to experience high costs episodes (mental health and chronic events). Moreover, the same health episode was less expensive for CalWORKs children than for foster care children. For all types of health episodes, the average intensity – or cost – of services for CalWORKs children was less than that for foster care children. For example, the quarterly average cost of mental health and chronic illness episodes for CalWORKs children in 2000 were \$323 and \$337, respectively; the comparable mean expenditures for foster care children were \$701 and \$574. Expenditure differences between the two populations in well-child visits, substance abuse episodes, and acute illnesses were much smaller. These findings support the hypothesis that foster care children had greater health needs than a comparable group of CalWORKs children, a suggestion endorsed by a number of stakeholders and policymakers concerned with the welfare of foster care children.

## IV. Findings: Impact of Recent Policy Changes

Given the patterns in the Medi-Cal utilization of foster care children documented above, one might seek to assess the extent to which the observed trends can be explained by a number of policy changes implemented in California during the time period under analysis. In particular, the State passed three reforms in 1999 that were designed to support foster care children, predominantly with regards to their needs for medical services. Accordingly, we can ask whether these policy changes had any impacts on Medi-Cal utilization or enrollment by current and former foster care children, a question to which we will devote significant attention in our September report. In this section, we analyze the impacts of three pieces of foster care legislation (listed in Table 25) on the Medi-Cal experiences of foster care children since 2000.

### A. Health Care Program for Children in Foster Care

The health care delivered to children in out-of-home placements depends on the interaction of a number of programs and individuals, including the child welfare services, local health departments, Medi-Cal, caseworkers, probation officers, and foster care parents. In light of the complex web of stakeholders involved in the health care of these children, the California legislature created the Health Care Program for Children in Foster Care (HCPCFC) – effective on January 1, 2000 – to provide public health nursing expertise to meet the health care needs of children in foster care. It is commonly believed that public health nurses are uniquely positioned to link the foster care system to the Medi-Cal system, in addition to develop and implement recommendations for improving the delivery of medical services to foster care children. This public health nursing program applies a multidisciplinary team approach to supporting foster care children, and the nurses work closely with children’s caseworkers or probation officers to ensure that health care needs are met. The nurses also collaborate with welfare services staff to interpret health care information, develop health resources, and establish training services for probation staff.

While this program was implemented on a statewide basis, it is likely to have differential impacts across counties due to the different needs of the foster care populations and various county support systems. Moreover, as shown by Table 26, the number of foster care children per budgeted HCPCFC public health nurse varied dramatically across counties in 2002. For example, in two rural counties – Del Norte and Kings – there were more than 600 foster care children per public health nurse. At the low extreme, two other rural counties – Modoc and Mono – had ratios around or below 100 foster care children per nurse. The average number of foster care children per public health nurse was 345. Similarly, the amount of Federal Title XIX matching funds (grants to states for medical assistance programs) for the HCPCFC per foster care child varied substantially across counties. As shown by Table 27, federal matching funds were less than \$25 per foster care child in Del Norte and Calaveras, but exceeded \$250 per foster care child in five counties – Plumas, Amador, Trinity, Mono, and Mariposa.

As described above, we use a multivariate regression framework to isolate the impact of the HCPCFC on the likelihood of health episodes among foster care children. In addition to controls included in our statistical model, we perform this exercise separately for the long term and short term foster care populations to account for compositional differences in these two

samples. Table 28 presents our results for long term foster care children, while Table 29 presents the analogous findings for short term foster care children. Numbers reported in the tables represent the mean differences in the probabilities of having a health episode, relative to the outcomes in counties with very low concentrations of public health nurses (more than 500 foster care children per nurse). Assuming our statistical approach adequately controls for systematic differences among counties, these numbers reflect the expected impact of decreasing the ratio of foster care children per public health nurse. For example, the first row of Table 28 suggests that a long term foster care child in a county with the highest concentration of public health nurses (fewer than 330 foster care children per nurse) was 10% less likely to have a health episode of any type than the analogous child living in a county with a low concentration of public health nurses. This percentage drops to 2% for counties with 330 to 500 children per nurse, relative to areas with the lowest concentrations.

For the most part, we find a very small impact of the HCPCFC for long term foster care children and a slightly larger effect for short term foster care children. Other than the effects noted above, the only estimated effect with any level of statistical significance for long term foster care children is that a child living in an area with 330 to 500 foster care children per nurse was 1% more likely to have a chronic episode than the equivalent child in a region with a lower concentration of nurses. For short term foster care children, we find that non-chronic foster care children in areas with higher concentrations of public health nurses were 3% to 5% less likely to have a well-being visit than those in areas with lower concentrations of nurses. Moreover, all short term foster care children in these areas were 2% to 3% less likely that their counterparts in areas with lower concentrations of nurses to have a chronic episode. On the other hand, the HCPCFC appeared to increase the likelihood that a chronic foster care child had an episode with a specialty visit by 5% to 10%.

With respect to the decrease in Medi-Cal utilization among short term care children as a result of the HCPCFC, one possible explanation is that the HCPCFC decreased the frequency of chronic and well-being episodes as a result of public health nurse case management. In other words, public health nurses may be performing care that was previously delivered in a clinic. Moreover, we find that the HCPCFC increased the frequency of specialty visits for chronic children, suggesting that the case management of nurses may have induced those children to receive more rigorous care than they would have obtained otherwise. This story is also consistent with our finding of no change in emergency care due to the public health nurse program.

Overall, our estimation suggests there were limited impacts of the HCPCFC on the Medi-Cal utilization of foster care children, particularly those in the welfare system for at least three quarters of the year. However, we cannot interpret our results as evidence that the program was not successful by any measure. Because our identification strategy relies on variation across counties in average outcomes and measures county-level impacts, a small program may appear to have small effects on outcomes, even if the impact for children of interacting with a public health nurse in that area is substantial. A rigorous interpretation of our results would be that foster care children living in counties with high concentrations of public health nurses did not experience changes in the probabilities of health episodes as a consequence of the program, on average. However, this interpretation does not exclude the possibility that a small share of foster care children in these areas obtained large benefits from the program, a result that would be masked in the average county-level effects. Alternatively, we appeal to a more objective interpretation of

our results, suggesting that the HCPCFC is too small to have large impacts on the county-level outcomes that we measure.

## **B. Kinship Guardianship Assistance Payment (Kin-GAP) Program**

Since January 1, 2000, children who leave the juvenile court dependency system to live with a relative legal guardian have received a subsidy equivalent to the basic foster care reimbursement. This Kinship Guardianship Assistance Payment (Kin-GAP) Program was established in 1999 to offer relative caregivers of foster care children a new option for providing these children with a permanent home. As shown in Figure 3, the rate of foster care fell in every region except the Farm Belt between 2000 and 2002, a pattern that could be partially attributable to new opportunity created by Kin-GAP. Indeed, 1,132 children (1.1% of the 2000 cohort of foster care children) transitioned to Kin-GAP during the year.

Even though a child entering the Kin-GAP program technically leaves the foster care system, he or she remains presumptively eligible for Medi-Cal. If we hypothesize that one of the barriers to medical services faced by foster care children is the lack of stability in placements, then we might expect to see different patterns in the Medi-Cal utilization of children in the Kin-GAP program in comparison to children in traditional foster care. As shown in the previous analysis, Kin-GAP children were more likely than former foster care youth and foster care children to have any type of health episode.

To gain a better understanding of the different rates of Medi-Cal utilization among Kin-GAP and foster care children, we apply the multivariate probabilistic models described above to isolate the impact of the policy reform from numerous other factors that might have impacted Medi-Cal use. Table 30 summarizes the results of this exercise, with each row representing a separate regression according to the particular outcome of interest. The first column of the table presents the outcome indicator, or the type of health episode for which we are predicting the probability of occurrence. The second column indicates the health conditions defining the sample criteria for a particular regression. Finally, the third and fourth columns present the impact of Kin-GAP enrollment for long term foster care youth – those foster care and Kin-GAP children who are involved in the welfare system for more than two quarters of the year – and for short term enrollees – those children involved in the system for only one or two quarters of 2001. The entries in these columns are the differences in the probabilities that an outcome will occur among foster care children, relative to Kin-GAP children. For example, the first row presents differences in the probabilities of foster care and Kin-GAP children experiencing any health episode.

There are several interesting findings revealed in Table 30. First, the results confirm the simple descriptive statistics suggesting that Kin-GAP children had higher rates of Medi-Cal utilization, even when other confounding factors were taken into account. Considering long term participants of the welfare system, foster care children were 6% less likely than Kin-GAP children to experience a health episode during 2001. This difference is almost four times larger when short term participants are concerned: foster care children were 25% less likely than Kin-GAP children to have a health episode in two quarters of the year. Second, the largest difference in probabilities of health care utilization was for well-being visits for long-term and non-chronic children. Concerning this sample, foster care children were 9% less likely than the analogous Kin-GAP children to have a well-being visit. The comparable short-term foster care children

were 18% less likely than their Kin-GAP counterparts to have such a visit. Third, Table 30 suggests that long-term foster care children with chronic illnesses were no more likely than the comparable Kin-GAP children to have a specialty visit. In the short term, however, foster care children were 2% less likely than Kin-GAP children to visit a specialty provider. Lastly, long-term foster care children with and without chronic illnesses were 2% less likely than their Kin-GAP counterparts to experience a trip to the emergency department. All of the estimates mentioned above are statistically significant at the 95% confidence level.

Taken together, the findings presented in Table 30 show that Kin-GAP children had higher rates of Medi-Cal utilization, accounting for a number of demographic and regional factors that might affect medical service use. Moreover, there is some evidence that Kin-GAP children were more likely to receive preventative medical care – in the form of well-being visits – than foster care children. Short term differences between the two populations – applicable to children in the system during one or two quarters of the year – tended to be larger than long term differences, a result suggesting that patterns of care may differ according to the length of time in the welfare system. To the extent that our statistical models can account for unmeasurable differences between foster care and Kin-GAP children, our analysis suggests that the Kin-GAP program increased Medi-Cal use, particularly in the form of well-being visits. One potential explanation behind the higher use of well-being visits for Kin-GAP children is that relative guardians play a larger role than other foster care guardians in securing a normal source of medical care for the children who live with them. Similarly, the environment of relative caregiving arrangements may be more conducive to establishing a preventative medical care routine.

### **C. Extended Medi-Cal Eligibility for Former Foster Care Children 18 – 20 Years**

Following from the passage of the federal Foster Care Independence Act of 1999, California extended zero share-of-cost Medi-Cal eligibility for all children who are in foster care on their 18<sup>th</sup> birthday. Effective October 1, 2000, this new provision extended such eligibility to former foster care children until they reach 21 years of age, regardless of income or assets. These children are now automatically eligible for the full range of Medi-Cal benefits, and they do not have to reapply for such coverage upon transitioning out of foster care. Moreover, they face the same choice between managed care and fee-for-service delivery in all regions with managed care provisions other than those operating COHSs.

Prior to the extension, children aging out of foster care were required to reapply for Medi-Cal, with eligibility determined by the county. As shown by Table 31, a number of foster care children reaching age 18 in 1999 – before creation of the new eligibility category (“Former Foster Care”) – retained Medi-Cal eligibility. Forty-six of these teenagers were eligible for Medi-Cal through the traditional foster care aid category, while another 23% were entitled to Medi-Cal through other aid groups. However, another 26% were not enrolled in Medi-Cal, even though they may have been eligible for the program. Advocates of foster care children have often attributed this lack of coverage to former foster care children’s confusion about the process required for continuing medical care coverage. Table 31 also shows that percentage of foster care youths at least 18 years old who had Medi-Cal eligibility as a foster care case was five percentage points lower in 2001 than in 1999. At the same time, 15% of this population was classified as a former foster child Medi-Cal beneficiary in 2001. These statistics imply that about two-thirds of the former foster care Medi-Cal cases were “new” enrollees – those who

would not have been enrolled in the absence of the new policy – while the remaining one-third were “old” beneficiaries, who would have been eligible through another category regardless of the reform. Moreover, between 1999 and 2001, the share of young adults (18 years or older) formerly or currently in foster care that did not have Medi-Cal eligibility fell from 26% to 16%.

Table 32 shows the distribution of 17 to 21 year olds enrolled in Medi-Cal in 2001 across different eligibility categories. Of those youths enrolled through the former foster care eligibility group, 30% were 18 years old, 39% were 19 years old, and 31% were 20 years old. Only a few children were 21 years old. Twenty-six percent of all the teenagers aged 17 years or older who were qualified for Medi-Cal as a foster care child were 18 years old, and therefore presumably eligible as a former foster care child. In contrast, almost no children older than 18 years had a foster care eligibility code.

Table 33 presents results from our multivariate analysis of the impacts of the new Medi-Cal eligibility category on the delivery of health services to newly emancipated foster children. The first column of the table shows the difference in the probability of a former foster care child and a current 17 year old foster care child experiencing a health episode. For example, the first row of the table shows that former foster care children were 9% more likely than current foster care children to have a health episode of any type. Similarly, both chronic and non-chronic former foster care children were 5% more likely than their current foster care counterparts to have a health episode including an emergency department visit. The second column of Table 33 shows the impact of the Medi-Cal extension to former foster care children on the differential between the two groups of children. While the availability of the new Medi-Cal eligibility category had no effect on the probability of a former foster care child having a health episode of any type, it increased the probability of having a well-child visit by 5% and the probability of having a mental health episode by 2%. Both of these estimates are statistically significant at the 90% confidence level. Lastly, the creation of the new aid category decreased the probability of having emergency care by 8% among chronic former foster care children. This last estimate is statistically significant at the 95% confidence level.

Overall, our analysis implies that the extension of Medi-Cal to former foster care children increased the use of medical services among this group in certain ways and decreased it in other ways. To the extent that well-being visits reflect preventative care, we find that former foster care children were more likely to receive such services after the option of optioning Medi-Cal as a former foster care child was available. On the other hand, the policy reform decreased the prevalence of emergency care among former foster care children. To the extent that emergency department visits are used in lieu of regular care by individuals who do not have a regular source of care – a common phenomenon cited in the health care community – this result lends support to the benefit of the reform.

## V. Conclusion

In this report, we carefully characterize the foster care population, highlighting a number of demographic and regional differences among its constituents. To improve our understanding and provide context for assessing the circumstances of this group, we also perform comparisons to three other groups of children presumptively eligible for Medi-Cal. In particular, we compare foster care children to children receiving CalWORKs, children participating in the new Kin-GAP program, and children who have aged out of the foster care program. After describing the characteristics of these youths, we examine the Medi-Cal utilization and expenditures of the subset of foster care children receiving fee-for-service coverage, a group consisting of approximately 90% of the population, and contrast their Medi-Cal experiences to those of the three comparison groups noted above. Lastly, we employ conventional econometric tools to assess the impacts of three recent policy reforms targeting the delivery of medical services to foster care children.

### A. Summarizing the Medi-Cal Experiences of Foster Care Children

We find substantial demographic and regional differences in the Medi-Cal utilization of foster care children. For example, foster care children older than 15 years, blacks, and foster care children living in the Bay Area and Los Angeles were more likely than their counterparts to experience no health care episodes during 1999 and 2000. This finding could reflect lower medical needs, greater barriers to access, or a combination of both among these groups. Well-being visits, which largely represent general medical and preventative care, were lowest for foster care infants aged zero to one year and teenagers at least 16 years old. Unlike the teenagers, who were less likely to have any sort of health episode, 62% of the foster care infants had a chronic health episode. In relation to CalWORKs children receiving fee-for-service coverage, we find some evidence that foster care children were more likely to have a health episode of any type. Moreover, the percentage of foster care children with a mental health episode was three times higher than the analogous percentage of CalWORKs children. Despite the association between foster care and higher rates of mental and physical health episodes, we can not ascribe causality between Medi-Cal utilization and foster care placements. Comparing the utilization of current and former foster care children, we find that Kin-GAP children were the most likely to experience any type of health episode. Lastly, current foster care children had higher rates of mental health episodes than former foster care children.

With respect to expenditures for Medi-Cal services, we find that the mental health and chronic episodes of foster care children were the most expensive types of health episodes, accruing average expenditures of \$592 and \$573, respectively, per episode in 2000. Well-being visits for foster care children, on the other hand, cost only \$22 per episode on average. Expenditures varied across foster care children according to age and location. For example, substance abuse episodes were much more expensive for older foster care children than younger children. Likewise, average health episode expenditures were highest in the North and Mountain region and lowest in the Bay Area, a comparison that does not account for the composition of services delivered across regions. In comparison to the expenditures of analogous CalWORKs

children, foster care children's health episodes tended to be much more expensive, irrespective of the type of episode.

In addition to examining patterns in the Medi-Cal utilization and expenditures of current and former foster care children, we also estimated the effects of three recent reforms passed by the California Legislature on these trends. Most notably, we found that two of the policy changes increased the overall use of medical services. In particular, children exiting the foster care system in 2001 due to participation in the Kin-GAP program were 6% to 25% more likely to experience a health episode of any type than their foster care counterparts, depending on the percentage of the year in which they were in the child welfare system. Similarly, the creation of a new Medi-Cal eligibility code for children transitioning out of foster care due to age increased the probability of such a child of having a well-being visit by 5%. At the same time, this Medi-Cal extension decreased the probability of emergency care for former foster care children with chronic conditions by 8%. Lastly, we find that the HCPCFC had limited impacts on the Medi-Cal utilization of long term foster care children. However, we also find it increased the likelihood that short term foster care children had specialty visits and decreased the probability that they had well-being visits and chronic episodes, possibly reflecting a shifting of care from clinics to public health nurses. Taken together, our results suggest that recent actions by the California legislature have increased the use of Medi-Cal utilization for current and former foster care children, particularly in the form of well-being visits.

## **B. Implications**

There are several implications of the results presented above. First, we find that Medi-Cal expenditures of foster care children tended to be higher than those of other children eligible for this type of health insurance. This raises issues about the financing of health care for this vulnerable population. One common method of containing medical costs is the use of managed care plans to delivery services. Indeed, the last decade has seen the transition of a majority of Medi-Cal beneficiaries to compulsory managed care enrollment. To date, however, foster care children have been exempt from this mandate and allowed to choose between fee-for-service coverage and enrollment in a managed care plan, when available. However, as the state faces severe budgetary shortages, it may have to consider methods to control medical expenditures for foster care children.

A related implication arises in the case of a move towards delivering health services to foster care children through managed care plans, which maintain restrictions on the types and frequency of care provided. Our studied showed that the medical utilization of foster care children differed from that of other Medi-Cal eligible populations. While we are unable to assess the extent to which the use of Medi-Cal services reflected the need for health care, our results suggest that the health care needs of foster care children are likely to differ from those of other children eligible for Medi-Cal. Accordingly, in the case that managed care enrollment is applied equally to the majority of beneficiaries – including foster care children – it is important that the managed care rules are tailored to the meet needs of the foster care population. Because current and former foster care children make up only about 5% of the Medi-Cal child population, policymakers may inadvertently overlook the specific needs of this particularly vulnerable population.

A final implication of our study is that recent legislative changes have, in general, had a positive impact on the nature of Medi-Cal utilization for the target populations. Both Kin-GAP and former foster care children were more likely to receive well-child visits and former foster care children were less likely to use the emergency department. Short term foster care children living in areas with high concentrations of public health nurses were more likely to have specialty visits. These findings suggest that the nature of the foster care placement, the availability of Medi-Cal eligibility for former foster children, and the resources dedicated to providing public health nurses for foster care children have a beneficial impact on the delivery of health services to these vulnerable populations.

Lastly, one limitation of our study involves the restrictions of using Medi-Cal claims data to analyze the Medi-Cal experiences of foster care children. In particular, we are able to examine the patterns in utilization and expenditures for those children receiving fee-for-service coverage only, meaning that our results are particular to this group. Moreover, we are unable to offer any insight on the way in which medical use and costs might differ for fee-for-service and managed care beneficiaries. In addition, claims data do not allow us to assess the clinical needs of enrollees for medical services. Hence, we have no measure of the extent to which patterns in utilization might reflect the overutilization or underutilization of medical services by certain groups of children. Such information is necessary to identify any existing barriers to health care that might be faced by certain groups of foster care children, findings that could be used to tailor policies more specifically. Given the value of such information, it would be helpful if future research was directed towards assessing the need for medical services – or the health statuses – of foster care children and analyzing the patterns of medical utilization in its context.

# Endnotes

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<sup>1</sup> UCLA Center for Healthier Children, Families, and Communities. *Assessment of the Factors Influencing the Adequacy of Health Care Services to Children in Foster Care*. Los Angeles, CA: December 2002. (<http://healthychild.ucla.edu/ChildrenFosterCare/>).

<sup>2</sup> Institute for Research on Women and Families, California State University at Sacramento. *Code Blue: Health Services for Children in Foster Care*. Sacramento, CA: March 1998.

<sup>3</sup> AB 2877 (Thomson) – the 2000-01 budget trailer bill legislation for health programs.

<sup>4</sup> “An Overview of the Child Welfare System in California: Today’s Challenges and Tomorrow’s Innovations,” in Fox, A., Frasch, K., and Berrick, J.D. Listening to Children in Foster Care: An Empirically Based Curriculum. Berkeley, CA: Child Welfare Research Center, 2000. (<http://cssr.berkeley.edu/childwelfare/>).

<sup>5</sup> Foster, Lisa. “Foster Care Fundamentals: An Overview of California’s Foster Care System.” Prepared for Assemblymember Darrell Steinberg, December 2001. (<http://www.library.ca.gov/crb/01/08/01-008.pdf>).

<sup>6</sup> There are a few medical conditions – such as pregnancy or severe health problems – that overrule the mandatory managed care enrollment for CalWORKs beneficiaries.

<sup>7</sup> Because only one of the two required managed care plans is operative in Stanislaus currently, all Medi-Cal beneficiaries in this have a choice between enrollment in a managed care plan or a fee-for-service plan. However, as soon as the second plan is functioning, enrollment in one of the managed care plans will be mandatory for CalWORKs children.

<sup>8</sup> According to reports from University of California, Santa Barbara; retrieved from [http://www.ucsb-efp.com/CA\\_.htm](http://www.ucsb-efp.com/CA_.htm) on September 22, 2003.

<sup>9</sup> These relatively low rates of kinship foster homes are likely one reason leading to the small shares of foster care children participating in the Kin-GAP program, as reported elsewhere in the document.

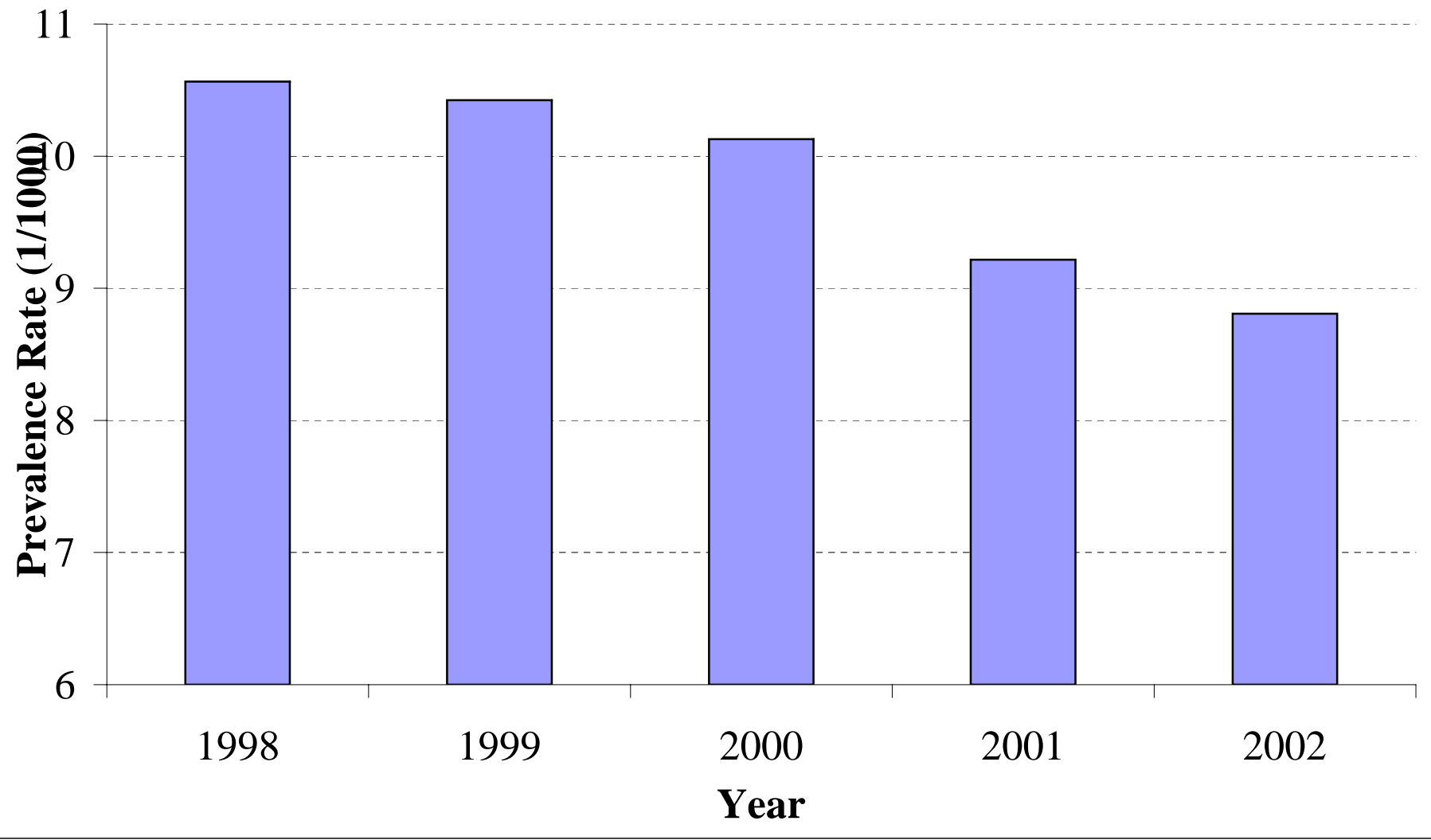
<sup>10</sup> The appendix tables consider only welfare cases, which make up at least 95% of the foster care population in every region.

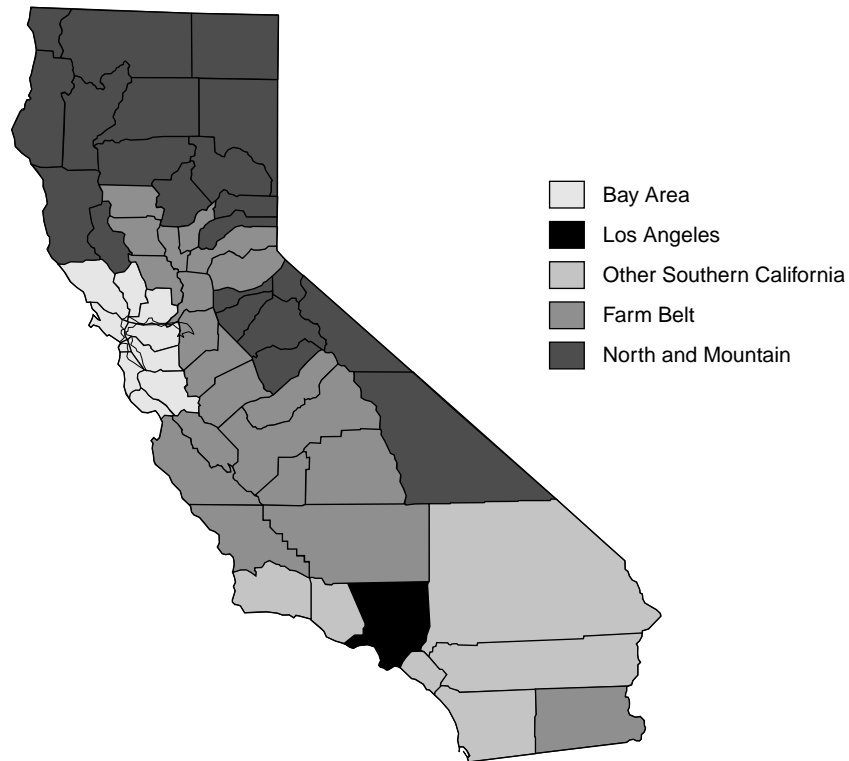
<sup>11</sup> We use quarter as the unit of time and beneficiary-quarter as the unit of analysis. By using beneficiary-quarter as the unit of analysis, we weight each beneficiary enrollment status by the number of quarters spent in that status during the year.

<sup>12</sup> See [www.ahrq.gov/data/hcup](http://www.ahrq.gov/data/hcup).

<sup>13</sup> See <http://www.hopkinschildrens.org/pages/clinical/specialties.cfm>.

**Figure 1 Foster Care Prevalence Rates in California**



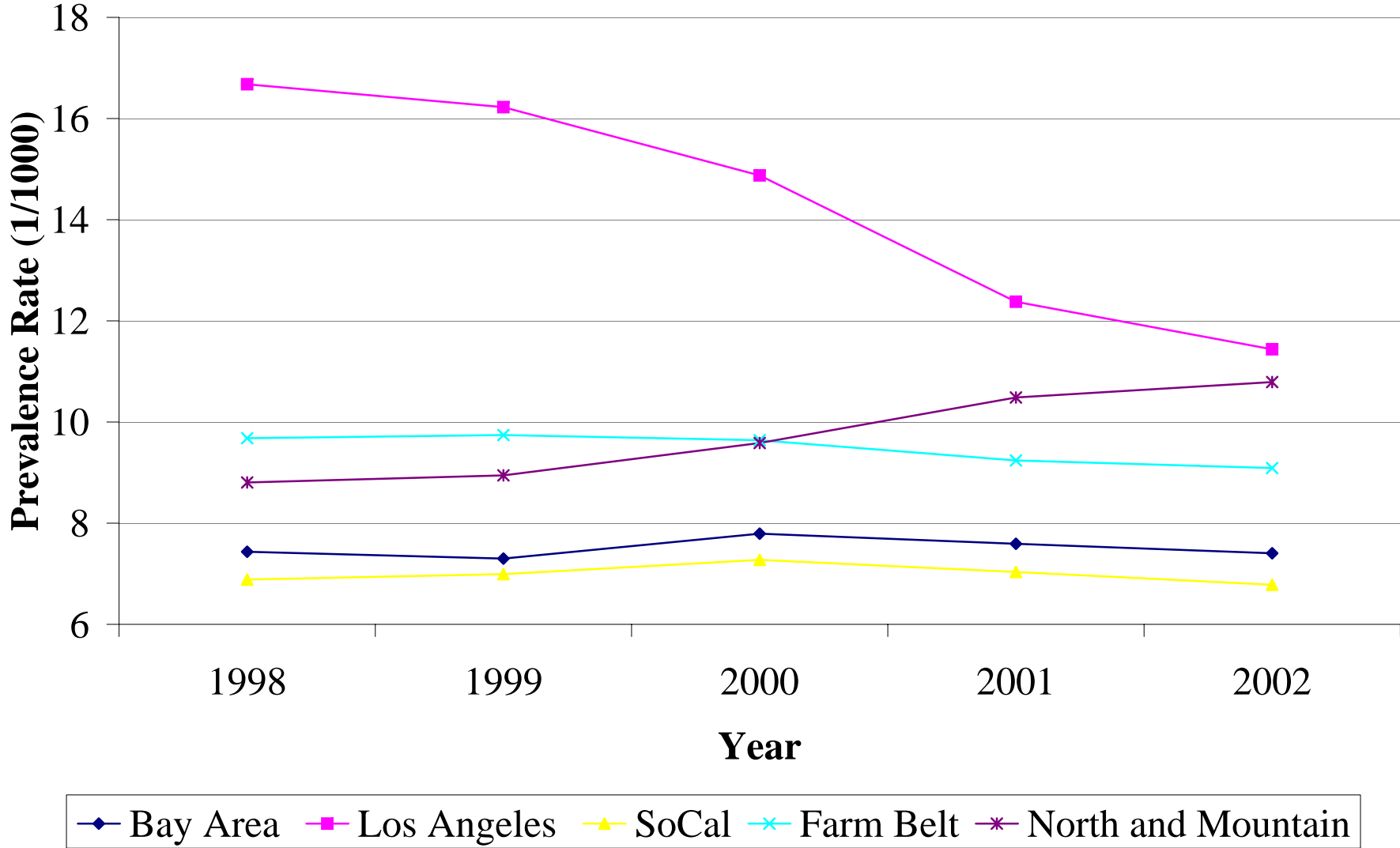


**Figure 2—Five Regions of California**

**Counties Included in Each Region**

Bay Area	Los Angeles	Other Southern California	Farm Belt	North and Mountain		
Alameda	Los Angeles	Orange	Colusa	Placer	Alpine	Modoc
Contra Costa		Riverside	El Dorado	Sacramento	Amador	Mono
Marin		San Bernardino	Fresno	San Benito	Butte	Nevada
Napa		San Diego	Glenn	San Joaquin	Calaveras	Plumas
San Francisco		Santa Barbara	Imperial	San Luis Obispo	Del Norte	Shasta
San Mateo		Ventura	Kern	Stanislaus	Humboldt	Sierra
Santa Clara			Kings	Sutter	Inyo	Siskiyou
Santa Cruz			Madera	Tulare	Lake	Tehama
Solano			Merced	Yolo	Lassen	Trinity
Sonoma			Monterey	Yuba	Mariposa	Tuolumne
					Mendocino	

**Figure 3 Foster Care Prevalence Rates in California by Region**



**Table 1 Demographic Characteristics of Foster Care Children across Regions, January 2001**

	Overall	Bay Area	North & Mountain	Farm Belt	Los Angeles	Other South
Ethnicity:						
• Black	20%	50%	4%	22%	10%	20%
• Hispanic	19%	18%	5%	30%	10%	34%
• White	58%	27%	81%	43%	79%	42%
• Native American	1%	1%	9%	1%	0%	1%
• Other	2%	4%	1%	3%	1%	2%
Primary language:						
• English	97%	95%	99%	98%	96%	98%
• Spanish	2%	2%	0%	1%	3%	2%
• Other	1%	3%	0%	1%	1%	1%
Age :						
• 0 to 2	12%	11%	11%	14%	11%	14%
• 3 to 5	13%	10%	10%	13%	13%	13%
• 6 to 11	33%	33%	29%	32%	34%	32%
• 12 to 18	40%	46%	50%	41%	37%	41%
• 19+	2%	0%	0%	0%	4%	0%
Number of Cases	95,693	13,252	3,275	18,204	42,455	18,507

Source: Child Welfare Research Center, UC Berkeley, School of Social Welfare, Child Welfare Services Case Management System (CWS/CMS) Reports.

**Table 2 Demographic Characteristics of Foster Care and CalWORKs Children, January 2001**

	Foster Care	CalWORKs
Ethnicity:		
• Black	20%	20%
• Hispanic	19%	47%
• White	58%	21%
• Native American	1%	1%
• Other	2%	12%
Age :		
• 0 to 2	12%	16%
• 3 to 5	13%	18%
• 6 to 11	33%	38%
• 12 to 18	40%	28%
• 19+	2%*	-
Number of Cases	95,693	1,068,255

Source: Medi-Cal Eligibility Data System (MEDS).

\* The 2% of the foster care population that was 19 years or older represents the former foster care children who gained eligibility for Medi-Cal through new legislation.

**Table 3 Characteristics of Foster Care Children across Groups  
Long Term Foster Care, 2001**

	<b>Former Foster Care</b>	<b>Foster Care</b>	<b>Kin-Gap</b>
<b>Ethnicity</b>			
• Black	16%	19%	20%
• Hispanic	12%	18%	37%
• White	70%	60%	40%
• Native American	0%	1%	2%
• Other	2%	2%	1%
<b>Gender</b>			
• Male	50%	48%	51%
• Female	50%	52%	49%
<b>Age</b>			
• 0 to 2	0%	10%	2%
• 3 to 5	0%	12%	14%
• 6 to 11	0%	32%	46%
• 12 to 18	5%	46%	38%
• 19+	95%	1%	0%
<b>Region</b>			
• Bay Area	4%	13%	10%
• Los Angeles	79%	47%	0%
• Other South	6%	17%	44%
• Farm Belt	7%	18%	37%
• North and Mountain	3%	5%	9%
<b>Number of Children</b>	<b>2,396</b>	<b>68,150</b>	<b>1,273</b>

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

**Table 4 Characteristics of Foster Care Children across Groups  
Short Term Foster Care, 2001**

	<b>Former Foster Care</b>	<b>Foster Care</b>	<b>Kin-Gap</b>
Ethnicity:			
• Black	25%	13%	31%
• Hispanic	21%	22%	27%
• White	52%	60%	35%
• Native American	0%	1%	5%
• Other	2%	5%	2%
Gender:			
• Female	50%	48%	47%
• Male	50%	52%	53%
Age :			
• 0 to 2	0%	23%	7%
• 3 to 5	0%	13%	16%
• 6 to 11	0%	22%	42%
• 12 to 18	33%	37%	34%
• 19+	67%	4%	1%
Region			
• Bay Area	13%	10%	17%
• Los Angeles	53%	42%	1%
• South of California	13%	17%	38%
• Farm Belt	14%	15%	39%
• North and Mountain	5%	4%	5%
Number of Children	1,297	24,403	220

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

**Table 5 Placement Characteristics of Foster Care Children, January 2001**

	<b>Overall</b>	<b>Bay Area</b>	<b>North &amp; Mountain</b>	<b>Farm Belt</b>	<b>Los Angeles</b>	<b>Other South</b>
By type						
• Welfare	95%	93%	89%	94%	96%	95%
• Probation	5%	7%	11%	6%	4%	5%
By Placement						
• Foster Family Agency	19%	19%	27%	25%	18%	10%
• Foster Family	15%	17%	24%	17%	11%	21%
• Group Home	11%	15%	13%	11%	8%	14%
• Kinship	39%	37%	20%	31%	45%	37%
• Other	16%	13%	15%	17%	17%	17%
By County Medi-Cal Type*						
• COHS	7%	12%	0%	5%	0%	20%
• GMC/Two Plan	82%	66%	0%	81%	100%	77%
• Other	10%	22%	100%	15%	0%	4%
Number of Cases	91,986	14,481	3,084	18,832	39,110	16,479

Source: Child Welfare Research Center, UC Berkeley, School of Social Welfare, Child Welfare Services Case Management System (CWS/CMS) Reports.

\* Refers to the county in which a child lives (i.e. child lives in a county that adapted the Medi-Cal Two Plan Model) and does not indicate the actual enrollment status of a child. That is, a child living in a Two Plan county could receive Medi-Cal through either managed care or fee-for-service.

**Table 6 Annual Enrollment in Medi-Cal by Foster Care Children, 2000 Cohort\***

	% of Foster Care Children	% year not Enrolled in Foster Care	Enrolled in FC	
			% Enrolled Managed Care	% with Fee-For-Service
All	100%	14%	12%	88%
By Age				
• <1	9%	19%	11%	90%
• 1 to 5	25%	16%	14%	87%
• 6 to 10	28%	10%	12%	88%
• 11 to 15	29%	10%	12%	88%
• 16+	9%	26%	12%	88%
By Race				
• White	58%	12%	10%	91%
• Hispanic	19%	19%	19%	81%
• Black	20%	13%	15%	85%
• Asian	0%	20%	15%	85%
• Native American	1%	11%	7%	92%
By Region				
• Bay Area	12%	4%	17%	83%
• Los Angeles	42%	6%	6%	94%
• Other South	14%	5%	26%	74%
• Farm Belt	30%	33%	15%	85%
• North and Mountain	3%	7%	0%	100%
By Medi-Cal Model				
• COHS	5%	5%	74%	26%
• GMC/Two Plan	77%	5%	9%	91%
• Stanislaus <sup>†</sup>	1%	6%	10%	90%
• Other	17%	55%	2%	98%

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

\*Sample includes all foster care children who were enrolled in January 2000.

<sup>†</sup> The two Medi-Cal managed care plans in Stanislaus were not operative in 1999 and 2000 and foster care and CalWORKs children had a choice of managed care or fee-for-service Medi-Cal.

**Table 7 Annual Enrollment in Medi-Cal by CalWORKs Children, 2000 Cohort\***

	% of CalWORKs Children	% year not Enrolled in CalWORKs	Enrolled in CalWORKs	
			% Enrolled Managed Care	% with Fee-For-Service
All	100%	6%	68%	32%
By Age				
• <1	11%	9%	70%	30%
• 1 to 5	31%	6%	71%	29%
• 6 to 10	30%	5%	63%	37%
• 11 to 15	22%	5%	68%	32%
• 16+	5%	13%	76%	24%
By Race				
• White	22%	8%	58%	42%
• Hispanic	45%	6%	69%	31%
• Black	20%	5%	76%	24%
• Asian	1%	5%	56%	45%
• Native American	1%	8%	35%	64%
By Region				
• Bay Area	10%	2%	76%	24%
• Los Angeles	35%	2%	79%	21%
• Other South	17%	3%	70%	29%
• Farm Belt	34%	13%	59%	41%
• North and Mountain	3%	5%	0%	100%
By Medi-Cal Model				
• COHS	7%	3%	86%	15%
• GMC/Two Plan	78%	2%	74%	26%
• Stanislaus <sup>†</sup>	2%	4%	63%	38%
• Other	14%	31%	3%	97%

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

\*Sample includes all CalWORKs children who were enrolled in January 2000.

<sup>†</sup> The two Medi-Cal managed care plans in Stanislaus were not operative in 1999 and 2000 and foster care and CalWORKs children had a choice of managed care or fee-for-service Medi-Cal.

**Table 8 Characteristics of Foster Care Children by their Enrollment in Managed Care – Long Term Foster Care, 2001**

	<b>Enrolled one or more quarters in Medi-Cal Managed Care</b>	<b>Never Enrolled in Medi-Cal Managed Care</b>
Ethnicity:		
• Black	23%	19%
• Hispanic	29%	18%
• White	44%	60%
• Native American	1%	1%
• Other	3%	2%
Gender		
• Male	50%	48%
• Female	50%	52%
Age :		
• 0 to 2	8%	9%
• 3 to 5	13%	11%
• 6 to 11	35%	31%
• 12 to 18	41%	44%
• 19+	3%	4%
Region		
• Bay Area	18%	13%
• Los Angeles	25%	47%
• South of California	33%	17%
• Farm Belt	23%	18%
• North and Mountain	0%	5%
Enrollment Type		
• Former Foster Care	2%	3%
• Foster Care	94%	95%
• Kin-GAP	4%	2%
Number of Children	21,003	71,819

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

**Table 9 Characteristics of Foster Care Children by their Enrollment in Managed Care – Short Term Foster Care, 2001**

	Enrolled one or more quarters in Medi-Cal Managed Care	Never Enrolled in Medi-Cal Managed Care
Ethnicity:		
• Black	20%	14%
• Hispanic	32%	22%
• White	43%	59%
• Native American	0%	1%
• Other	5%	4%
Gender:		
• Female	49%	48%
• Male	51%	52%
Age :		
• 0 to 2	15%	23%
• 3 to 5	15%	13%
• 6 to 11	24%	21%
• 12 to 18	39%	36%
• 19+	7%	7%
Region		
• Bay Area	20%	10%
• Los Angeles	30%	43%
• South of California	33%	17%
• Farm Belt	16%	15%
• North and Mountain	0%	4%
Enrollment Type*		
• Former Foster Care	7%	5%
• Foster Care	97%	97%
• Kin-Gap	2%	1%
Number of Children	7,040	25,039

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

\*Numbers do not sum to 100 because it is possible for short term foster care children to be short term “foster care” and also enrolled in another program.

**Table 10 Top Diagnoses by Health Episode Type Foster Care Children**

Health Episode Type/Diagnoses	1999		2000	
	% of Visits	% of Exp.	% of Visits	% of Exp.
Well Visit				
• Medical examination/evaluation	16.06	14.08	16.11	14.03
• Other ear and sense organ disorders	10.74	9.15	10.17	8.81
• Other upper respiratory infections	8.69	9.82	8.63	9.80
• Other eye disorders	7.54	7.95	7.31	7.70
• Administrative/social admission	7.48	7.43	8.11	7.99
Mental Health				
• Other mental conditions	23.90	18.24	24.90	20.51
• Pre-adult disorders	9.14	6.82	8.98	7.24
• Unspecified Illness	8.32	15.35	7.96	12.36
• Mental retardation	5.04	20.91	4.51	18.56
• Medical examination/evaluation	3.29	<3.00	3.46	<3.00
• Anxiety, somatoform, dissociative, and	<3.00	2.76	<3.00	3.08
Substance Abuse				
• Substance-related mental disorders	38.59	48.54	41.14	51.36
• Unspecified Illness	8.89	7.89	7.75	6.62
• Alcohol-related mental disorders	5.94	7.22	4.83	6.12
• Medical examination/evaluation	5.07	2.79	5.23	2.81
• Other mental conditions	2.54	2.25	2.79	2.17
Acute Illness				
• Other upper respiratory infections	7.17	5.01	7.30	5.14
• Medical examination/evaluation	6.47	<3.00	6.35	<3.00
• Administrative/social admission	6.26	5.98	7.45	6.61
• Unspecified Illness	5.02	4.27	4.93	3.76
• Blindness and vision defects	4.47	3.15	4.51	3.03
• Liveborn	<3.00	3.27	<3.00	7.13
Chronic Illness				
• Medical examination/evaluation	5.54	<3.00	5.53	<3.00
• Unspecified Illness	5.07	4.26	4.93	3.60
• Other upper respiratory infections	4.77	2.56	4.90	2.54
• Rehabilitation care, fitting of prostheses, and	3.84	<3.00	3.58	<3.00
• Genitourinary symptoms and ill-defined	3.39	<3.00	3.12	<3.00
• Paralysis	<3.00	3.20	<3.00	2.65
• Pneumonia	<3.00	2.83	<3.00	2.81
• Asthma	<3.00	2.56	<3.00	2.45

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

**Table 11 Top Diagnoses by Health Episode Type CalWORKs Children**

Health Episode Type/Diagnoses	1999		2000	
	% of Visits	% of Exp.	% of Visits	% of Exp.
<b>Well Visit</b>				
• Medical examination/evaluation	27.70	26.34	27.30	25.80
• Other ear and sense organ disorders	18.80	15.64	18.64	15.44
• Other eye disorders	13.20	14.50	13.12	14.34
• Unspecified Illness	6.63	6.08	6.78	6.20
• Other infections, including parasitic	4.28	<3.00	4.32	<3.00
• Disorders of teeth and jaw	<3.00	7.75	<3.00	7.80
<b>Mental Health</b>				
• Other mental conditions	32.81	30.47	33.00	30.22
• Personal history of mental disorder, etc.	10.68	4.38	11.12	4.57
• Pre-adult disorders	9.74	14.49	10.11	14.94
• Unspecified Illness	7.39	6.65	7.28	6.51
• Medical examination/evaluation	6.31	<3.00	6.47	<3.00
• Anxiety, somatoform, dissociative, and	<3.00	7.18	<3.00	7.63
<b>Substance Abuse</b>				
• Substance-related mental disorders	40.94	47.66	36.68	45.01
• Unspecified Illness	10.15	8.02	11.43	8.97
• Alcohol-related mental disorders	10.08	13.71	12.96	16.05
• Medical examination/evaluation	4.83	2.40	5.30	2.38
• Other mental conditions	1.62	<3.00	1.04	<3.00
• Other upper respiratory infections	<3.00	1.53	<3.00	1.59
<b>Acute Illness</b>				
• Other upper respiratory infections	8.07	5.40	8.62	5.83
• Administrative/social admission	5.87	4.65	6.24	4.94
• Medical examination/evaluation	5.56	<3.00	5.46	<3.00
• Unspecified Illness	3.99	<3.00	3.83	<3.00
• Otitis media and related conditions	3.55	<3.00	3.86	<3.00
• Appendicitis and other appendiceal conditions	<3.00	3.58	<3.00	2.85
• Disorders of teeth and jaw	<3.00	3.40	<3.00	3.12
• Liveborn	<3.00	2.89	<3.00	3.35
<b>Chronic Illness</b>				
• Rehabilitation care, fitting of prostheses, and	9.04	3.21	8.71	2.55
• Medical examination/evaluation	7.21	<3.00	7.02	<3.00
• Personal history of mental disorder, etc.	5.65	<3.00	5.53	<3.00
• Other upper respiratory infections	5.33	3.88	5.99	4.42
• Unspecified Illness	4.65	3.04	4.56	2.75
• Disorders of teeth and jaw	<3.00	2.78	<3.00	2.66
• Pneumonia	<3.00	2.54	<3.00	3.02

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

**Table 12 Characteristics of Health Episodes**

	<b>Overall</b>	<b>Well-Child Visits</b>	<b>Mental Health</b>	<b>Substance Abuse</b>	<b>Acute Illness</b>	<b>Chronic Illness</b>
# of Person-Episodes	2,252,195	1,006,297	47,277	2,937	412,844	782,840
Share of Episodes	100.0%	44.7%	2.1%	0.1%	18.3%	34.8%
Avg. Medi-Cal Payment	\$403.67	\$18.94	\$898.54	\$916.50	\$244.83	\$950.19
Share of Payments	100.00%	2.10%	4.67%	0.30%	11.12%	81.82%
Avg. Length (Days)	53.03	2.49	152.38	138.37	7.35	135.76
Payment / Day	\$7.61	\$7.60	\$5.90	\$6.62	\$33.32	\$7.00
Visits per Episode		1.52	26.22	31.75	4.90	19.48

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

**Table 13 Health Episodes of Foster Care Children in Fee-For-Service 1999 Cohort\***

	<b>% of FC Children in Cohort</b>	<b>No Health Episode</b>	<b>Well Child Visit</b>	<b>Mental Health</b>	<b>Substance Abuse</b>	<b>Acute Illness</b>	<b>Chronic Illness</b>
All	100%	36%	8%	6%	1%	6%	43%
By Age							
• <1	5%	26%	5%	2%	0%	5%	62%
• 1 to 5	25%	35%	8%	5%	0%	7%	44%
• 6 to 10	29%	37%	9%	7%	0%	6%	41%
• 11 to 15	29%	36%	8%	7%	1%	6%	42%
• 16+	13%	40%	5%	5%	2%	7%	41%
By Race							
• White	60%	36%	7%	6%	0%	6%	44%
• Hispanic	18%	36%	8%	5%	1%	7%	43%
• Black	20%	39%	9%	5%	1%	7%	40%
• Asian	0%	30%	6%	9%	1%	6%	47%
• Native American	1%	36%	5%	7%	0%	7%	44%
By Region							
• Bay Area	13%	42%	8%	4%	0%	7%	38%
• Los Angeles	50%	37%	7%	6%	0%	6%	43%
• Other South	11%	34%	10%	7%	1%	6%	42%
• Farm Belt	22%	34%	9%	5%	1%	7%	45%
• North and Mountain	4%	31%	4%	8%	0%	7%	50%
By Medi-Cal Model							
• COHS	2%	20%	27%	10%	1%	7%	35%
• GMC/Two Plan	88%	37%	8%	6%	1%	6%	43%
• Stanislaus <sup>†</sup>	1%	33%	9%	3%	0%	6%	48%
• Other	10%	33%	5%	7%	1%	7%	48%

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

\*Sample includes all foster care children who were enrolled in January 1999 and who were fee-for-service beneficiaries in at least one quarter during 1999.

<sup>†</sup>The two Medi-Cal managed care plans in Stanislaus were not operative in 1999 and 2000 and foster care and CalWORKs children had a choice of managed care or fee-for-service Medi-Cal.

**Table 14 Health Episodes of Foster Care Children in Fee-For-Service 2000 Cohort\***

	<b>% of FC Children in Cohort</b>	<b>No Health Episode</b>	<b>Well Child Visit</b>	<b>Mental Health</b>	<b>Substance Abuse</b>	<b>Acute Illness</b>	<b>Chronic Illness</b>
All	100%	37%	7%	5%	1%	6%	43%
By Age							
• <1	9%	30%	6%	2%	0%	6%	57%
• 1 to 5	24%	38%	9%	5%	0%	7%	41%
• 6 to 10	30%	38%	9%	6%	0%	6%	42%
• 11 to 15	30%	37%	7%	6%	1%	6%	42%
• 16+	7%	44%	4%	4%	2%	7%	38%
By Race							
• White	61%	37%	7%	6%	0%	6%	43%
• Hispanic	17%	36%	8%	4%	1%	7%	43%
• Black	19%	39%	8%	5%	1%	7%	40%
• Asian	0%	33%	7%	10%	1%	5%	45%
• Native American	1%	31%	4%	9%	1%	8%	47%
By Region							
• Bay Area	13%	41%	8%	3%	0%	7%	40%
• Los Angeles	49%	40%	7%	6%	0%	6%	41%
• Other South	12%	34%	9%	6%	1%	6%	44%
• Farm Belt	22%	33%	8%	5%	1%	6%	46%
• North and Mountain	4%	29%	3%	9%	0%	6%	52%
By Medi-Cal Model							
• COHS	2%	15%	24%	8%	1%	8%	44%
• GMC/Two Plan	88%	39%	7%	5%	1%	6%	42%
• Stanislaus <sup>†</sup>	1%	36%	9%	3%	0%	6%	46%
• Other	10%	30%	6%	7%	1%	7%	50%

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

\*Sample includes all foster care children who were enrolled in January 2000 and who were fee-for-service beneficiaries in at least one quarter during 2000.

<sup>†</sup>The two Medi-Cal managed care plans in Stanislaus were not operative in 1999 and 2000 and foster care and CalWORKs children had a choice of managed care or fee-for-service Medi-Cal.

**Table 15 Health Episodes of CalWORKs Children in Fee-For-Service 1999 Cohort\***

	<b>% of CW Children in Cohort</b>	<b>No Health Episode</b>	<b>Well Child Visit</b>	<b>Mental Health</b>	<b>Substance Abuse</b>	<b>Acute Illness</b>	<b>Chronic Illness</b>
All	100%	25%	26%	2%	0%	9%	38%
By Age							
• <1	6%	33%	8%	0%	0%	12%	47%
• 1 to 5	27%	29%	19%	1%	0%	11%	40%
• 6 to 10	37%	21%	32%	3%	0%	7%	38%
• 11 to 15	24%	25%	29%	3%	0%	8%	35%
• 16+	7%	31%	20%	2%	0%	11%	36%
By Race							
• White	31%	28%	17%	3%	0%	9%	43%
• Hispanic	42%	24%	28%	2%	0%	9%	38%
• Black	15%	24%	34%	3%	0%	8%	32%
• Asian	2%	40%	20%	1%	0%	7%	31%
• Native American	1%	32%	9%	2%	0%	11%	45%
By Region							
• Bay Area	7%	19%	33%	2%	0%	12%	34%
• Los Angeles	23%	14%	42%	2%	0%	7%	36%
• Other South	18%	27%	27%	3%	0%	8%	35%
• Farm Belt	41%	29%	21%	2%	0%	9%	39%
• North and Mountain	11%	35%	6%	3%	0%	10%	47%
By Medi-Cal Model							
• COHS	4%	24%	35%	3%	0%	8%	30%
• GMC/Two Plan	64%	20%	34%	2%	0%	8%	36%
• Stanislaus <sup>†</sup>	1%	18%	37%	1%	0%	9%	34%
• Other	30%	36%	7%	2%	0%	9%	45%

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

\*Sample includes all CalWORKs children who were enrolled in January 1999 and who were fee-for-service beneficiaries in at least one quarter during 1999.

<sup>†</sup>The two Medi-Cal managed care plans in Stanislaus were not operative in 1999 and 2000 and foster care and CalWORKs children had a choice of managed care or fee-for-service Medi-Cal.

**Table 16 Health Episodes of CalWORKs Children in Fee-For-Service 2000 Cohort\***

	<b>% of CW Children in Cohort</b>	<b>No Health Episode</b>	<b>Well Child Visit</b>	<b>Mental Health</b>	<b>Substance Abuse</b>	<b>Acute Illness</b>	<b>Chronic Illness</b>
All	100%	22%	26%	2%	0%	9%	40%
By Age							
• <1	10%	32%	7%	0%	0%	13%	48%
• 1 to 5	29%	24%	24%	2%	0%	11%	40%
• 6 to 10	35%	18%	32%	3%	0%	7%	40%
• 11 to 15	22%	23%	30%	3%	0%	9%	36%
• 16+	4%	27%	18%	1%	0%	13%	40%
By Race							
• White	29%	26%	18%	3%	0%	9%	45%
• Hispanic	44%	20%	28%	2%	0%	10%	40%
• Black	15%	22%	33%	2%	0%	9%	33%
• Asian	2%	39%	21%	1%	0%	7%	31%
• Native American	1%	30%	9%	2%	0%	11%	47%
By Region							
• Bay Area	8%	16%	29%	2%	0%	15%	38%
• Los Angeles	25%	16%	40%	1%	0%	8%	36%
• Other South	17%	23%	31%	3%	0%	8%	36%
• Farm Belt	40%	25%	21%	2%	0%	10%	42%
• North and Mountain	10%	34%	5%	3%	0%	10%	48%
By Medi-Cal Model							
• COHS	3%	4%	48%	4%	0%	11%	33%
• GMC/Two Plan	65%	17%	34%	2%	0%	9%	38%
• Stanislaus <sup>†</sup>	2%	21%	26%	1%	0%	10%	42%
• Other	30%	36%	7%	2%	0%	10%	45%

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

\*Sample includes all CalWORKs children who were enrolled in January 2000 and who were fee-for-service beneficiaries in at least one quarter during 2000.

<sup>†</sup>The two Medi-Cal managed care plans in Stanislaus were not operative in 1999 and 2000 and foster care and CalWORKs children had a choice of managed care or fee-for-service Medi-Cal.

**Table 17 Logistic Model of Health Episode Type by Demographics and County Characteristics**

<b>Characteristics</b>	<b>Well-Child Visit</b>	<b>Mental Health</b>	<b>Substance Abuse</b>	<b>Acute Illness</b>	<b>Chronic Illness</b>
Foster Care	0.205*	2.349*	10.391*	0.716*	1.222*
Age: 0 vs. 16+	0.368*	0.24*	0.004*	1.024*	1.61*
Age: 01-05 vs. 16+	1.203*	0.921*	0.003*	0.907*	1.125*
Age: 06-10 vs. 16+	1.821*	1.591*	0.008*	0.595*	1.105*
Age: 11-15 vs. 16+	1.687*	1.573*	0.55*	0.721*	0.962*
Race: Asian vs. White	1.608*	0.522*	0.523*	0.851*	0.587*
Race: Black vs. White	1.475*	0.831*	0.898*	1.064*	0.728*
Race: Hispanic vs. White	1.363*	0.646*	1.57*	1.134*	0.897*
Race: Nat American vs. White	0.714*	1.019	1.691*	1.307*	1.03*
Race: Other vs. White	2.104*	0.52*	0.515*	0.833*	0.785*
Sex: F vs. M	1.097*	0.604*	0.42*	0.997	1.019*
COHS vs. Stanislaus	1.331*	3.083*	1.701*	1.012	0.772*
GMC/Two Plan vs. Stanislaus <sup>†</sup>	1.004	1.839*	1.753*	0.909*	0.968*
Other vs. Stanislaus <sup>†</sup>	0.175*	1.672*	1.971*	0.988	1.304*

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

Reported numbers are odds ratios. A ‘\*’ indicates that the odds ratio is significant at the 95% level.

<sup>†</sup>The two Medi-Cal managed care plans in Stanislaus were not operative in 1999 and 2000 and foster care and CalWORKs children had a choice of managed care or fee-for-service Medi-Cal.

**Table 18 Characteristics of Health Episodes and Types of Utilization**

	<b>Overall</b>	<b>Well Child Visit</b>	<b>Mental Health</b>	<b>Substance Abuse</b>	<b>Acute Illness</b>	<b>Chronic Illness</b>	<b>Labor &amp; Delivery</b>
Number of Episodes	3,601,626	1,559,018	70,882	4,839	676,154	1,225,907	64,826
Share of Episodes with							
Emergency Dept. Visit	11.06%	1.25%	12.68%	34.53%	15.69%	19.94%	27.06%
Ambulatory Care Sensitive Condition	0.44%	0.00%	0.09%	0.02%	0.50%	0.97%	0.87%
Prescription Drug	29.51%	9.36%	35.88%	52.82%	37.57%	49.07%	51.29%
Specialty Visit	4.25%	0.35%	6.30%	8.31%	4.06%	8.44%	18.02%

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

**Table 19 Health Episodes of Foster Care Children in Fee-For-Service  
Long Term Foster Care, 2001**

	<b>Former Foster Care</b>	<b>Foster Care</b>	<b>Kin-Gap</b>
All Health Episodes			
At least one	38%	57%	59%
More than one	4%	8%	12%
Well-Being Visit			
At least one	7%	16%	22%
More than one	1%	2%	5%
Mental Health			
At least one	1%	4%	2%
More than one	0%	0%	0%
Substance Abuse			
At least one	1%	1%	0%
More than one	0%	0%	0%
Acute Illness			
At least one	17%	18%	21%
More than one	2%	3%	4%
Chronic Illness			
At least one	14%	32%	28%
More than one	1%	3%	3%
Child Delivery			
At least one	6%	1%	0%
More than one	0%	0%	0%
Emergency Visits			
At least one	17%	13%	13%
More than one	2%	1%	1%
Pediatric ACSC			
At least one	0%	0%	0%
More than one	0%	0%	0%
Specialty visit			
At least one	5%	6%	4%
More than one	0%	0%	0%
Prescription Drug			
At least one	21%	35%	31%
More than one	4%	8%	8%
Number of children	2,396	68,150	1,273

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

**Table 20 Health Episodes of Foster Care Children in Fee-For-Service Short Term Foster Care, 2001**

	Former Foster Care	Foster Care	Kin-Gap
All Health Episodes			
At least one	36%	42%	50%
More than one	4%	2%	15%
Well-Being Visit			
At least one	8%	10%	16%
More than one	1%	1%	6%
Mental Health			
At least one	1%	2%	2%
More than one	0%	0%	0%
Substance Abuse			
At least one	0%	1%	0%
More than one	0%	0%	0%
Acute Illness			
At least one	15%	14%	20%
More than one	2%	1%	4%
Chronic Illness			
At least one	13%	16%	24%
More than one	1%	0%	4%
Child Delivery			
At least one	4%	2%	0%
More than one	0%	0%	0%
Emergency Visits			
At least one	13%	9%	13%
More than one	1%	0%	1%
Pediatric ACSC			
At least one	0%	0%	0%
More than one	0%	0%	0%
Specialty visit			
At least one	3%	3%	4%
More than one	0%	0%	0%
Prescription Drug			
At least one	19%	22%	30%
More than one	4%	2%	8%
Number of children	1,297	24,403	220

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

**Table 21 Average Expenditures by Foster Care Children in Fee-For-Service 1999 Cohort\***

	<b>All Health Episodes</b>	<b>Well Child Visit</b>	<b>Mental Health</b>	<b>Substance Abuse</b>	<b>Acute Illness</b>	<b>Chronic Illness</b>
All	\$426	\$22	\$581	\$375	\$176	\$517
By Age						
• <1	\$672	\$23	\$1,019	.	\$443	\$734
• 1 to 5	\$405	\$23	\$543	\$79	\$170	\$498
• 6 to 10	\$343	\$21	\$472	\$194	\$144	\$423
• 11 to 15	\$434	\$21	\$633	\$401	\$149	\$522
• 16+	\$535	\$22	\$783	\$353	\$226	\$633
By Race						
• White	\$410	\$22	\$483	\$389	\$159	\$499
• Hispanic	\$424	\$22	\$824	\$328	\$176	\$503
• Black	\$419	\$22	\$658	\$388	\$203	\$514
• Asian	\$600	\$19	\$1,089	\$576	\$138	\$647
• Native American	\$610	\$21	\$612	\$1,075	\$271	\$730
By Region						
• Bay Area	\$411	\$21	\$539	\$287	\$201	\$526
• Los Angeles	\$433	\$23	\$609	\$359	\$172	\$512
• Other South	\$427	\$21	\$534	\$381	\$201	\$538
• Farm Belt	\$399	\$21	\$540	\$399	\$155	\$492
• North and Mountain	\$542	\$20	\$605	\$527	\$169	\$625
By Medi-Cal Model						
• COHS	\$457	\$19	\$345	\$274	\$194	\$881
• GMC/Two Plan	\$422	\$22	\$587	\$378	\$174	\$510
• Stanislaus <sup>†</sup>	\$284	\$20	\$444	\$172	\$111	\$349
• Other	\$467	\$21	\$597	\$384	\$186	\$540

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

\*Sample includes all foster care children who were enrolled in January 1999 and who were fee-for-service beneficiaries in at least one quarter during 1999.

<sup>†</sup>The two Medi-Cal managed care plans in Stanislaus were not operative in 1999 and 2000 and foster care and CalWORKs children had a choice of managed care or fee-for-service Medi-Cal.

**Table 22 Average Expenditures by Foster Care Children in Fee-For-Service 2000 Cohort\***

	<b>All Health Episodes</b>	<b>Well Child Visit</b>	<b>Mental Health</b>	<b>Substance Abuse</b>	<b>Acute Illness</b>	<b>Chronic Illness</b>
All	\$468	\$22	\$592	\$418	\$187	\$573
By Age						
• <1	\$834	\$24	\$757	\$419	\$309	\$974
• 1 to 5	\$400	\$23	\$516	\$68	\$155	\$505
• 6 to 10	\$354	\$22	\$479	\$300	\$140	\$434
• 11 to 15	\$469	\$22	\$664	\$424	\$192	\$555
• 16+	\$670	\$24	\$1,052	\$410	\$298	\$788
By Race						
• White	\$449	\$23	\$493	\$425	\$179	\$551
• Hispanic	\$491	\$22	\$944	\$389	\$209	\$583
• Black	\$449	\$22	\$565	\$456	\$187	\$565
• Asian	\$798	\$21	\$1,227	\$527	\$267	\$885
• Native American	\$525	\$21	\$656	\$615	\$194	\$599
By Region						
• Bay Area	\$436	\$21	\$662	\$277	\$199	\$540
• Los Angeles	\$486	\$23	\$646	\$441	\$177	\$590
• Other South	\$456	\$21	\$443	\$429	\$226	\$579
• Farm Belt	\$444	\$23	\$505	\$434	\$186	\$548
• North and Mountain	\$549	\$22	\$680	\$321	\$156	\$609
By Medi-Cal Model						
• COHS	\$509	\$19	\$359	\$299	\$461	\$815
• GMC/Two Plan	\$462	\$23	\$585	\$432	\$176	\$567
• Stanislaus <sup>†</sup>	\$480	\$22	\$441	\$271	\$162	\$618
• Other	\$505	\$22	\$701	\$339	\$227	\$574

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

\*Sample includes all foster care children who were enrolled in January 2000 and who were fee-for-service beneficiaries in at least one quarter during 2000.

<sup>†</sup>The two Medi-Cal managed care plans in Stanislaus were not operative in 1999 and 2000 and foster care and CalWORKs children had a choice of managed care or fee-for-service Medi-Cal.

**Table 23 Average Expenditures by CalWORKs Children in Fee-For-Service 1999 Cohort\***

	<b>All Health Episodes</b>	<b>Well Child Visit</b>	<b>Mental Health</b>	<b>Substance Abuse</b>	<b>Acute Illness</b>	<b>Chronic Illness</b>
All	\$194	\$18	\$221	\$294	\$219	\$305
By Age						
• <1	\$565	\$23	\$578	.	\$432	\$687
• 1 to 5	\$195	\$20	\$240	\$251	\$206	\$275
• 6 to 10	\$126	\$17	\$222	\$62	\$154	\$204
• 11 to 15	\$173	\$17	\$200	\$298	\$198	\$296
• 16+	\$405	\$18	\$253	\$289	\$351	\$643
By Race						
• White	\$221	\$18	\$245	\$308	\$202	\$303
• Hispanic	\$171	\$18	\$206	\$264	\$211	\$271
• Black	\$166	\$17	\$203	\$311	\$276	\$293
• Asian	\$225	\$18	\$237	\$237	\$192	\$369
• Native American	\$315	\$19	\$351	\$497	\$199	\$404
By Region						
• Bay Area	\$206	\$16	\$187	\$344	\$257	\$372
• Los Angeles	\$168	\$16	\$221	\$344	\$294	\$316
• Other South	\$181	\$18	\$241	\$319	\$216	\$291
• Farm Belt	\$189	\$20	\$152	\$257	\$187	\$280
• North and Mountain	\$298	\$20	\$367	\$277	\$195	\$350
By Medi-Cal Model						
• COHS	\$174	\$17	\$149	\$300	\$236	\$340
• GMC/Two Plan	\$171	\$18	\$188	\$313	\$243	\$298
• Stanislaus <sup>†</sup>	\$166	\$16	\$92	.	\$194	\$325
• Other	\$258	\$21	\$325	\$273	\$172	\$311

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

\*Sample includes all CalWORKs children who were enrolled in January 1999 and who were fee-for-service beneficiaries in at least one quarter during 1999.

<sup>†</sup>The two Medi-Cal managed care plans in Stanislaus were not operative in 1999 and 2000 and foster care and CalWORKs children had a choice of managed care or fee-for-service Medi-Cal.

**Table 24 Average Expenditures by CalWORKs Children in Fee-For-Service 2000 Cohort\***

	<b>All Health Episodes</b>	<b>Well Child Visit</b>	<b>Mental Health</b>	<b>Substance Abuse</b>	<b>Acute Illness</b>	<b>Chronic Illness</b>
All	\$206	\$19	\$224	\$354	\$215	\$326
By Age						
• <1	\$544	\$24	\$316	\$88	\$331	\$683
• 1 to 5	\$166	\$19	\$229	\$89	\$176	\$249
• 6 to 10	\$130	\$18	\$216	\$212	\$158	\$209
• 11 to 15	\$199	\$18	\$224	\$350	\$224	\$342
• 16+	\$530	\$19	\$264	\$442	\$435	\$809
By Race						
• White	\$234	\$19	\$251	\$344	\$206	\$323
• Hispanic	\$181	\$18	\$191	\$338	\$206	\$286
• Black	\$184	\$18	\$216	\$364	\$252	\$324
• Asian	\$321	\$19	\$167	\$198	\$150	\$578
• Native American	\$312	\$19	\$474	\$605	\$214	\$380
By Region						
• Bay Area	\$208	\$17	\$213	\$234	\$218	\$349
• Los Angeles	\$180	\$17	\$266	\$465	\$276	\$337
• Other South	\$206	\$18	\$219	\$416	\$244	\$356
• Farm Belt	\$199	\$21	\$159	\$226	\$182	\$294
• North and Mountain	\$314	\$20	\$373	\$412	\$193	\$365
By Medi-Cal Model						
• COHS	\$197	\$18	\$155	\$306	\$289	\$433
• GMC/Two Plan	\$182	\$18	\$189	\$383	\$233	\$318
• Stanislaus <sup>†</sup>	\$163	\$16	\$132	\$185	\$184	\$252
• Other	\$278	\$21	\$323	\$327	\$173	\$337

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

\*Sample includes all CalWORKs children who were enrolled in January 2000 and who were fee-for-service beneficiaries in at least one quarter during 2000.

<sup>†</sup>The two Medi-Cal managed care plans in Stanislaus were not operative in 1999 and 2000 and foster care and CalWORKs children had a choice of managed care or fee-for-service Medi-Cal.

**Table 25 Foster Care Policy Changes**

<b>Policy Reform</b>	<b>Date effective</b>
Health Care Program for Children in Foster Care	January 1, 2000
Kinship Guardianship Assistance Payment (Kin-GAP) Program	January 1, 2000
Extended Medi-Cal Eligibility for Former Foster Care Children 18-20 Years	October 1, 2000

**Table 26 Foster Care Children per HCPCFC Public Health Nurses by County, 2002**

<b>County</b>	<b>Foster Care Children per Public Health Nurse</b>	<b>County</b>	<b>Foster Care Children per Public Health Nurse</b>
Del Norte	860	Santa Barbara	320
Kings	624	Yolo	320
Contra Costa	556	Monterey	309
San Francisco	556	Solano	275
Alameda	552	Santa Cruz	265
Sutter	539	Glenn	255
Kern	539	Placer	251
San Diego	486	Marin	238
Merced	478	El Dorado	226
Tuolumne	462	Yuba	223
San Benito	460	Nevada	220
Orange	450	Mendocino	214
Sonoma	441	Madera	212
Santa Clara	433	Colusa	208
Fresno	428	Trinity	204
Sacramento	421	Plumas	174
San Joaquin	408	Mariposa	143
Riverside	399	Inyo	136
Humboldt	395	Napa	136
Los Angeles	380	Amador	128
San Bernardino	371	Modoc	104
Lake	361	Mono	67
Stanislaus	354	Alpine	Not available
Siskiyou	350	Imperial	Not available
Butte	350	Sierra	
San Luis Obispo	345		
San Mateo	344		
Tulare	337		
Shasta	333		
Ventura	330		
Lassen	328		
Calaveras	326		
Tehama	325		

Sources: California Department of Health Services and Child Welfare Research Center, UC Berkeley, School of Social Welfare, Child Welfare Services Case Management System (CWS/CMS) Reports.

**Table 27 Federal Title XIX Matching Funds for HCPCFC per Foster Care Child by County, 2002**

<b>County</b>	<b>Expenditures per Foster Care Child</b>	<b>County</b>	<b>Expenditures per Foster Care Child</b>
Imperial	\$0.00	Placer	\$148.32
Yuba	\$0.00	Solano	\$148.85
Del Norte	\$22.72	San Luis Obispo	\$155.74
Calaveras	\$24.42	Colusa	\$163.36
Sacramento	\$53.15	Stanislaus	\$167.39
Sutter	\$61.84	Mendocino	\$188.82
Lassen	\$66.90	Inyo	\$193.00
Riverside	\$69.55	San Mateo	\$195.05
Kern	\$70.73	Madera	\$197.32
San Joaquin	\$75.74	Glenn	\$197.64
Kings	\$79.42	Santa Barbara	\$204.14
Lake	\$84.64	El Dorado	\$204.89
Tuolumne	\$92.59	Nevada	\$206.04
Fresno	\$95.00	Marin	\$216.45
Orange	\$95.36	Monterey	\$222.03
San Francisco	\$99.34	Santa Cruz	\$237.83
Santa Clara	\$99.50	Napa	\$246.35
San Bernardino	\$106.83	Plumas	\$254.61
San Diego	\$108.72	Amador	\$256.66
Tehama	\$109.65	Trinity	\$289.59
Merced	\$110.16	Mono	\$296.92
Sonoma	\$113.63	Mariposa	\$312.53
Alameda	\$114.26	Modoc	Not available
Siskiyou	\$115.02	Alpine	Not available
Ventura	\$120.90	Sierra	Not available
Tulare	\$121.99		
Humboldt	\$122.13		
Butte	\$128.39		
Yolo	\$129.31		
San Benito	\$130.99		
Shasta	\$134.00		
Los Angeles	\$135.41		
Contra Costa	\$136.72		

Sources: California Department of Health Services and Child Welfare Research Center, UC Berkeley, School of Social Welfare, Child Welfare Services Case Management System (CWS/CMS) Reports.

**Table 28 Impact of the Health Care Program for Children in Foster Care: Long Term Foster Care Children, 2001**

<b>Health Episode</b>	<b>Sample</b>	<b>Between 330 and 500 Foster Care Children per Public Nurse</b>	<b>Fewer than 330 Foster Care Children per Public Nurse</b>
Any Health Episode	All	-0.02 **	-0.10 *
Emergency Visit	Chronic	0.00	-0.01
Emergency Visit	Non Chronic	0.00	-0.02
1 Mental Health Episode	All	0.00	-0.01
Well-Being Visit	Non Chronic	-0.03	0.00
Specialty Visit	Chronic	0.00	0.00
Chronic	All	0.01 *	0.00

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

Reported numbers are mean differences in probabilities with respect to the outcomes in counties with more than 500 FC Children per Public Nurse.

All regressions control for individual and county characteristics. For individual characteristics, we include ethnicity, age, county, and number of quarters previously enrolled in foster care or CalWORKS for individuals. For county characteristics, we include regional fix effects, county prevalence rates and county share of foster care children in group homes. A “\*” indicates that the mean difference is significant at the 90% confidence level, and a “\*\*\*” indicates the effect is significant at the 95% level.

**Table 29 Impact of Health Care Program for Children in Foster Care:  
Short Term Foster Care Children, 2001**

<b>Health Episode</b>	<b>Sample</b>	<b>Between 330 and 500 Foster Care Children per Public Nurse</b>	<b>Fewer than 330 Foster Care Children per Public Nurse</b>
Any Health Episode	All	0.00	-0.04 **
Emergency Visit	Chronic	-0.00	-0.01
Emergency Visit	Non Chronic	-0.00	-0.01
1 Mental Health Episode	All	0.00	0.00
Well-Being Visit	Non Chronic	-0.03 **	-0.05 **
Specialty Visit	Chronic	0.05 **	0.10 **
Chronic	All	-0.02 **	-0.03 **

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

Reported numbers are mean differences in probabilities with respect to the outcomes in counties with more than 500 FC Children per Public Nurse.

All regressions control for individual and county characteristics. For individual characteristics, we include ethnicity, age, county, and number of quarters previously enrolled in foster care or CalWORKS for individuals. For county characteristics, we include regional fix effects, county prevalence rates and county share of foster care children in group homes. A “\*” indicates that the mean difference is significant at the 90% confidence level, and a “\*\*\*” indicates the effect is significant at the 95% level.

**Table 30 Comparing the Probabilities of Health Episodes of Foster Care and Kin-GAP Children, 2001**

<b>Health Episode</b>	<b>Sample</b>	<b>Long Term Enrollees</b>	<b>Short Term Enrollees</b>
Any Health Episode	All	-0.06 **	-0.25 **
Emergency Visit	Chronic	-0.02 **	0.04
Emergency Visit	Non Chronic	-0.02 **	-0.07
1 Mental Health Episode	All	0.02	-0.01 **
>1 Mental Health Episode	All	0.00	0.00
Well-Being Visit	Non Chronic	-0.09 **	-0.18 **
Specialty Visit	Chronic	0.00	-0.02 **

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

Reported numbers are mean differences in probabilities for the two groups. All regressions control for ethnicity, age, county, and number of quarters previously enrolled in foster care or CalWORKS. A ‘\*’ indicates that the mean difference is significant at the 90% confidence level, and a ‘\*\*\*’ indicates the effect is significant at the 95% level.

**Table 31 Medi-Cal Enrollment for Foster Care Youths Age After their 18<sup>th</sup> Birthday**

<b>Year</b>	<b>Foster Care Children 18+ years</b>	<b>AFDC Foster Care</b>	<b>CSPF</b>	<b>Kin-GAP</b>	<b>EA Foster Care*</b>	<b>CalWORKs</b>	<b>Former Foster Care</b>	<b>Other Medi-Cal</b>	<b>Not Enrolled</b>
<i>Number of Children</i>									
1999	5,600	2,573	92	0	65	144	0	1,290	1,436
2000	5,735	2,293	198	4	69	162	140	1,437	1,432
2001	5,400	2,190	105	4	52	140	792	1,230	887
<i>Percent of Children</i>									
1999	100%	46%	2%	0%	1%	3%	0%	23%	26%
2000	100%	40%	4%	0%	1%	3%	2%	25%	25%
2001	100%	41%	2%	0%	1%	3%	15%	23%	16%
<i>Change, 1999 to 2001</i>									
		-5.3%	0.3%	0.1%	-0.2%	0.0%	14.7%	-0.2%	-9.3%

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

\*Emergency Assistance (EA) Program, which covers juvenile probation cases placed in foster care.

**Table 32 Medi-Cal Enrollment by Age, 2001**

	<b>17 years old</b>	<b>18 years old</b>	<b>19 years old</b>	<b>20 years old</b>	<b>21 years old</b>	<b>All</b>
AFDC Foster Care	5,538	1,995	10	1	0	7,544
CSPF	521	349	304	141	19	1,333
EA Foster Care *	192	55	9	2	0	258
Former Foster Care	1	1,009	1,333	1,052	21	3,416
Kin-GAP	90	13	0	0	0	103
CalWORKs	40,353	16,692	11,393	12,639	5,994	87,071
Other Medi-Cal	20,093	36,993	32,526	20,938	5,216	115,766

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

\*Emergency Assistance (EA) Program, which covers juvenile probation cases placed in foster care.

**Table 33 Comparing the Probabilities of Health Episodes of Former Foster Care Children Before and After Medi-Cal Extension**

<b>Health Episode</b>	<b>Sample</b>	<b>Probability Differential Former Foster Care vs. Foster Care</b>	<b>Impact of Medi-Cal Extension on the Probability Differential</b>
Any Health Episode	All	0.09 **	0.00
Emergency Visit	Chronic	0.05 **	-0.08 **
Emergency Visit	Non Chronic	0.05 **	-0.02
1 Mental Health Episode	All	0.00	0.02 *
Well-Being Visit	Non Chronic	-0.03	0.05 *
Specialty Visit	Chronic	0.00	0.00

Source: Medi-Cal Eligibility Data System (MEDS) and Medi-Cal paid claims.

Reported numbers are mean differences in probabilities for the two groups. All regressions control for ethnicity, age, county, and number of quarters previously enrolled in foster care or CalWORKS. A “\*” indicates that the mean difference is significant at the 90% confidence level, and a “\*\*” indicates the effect is significant at the 95% level.

**Table A1 Placement Characteristics of Foster Care Children, January 2001  
Welfare Cases by Ethnicity**

	Overall	Bay Area	North & Mountain	Farm Belt	Los Angeles	Other South
<b>White</b>						
• FF Agency	22%	22%	30%	29%	20%	11%
• Foster Family	19%	22%	26%	17%	13%	22%
• Group Home	10%	13%	8%	9%	8%	14%
• Kinship	32%	29%	19%	29%	38%	34%
• Other	17%	15%	17%	15%	20%	19%
<b>Black</b>						
• FF Agency	16%	19%	27%	25%	14%	9%
• Foster Family	14%	15%	25%	15%	12%	23%
• Group Home	7%	9%	4%	6%	6%	9%
• Kinship	47%	45%	24%	33%	52%	39%
• Other	16%	13%	19%	22%	15%	20%
<b>Hispanic</b>						
• FF Agency	21%	22%	30%	21%	24%	11%
• Foster Family	15%	19%	32%	19%	9%	22%
• Group Home	6%	7%	3%	4%	5%	9%
• Kinship	41%	39%	23%	38%	44%	42%
• Other	17%	13%	12%	17%	19%	16%
<b>Asian/Other</b>						
• FF Agency	25%	25%	53%	38%	25%	15%
• Foster Family	17%	21%	13%	17%	11%	22%
• Group Home	7%	7%	7%	6%	6%	10%
• Kinship	32%	31%	27%	22%	37%	32%
• Other	19%	15%	0%	17%	20%	21%
<b>Native American</b>						
• FF Agency	19%	27%	13%	24%	26%	15%
• Foster Family	20%	26%	30%	18%	8%	17%
• Group Home	8%	8%	7%	4%	11%	10%
• Kinship	39%	31%	40%	34%	42%	42%
• Other	14%	9%	10%	20%	13%	16%
<b>Missing</b>						
• FF Agency	10%	18%	0%	13%	0%	6%
• Foster Family	25%	27%	13%	22%	0%	33%
• Group Home	10%	18%	0%	13%	0%	6%
• Kinship	15%	27%	0%	13%	0%	17%
• Other	40%	9%	88%	39%	0%	39%

Source: Child Welfare Research Center, UC Berkeley, School of Social Welfare, Child Welfare Services Case Management System (CWS/CMS) Reports.

**Table A2 Placement Characteristics of Foster Care Children, January 2001  
Welfare Cases by Age**

	<b>Overall</b>	<b>Bay Area</b>	<b>North &amp; Mountain</b>	<b>Farm Belt</b>	<b>Los Angeles</b>	<b>Other South</b>
<b>&lt; 1 year</b>						
• FF Agency	21%	16%	12%	22%	34%	7%
• Foster Family	35%	51%	60%	44%	16%	49%
• Group Home	1%	2%	0%	1%	1%	2%
• Kinship	34%	26%	19%	30%	42%	36%
• Other	8%	6%	9%	4%	7%	6%
<b>1-5 years</b>						
• FF Agency	19%	20%	20%	25%	23%	10%
• Foster Family	17%	20%	34%	23%	10%	27%
• Group Home	1%	1%	0%	1%	1%	1%
• Kinship	43%	42%	34%	41%	48%	47%
• Other	19%	17%	11%	11%	19%	15%
<b>6-10 years</b>						
• FF Agency	20%	23%	30%	27%	18%	12%
• Foster Family	14%	15%	26%	14%	10%	20%
• Group Home	4%	5%	4%	4%	3%	8%
• Kinship	44%	44%	23%	35%	50%	41%
• Other	18%	13%	18%	20%	19%	19%
<b>11-15 years</b>						
• FF Agency	19%	21%	31%	26%	16%	12%
• Foster Family	14%	15%	22%	14%	11%	17%
• Group Home	13%	15%	12%	12%	10%	19%
• Kinship	39%	38%	17%	28%	46%	32%
• Other	14%	12%	18%	20%	16%	20%
<b>16+ years</b>						
• FF Agency	17%	15%	32%	26%	15%	9%
• Foster Family	17%	19%	23%	16%	14%	19%
• Group Home	17%	20%	13%	12%	14%	23%
• Kinship	34%	32%	13%	25%	40%	25%
• Other	14%	15%	19%	21%	16%	23%
<b>Missing</b>						
• FF Agency	40%	0%	0%	40%	0%	0%
• Foster Family	14%	0%	0%	14%	0%	0%
• Group Home	0%	0%	0%	0%	0%	0%
• Kinship	38%	0%	0%	38%	0%	0%
• Other	7%	0%	0%	7%	0%	0%

Source: Child Welfare Research Center, UC Berkeley, School of Social Welfare, Child Welfare Services Case Management System (CWS/CMS) Reports.

**Table A3 Pediatric Ambulatory Care Sensitive Conditions**

<b>Condition and ICD-9-CM Code(s)</b>	<b>Qualifiers</b>
Congenital syphilis (090)	Secondary diagnosis for newborns only
Immunization preventable conditions (033, 037, 045, 320.0, 390, 391)	Hemophilus meningitis (320.0) for age 1–5 only
Grand mal status and other epileptic convulsions (345)	
Convulsions “A” (780.3)	Age 0–5 years
Convulsions “B” (780.3)	Age >5 years
Severe ENT infections (382, 462, 463, 465, 472.1)	Exclude otitis media cases (382) with myringotomy with insertion of tube (20.01)
Bacterial pneumonia (481, 482.2, 482.3, 482.9, 483, 485, 486)	Exclude case with secondary diagnosis of sickle cell (282.6) and patients <2 mo
Asthma (493)	
Tuberculosis (011–018)	
Cellulitis (681, 682, 683, 686)	Exclude cases with a surgical procedure (01-86.99)
Diabetes “A” (250.1, 250.2, 250.3)	
Diabetes “B” (250.8, 250.9)	
Diabetes “C” (250.0)	
Hypoglycemia (251.2)	
Gastroenteritis (558.9)	
Kidney/urinary infection (590, 599.0, 599.9)	
Dehydration-volume depletion (276.5)	
Iron deficiency anemia (280.1, 280.8, 280.9)	Ages 0–5 years only
Nutritional deficiencies (260, 261, 262, 268.0, 268.1)	
Failure to thrive (783.4)	Age <1 years

Source: Gadowski A, Jenkins P and Nichols M. (1998). “Impact of a Medicaid Primary Care Provider and Preventive Care on Pediatric Hospitalization,” *Pediatrics*, 101:3.

**Table A4 List of Medical Specialties**

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**Specialty**

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Anesthesiology  
Cardiology  
Dermatology  
Endocrinology  
Gastroenterology  
Hematology  
Immunology & Allergy  
Infectious Diseases  
Nephrology  
Neurology & Neurosurgery  
Oncology  
Ophthalmology  
Orthopedics  
Otolaryngology  
Pulmonary  
Rheumatology  
Urology

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Source: Johns Hopkins Children's Center.