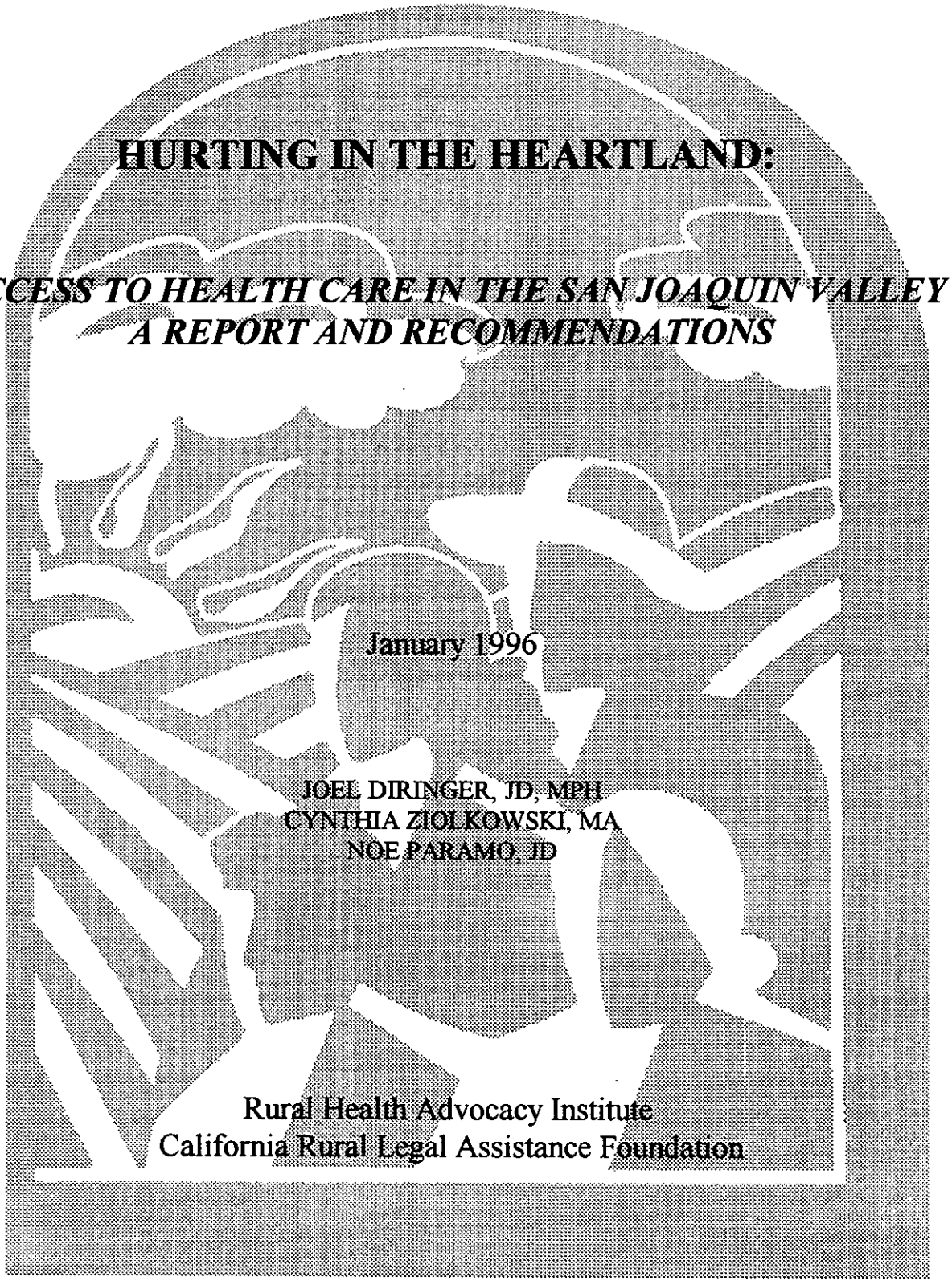
HURTING IN THE HEARTLAND:

ACCESS TO HEALTH CARE IN THE SAN JOAQUIN VALLEY
A REPORT AND RECOMMENDATIONS



January 1996

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The Rural Health Advocacy Institute is a joint project of California Rural Legal Assistance (CRLA) and the CRLA Foundation. The principal goals of the Rural Health Advocacy Institute are to:

- develop, maintain and disseminate information on the health of California's rural and agricultural communities;
- identify and train community leaders in advocating for healthier communities through healthier environments and working conditions and greater access to preventive programs and primary health care;
- advocate on behalf of rural and agricultural communities to ensure healthier lives, environment and working conditions.

Joel Diringer, JD, MPH , was director of the Rural Health Advocacy Institute. Cynthia Ziolkowski, MA was a research associate at the Institute and Noe Paramo, JD, is a community outreach worker in the Modesto office of CRLA.

Mr. Diringer is currently a Senior Program Officer with The *California* Endowment (818-703-3311, ext. 282).

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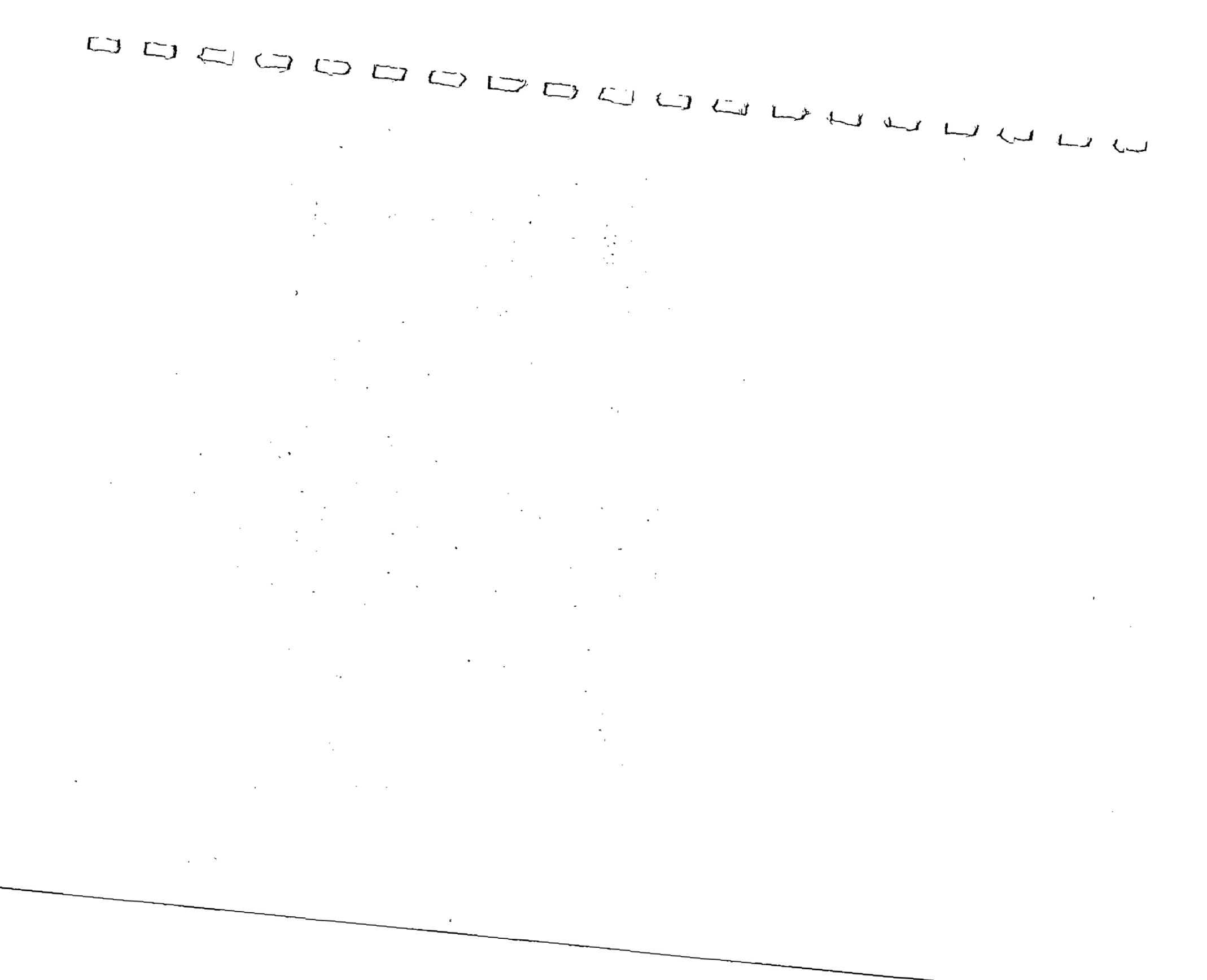
This report was made possible through a generous grant from Blue Cross of California in advancement of its mission to assist and support organizations which are engaged in helping all Californians gain access to health care. With the changes in the system, Blue Cross is applying its problem solving capacity in partnerships with organizations such as the Rural Health Advocacy Institute to reach our mutual goal - to give Californians the opportunity to lead healthier lives.

Invaluable assistance was obtained from dozens of persons who participated in focus groups and advisory committees, and who provided input on technical, policy, and community issues. Special thanks goes to Geraldine Dallek, formerly of the Center for Health Care Rights, Dr. Andrew Bindman and Dennis Keane of the UCSF Primary Care Research Center, Laurie True and Marion Standish of Food Policy Advocates, Betty Wetters of the Merced County Health Department, Eliezer Risco of United Health Centers of the San Joaquin Valley, Jane Walsh of the Western Consortium for Public Health, Matt Freebe, student intern from California Polytechnic State University, staff at the Hospital Council Foundation of Northern and Central California, and Christine Awtrey of the San Joaquin County Council of Governments. The staff of Department of Health Services were also extremely helpful in obtaining relevant data.

We dedicate this report to those persons who are doing the backbreaking work of planting, tending, harvesting, and packaging our food, but who are left out of our elaborate system of health care. Farmworkers are the backbone of our agricultural wealth, yet they remain hurting in our heartland of abundance. This report identifies the issues confronting farmworkers and the rural poor, and provides solutions to their isolation.



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EXECUTIVE SUMMARY

California's San Joaquin Valley is one of the richest agricultural areas in the world. Yet, the health of its residents who toil in its abundant fields is in a sad state. Farmworkers and the rural poor are confronted on a daily basis with a lack of medical providers, inadequate transportation, and a culturally insensitive health care system -- problems which undermine efforts to provide medical care to this population. This report documents the health of San Joaquin Valley communities, the barriers to care faced by the residents, and the challenges ahead to ensuring that the underserved and uninsured of the San Joaquin Valley gain equal access to health programs and services.

The material presented here is the result of a year long investigation of health conditions in the San Joaquin Valley by the Rural Health Advocacy Institute, a joint project of California Rural Legal Assistance (CRLA) and CRLA Foundation.

In this report's major parts we:

- describe our methodology for evaluating policy issues, analyzing community level data, conducting an inventory of health services and convening community focus groups.

- analyze several key impediments to health care, including 1) the underutilization and underfunding of preventive health programs, 2) the cultural, financial, bureaucratic, transportation, and knowledge barriers to care, and 3) the policy and structural changes confronting the delivery of health care to the poor and immigrant residents with a special focus on farmworkers and Southeast Asian refugees.

- present county level health indicators and compare the county health access findings with the Healthy People 2000 disease prevention and health promotion goals established by the federal government.

- rank the 61 San Joaquin Valley community zip-code clusters using a Health Access Index, and describe the demographic characteristics of these communities based on the quality of their access to care.

- provide recommendations for five community-based programs which would help San Joaquin Valley residents help themselves to obtain fuller participation in preventive health programs and, in the end, a healthier life.

METHODOLOGY

In an attempt to provide a comprehensive look at the communities in the eight counties of the San Joaquin Valley, this report combines quantitative community health data and qualitative information received from local focus groups and key informant interviews on health access issues.

There are two major parts to the analysis. The first part is policy analysis of the major impediments to health care. The second is a statistical analysis which primarily uses community-based, rather than county level data. When community level data were not available, county data were used. Community based data allow us to perform small area analysis, and provide us with statistically reliable information in areas small enough to identify differences among communities. Community based data also allows localities to conduct self-assessments, identify their own health needs, and work together to meet the challenges in breaking down barriers to health care.

County data were analyzed to determine the differences between the counties in relation to: rates of cancer, tuberculosis, AIDS, anemia, and hospital admissions for diabetes and specialist sensitive hospital procedures (referral sensitive diagnoses), and participation in Food Stamps, Medi-Cal, the Child Health and Disability Prevention Program (CHDP), and the Special Supplemental Food Program for Women, Infants and Children (WIC). Comparisons to State data and federal Healthy People Year 2000 Goals are provided when available.

We also ranked the 61 San Joaquin Valley communities on the basis of a Health Access Index (HAI) developed by the project. The HAI was obtained by first independently ranking the communities for the following four health indicators: 1) ambulatory care sensitive hospital admissions, and rates of 2) low birth weight, 3) late prenatal care, and 3) teen births. The community rankings for each variable were then averaged to provide an HAI score and a final rank for each community. The communities were placed in four quartiles, with the top quartile being those communities with the best health access, and the bottom quartile being the communities with the worst access to care. The quartile rankings for the 61 communities were analyzed to determine what differences existed between the quartiles in relation to age, relative poverty, ethnicity and Medi-Cal utilization of the population, rural status, and rates of AIDS, syphilis and tuberculosis.

IMPEDIMENTS TO IMPROVING HEALTH CARE IN THE SAN JOAQUIN VALLEY

A number of critical barriers relate to the overall health of the underserved and uninsured persons living in the San Joaquin Valley of California. We found a panoply of health programs in the San Joaquin Valley, but encountered systemic roadblocks that impede the low income population from obtaining care from these programs. These impediments include:

- *Underutilization and underfunding of existing health programs*
  - The Child Health and Disability Prevention Program (CHDP) screens less than a third of the target population of needy children in the San Joaquin Valley for medical and dental problems.
  - WIC is funded to serve less than half of the eligible population.
  - 60,000 San Joaquin Valley children are deprived of federally subsidized school breakfast because their schools have not implemented the program.
  - Medi-Cal benefits are not uniformly distributed and some poor, predominantly rural communities underutilize the program.
  - Non-profit and public health centers, the backbone of the health delivery system in the poor, rural areas, receive insufficient funding to serve all who need their services, and face unprecedented challenges by changes in the delivery system and by federal funding cuts.

- *Barriers to health programs* which include bureaucracy, cultural and linguistic issues, inadequate knowledge about services, provider hurdles, financial roadblocks, and most important, *a lack of reliable transportation.*

- *Anti-immigrant legislation* such as Proposition 187 which severely hampers the work of public health and primary care providers in assuring a healthy population. Even with a federal injunction prohibiting enforcement of Proposition 187, the fear engendered by its passage has made many immigrants reluctant to seek health care. Proposed Congressional legislation to bar all immigrants from Medi-Cal, Food Stamps, SSI, and AFDC and other federally funded health and nutrition programs will, if passed, leave many with no services.

- Proposed *Medicaid block grants*, if passed, will cost the San Joaquin Valley over $1.5 billion in anticipated federal revenue to serve low income elderly, disabled, and families with children. *Medi-Cal managed care*, soon to be mandatory in San Joaquin, Stanislaus, Fresno, Tulare and Kern Counties may improve care, but also

poses the risk of underservice to low income populations.

Other important considerations which relate to the health of San Joaquin residents include:

- *Race and ethnicity*, which are important predictors of access to health care in the San Joaquin Valley. The communities with the poorest access to health care have almost twice the Latino population than those with the best access.

- Half of the State's approximately 800,000 *migrant and seasonal farmworkers* live and work in the San Joaquin Valley. They are poorly paid, work in dangerous conditions, and are exposed to pesticides and other agricultural chemicals. This population's access to health care is severely limited.

- *Southeast Asian health access problems*, such as lack of translation services and inappropriate care resulting from poor understanding of cultural differences, are all important areas of concern.

- *Environmental issues* such as low quality drinking water, poor ambient air quality, heavy reliance on pesticides and agricultural chemicals, threat of lead poisoning in the poor housing stock, and siting of toxic waste dumps and hazardous industries in low-income, minority areas exacerbate health access problems.

SUMMARY OF DATA ANALYSIS

Our analysis of over a dozen health and demographic indicators provides no clear picture of access to care in the San Joaquin Valley. Overall we found that the health and delivery systems within the San Joaquin are as varied as the populations served by that system. Some areas and populations are well served and enjoy good access and health outcomes, comparable to California as a whole.

In other areas, lack of transportation and inadequate delivery systems result in high rates of disease, poor birth outcomes, poor nutrition and ill health. These areas with the worst access are poorer, have a greater percent of Latino residents, and rely heavily on Medi-Cal.

We first present our county level findings on infant mortality, cancer deaths, communicable disease and childhood anemia. We then report on our community level findings on prenatal care, low birthweight, teen births, and avoidable hospitalization admissions. Finally we rank the San Joaquin Valley communities using our Health Access Index.

COUNTY FINDINGS

- *All San Joaquin Valley counties, except Tulare, have infant mortality rates significantly above the State rate.* Kern County and Fresno County have the worst overall infant death rates in the State, as well as the worst infant death rates for Latinos. (See Table B-7)

- *The San Joaquin Valley has a lower rate of cancer deaths than the State as a whole.* Of the three easily diagnosable and often curable cancers we examined - breast, cervical and colo-rectal - only cervical cancer deaths exceeded the State rate. However, the Valley death rates for all three cancers exceed the Year 2000 Goals. (See Table 2)

- *The Valley tuberculosis rate of 15.8 cases per 100,000 population, is below the State rate of 16.9, but well above the Year 2000 Goal of no more 3.5 cases per 100,000.* (See Table 3)

- *The rate of syphilis in the San Joaquin Valley (6.5 cases per 100,000) is worse than the State rate of 5.6, but better than the Year 2000 goal of no more than 10 cases per 100,000 population.* (See Table 3)

- *The San Joaquin Valley counties have some of the lowest rates of AIDS in the State.* (See Table 3)

- *All San Joaquin Valley counties exceed the Year 2000 childhood anemia goals by three to ten times indicating poor nutrition and inadequate access to preventive screening programs.* All counties exceeded the Year 2000 goals of no more than 3% prevalence for childhood anemia, and four San Joaquin Valley counties (Kings, Madera, Merced, and Tulare) exceeded the state average of 19.3% for children under age five. (See Table 4)

COMMUNITY FINDINGS

- *San Joaquin Valley residents are hospitalized more often for ambulatory care sensitive (ACS) conditions than the State as a whole.* There is great disparity in ACS rates throughout the Valley, even within cities. For example, ACS admission rates are eight times higher in Central Stockton than in East Stockton. (See Table B-1)

- *San Joaquin Valley women are only slightly less likely than California women as a whole to receive early prenatal care.* However access to prenatal care is extermely limited in some San Joaquin Valley communites. For example, over half the women in the rural Fresno County community of Huron received late or no prenatal care. (See Table B-2)

- *Infants born in the San Joaquin Valley are slightly more likely to be of low birth weight than infants born in the State as a whole.* Over 11% of the 1993 births in N. Modesto/Salida were low birth weight, compared to a State rate of 6.0 percent. (See Table B-3)

- *Births to adolescents (under age 18) were higher than the State average* in all San Joaquin Valley counties, with Kings, Fresno, Madera and Tulare having rates of 7% or higher. Fresno County communities show nearly a three-fold difference in rate of births to teens. 8.9% of Herndon/Pinedale's births are to teen mothers (nineteen or younger), compared to 24.8% of W. Fresno/Burrel's. (See Table B-4)

In the table below, we list those communities that ranked the highest and lowest in our Health Access Index which combined rankings for avoidable hospital admissions, late prenatal care, low birth weight, and teen births.

Executive Summary

Health Access Index*
Ten Best Communities and Ten Worst Communities

Best Communities		Worst Communities	
Community	County	Community	County
The Mountains	Madera	Central Stockton	San Joaquin
Frazier Park	Kern	Avenal	Kings
Herndon/Pinedale	Fresno	S. Stockton/French Camp	San Joaquin
Lodi	San Joaquin	E. Bakersfield/ Lamont	Kern
Buttonwillow/Elk Hills	Kern	W. Fresno/Burrel	Fresno
Clovis / Sanger	Fresno	Earlimart/Pixley	Tulare
North Fresno	Fresno	Chowchilla	Madera
Arvin/Tehachapi	Kern	Delano/McFarland	Kern
Tracy	San Joaquin	Shafter/Wasco	Kern
Reedley/Parlier	Fresno	Tulare	Tulare

*The Health Access Index was calculated by combining the ranks for avoidable hospital admissions, late prenatal care, low birth weight, and teen births.

We analyzed the rankings of all the Valley communities to determine key differences in their composition and health. When compared against those communities with the best access to care, we found that the areas with the worst access to care (i.e. those in the bottom quartile) were more likely to:

- be poor,
- have a higher percent of Latino residents,
- have a greater percent of Medi-Cal recipients, and
- have higher incidences of AIDS, tuberculosis and syphilis.

The age of the population, as measured by both percent of children and seniors did not affect the outcomes. Surprisingly, the rural or urban designation of the community also did not appear to significantly affect access. In fact, the rural communities were over represented in the top quartile of our ranking indicating better access to care.

RECOMMENDATIONS

We present here five key recommendations for low-cost programs which are designed to make better use of existing resources. In an era of fiscal austerity and cutbacks in programs, we must make optimal use of existing programs to ensure that they serve those most in need. These programs are designed to provide local communities with resources to determine the appropriate allocation of scarce health funds, target programs to meet their needs, and develop collaborative regional strategies.

1. Community Health "Promotores". We recommend a program of bilingual/bicultural community health "promotores" for each of the San Joaquin Valley counties to work with local community groups and individuals on reducing barriers to health care, and promotion of preventive programs and healthy behaviors. Specialized community health workers for Mixteco and Southeast Asian immigrants are also critical.

2. Health Care Cross-Referral Pilot Project. We recommend a pilot project which would establish a system of cross-referrals to health programs by other government funded programs with which low-income persons come in contact. This program would combat the underutilization and fragmentation of available health services.

3. Child Health Stakeholders' Conference. We recommend a summit of the San Joaquin Valley stakeholders in child health to collaborate on strategies for confronting the threats to children's health and the CHDP program. We envision a conference of medical and dental providers, public health officials, schools, clients, child development specialists and advocates to strategize on methods to improve child health services within existing programs.

4. Policy Initiative on Medical Transportation. We recommend a program on transportation which would investigate community options for improving transportation services, and research legal and regulatory requirements for these programs. With the assistance of providers, planners, local government, and community health workers, the project will study innovative programs, collaborate to replicate existing programs, and adapt programs and policy initiatives to benefit transportation scarce communities.

5. Policy and Data Advice to Community and Providers. We recommend a program to act as a resource and clearinghouse to provide community providers, public officials, and local groups with statistical data and policy analysis on changes and initiatives that are affecting the health of their communities. With a network of researchers, community outreach workers and policy analysts working on local, state and national issues, we can provide an invaluable service in

informing these key stakeholders through electronic communications (HandsNet, fax reports, etc.), newsletters, forums and conferences. These communications will keep rural California communities up-to-date on developments and strategies, and provide a forum for collaborative efforts.

CONCLUSIONS

We have learned that the San Joaquin Valley is not one homogenous region; there are significant variations in the health of Valley communities. Our findings point to the need to go beyond the analysis of regional or even county data. Only by looking at communities can we understand what impediments to health care exist and how to tear down those barriers. Only by working with communities can we devise collaborative strategies to most effectively use scarce health care dollars to make lives better for those who toil in the heartland.

Armed with reliable information and knowledge, local communities can work collaboratively to provide for a better environment for the families who live there. Local citizenry can educate state and federal policy makers about their needs, and advocate for policies that help, and do not harm, them. We have proposed five community based programs which involve local approaches to what are local problems. Through community involvement with culturally competent programs, we can provide a healthier life for everyone in the San Joaquin Valley.

Agriculture in the San Joaquin Valley is the envy of the world. Yet, the care of those that make this industry work - farmworkers and their families - is a national disgrace. We can and must do better.

I. INTRODUCTION

The San Joaquin Valley of California is one of the richest agricultural areas in the world. Yet, the health of San Joaquin Valley residents who toil in the fields is in a sad state. Farmworkers and the rural poor are confronted on a daily basis with a lack of medical providers, inadequate transportation, and a culturally insensitive health care system -- problems which undermine efforts to provide medical care for this population. This report documents the health of these communities, the barriers to care that they face, and the challenges ahead to ensuring that the underserved and uninsured of the San Joaquin Valley gain equal access to health programs and services.

Description of the San Joaquin Valley

Nestled between the Sierra Nevada Mountains to the east, and the Coastal Range to the west, the San Joaquin Valley stretches for approximately 275 miles through central California. As the southern part of the Central Valley, the San Joaquin Valley covers 27,500 square miles. With an estimated population of 3.1 million persons, the San Joaquin Valley is comprised of eight counties (San Joaquin, Stanislaus, Merced, Kings, Madera, Fresno, Tulare and Kern). Its major cities are Stockton, Modesto, Merced, Madera, Fresno, Visalia, and Bakersfield.

The dominant industry in the Valley is agriculture and food processing, with over 250 crops being produced and processed. The San Joaquin Valley is the most productive agricultural valley in the nation, if not the world. Other major employment is found in the public sector (particularly schools and correctional institutions), light manufacturing and health care.

Despite its overall abundance, many more San Joaquin Valley residents are unemployed compared to California residents as a whole. For January 1995, the unemployment rate for all San Joaquin Valley counties exceeded 13%, compared to a State rate of 8.7%.

Demographically, the San Joaquin Valley population is younger, poorer and more Latino than California as a whole. The population has:

- 20% more children than the State as a whole (32.2% of population v. 26.8%)
- 45% more poor people than the State as a whole (18.2% v. 12.5%)
- 20% more Latinos than the State as a whole (33% of population v. 27.4%)

(Detailed information about each of the counties is contained in Appendix D.)

Description of this report

The material presented here is the result of a year long investigation of health conditions in the San Joaquin Valley. Its purpose was to

- conduct a community needs assessment, using community based data and input from local residents, providers and community groups;
- identify those health issues of greatest concern;
- develop programs and collaborative strategies to enhance access for low-income persons in the San Joaquin Valley in an era of diminishing program funds and increasing discrimination against immigrants.

This report contains four major parts.

- In the first section we describe our methodology for analyzing community level data, conducting an inventory of health services, convening community focus groups, and evaluating policy issues.
- The second section identifies and analyzes several key issues including, 1) the underutilization of preventive health programs in the San Joaquin Valley, 2) the cultural, financial, bureaucratic, transportation, and knowledge barriers to care, and 3) the policy and structural changes confronting the delivery of health care to poor and immigrant residents with a special focus on farmworkers and Southeast Asian refugees. We also discuss several environmental issues which affect the health care of San Joaquin Valley residents.
- The third section presents study findings in which we describe and rank the 61 San Joaquin Valley communities using a Health Access Index. We then describe these communities and show how communities with better access to care differ from those where access measures are poor. We also provide additional data as a resource for local communities, and when possible, compare the community measures with the Healthy People 2000 Goals. By comparing community health access measures with Healthy People 2000 goals, communities can chart their

progress in meeting the "gold standard" of disease prevention and health promotion goals established by the Federal government.

- Lastly, in the fourth section we provide recommendations for five community-based programs which would help San Joaquin Valley residents help themselves to obtain fuller participation in preventive health programs and, in the end, a healthier life.

II. METHODOLOGY

In an attempt to provide a comprehensive look at the eight counties of the San Joaquin Valley, this report combines policy analysis of structural and political impediments to access to health care confronting the San Joaquin Valley of California, qualitative information received from local focus groups and key informant interviews on health issues, and quantitative community health data.

A. EVALUATION OF STRUCTURAL AND POLITICAL IMPEDIMENTS TO IMPROVING ACCESS TO CARE

With the proposed massive federal and state changes in the health delivery and financing systems confronting and confounding communities and providers, we felt that it was critical to analyze the impact of these proposed changes on the San Joaquin Valley's underserved populations. In particular, the analysis discusses Medicaid changes, including Medi-Cal managed care, Proposition 187 and other anti-immigrant restrictions, racial disparities of the special needs of farmworkers and Southeast Asian immigrants and key environmental issues. The ability of local communities to respond to health access barriers is intrinsically linked to the constant shifts in health policy, and cogent, timely analysis is necessary to plan for the future.

B. COMMUNITY FOCUS GROUPS AND KEY INFORMANT INTERVIEWS

In order to obtain the full breadth of input on health access issues, we convened local focus groups. Fourteen focus groups were held in all, two in each county (combining Kings and Tulare Counties). Over 50 people participated in these focus groups, during June and July 1995, representing county health departments, community health providers, hospitals, physicians, nurses, schools, Head Start, migrant farmworker programs, county government, and community and ethnic minority advocacy groups. The focus group sessions were composed of three parts: an explanation of the project, presentation of local data with a draft community health fact sheet, and a discussion of health barriers and local strategies that have been used to address those barriers. These focus groups were reconvened in November and December, 1995 after participants were presented with an earlier draft of this report. At that time, the groups were able to provide us with valuable input on the preparation of this final report. A list of focus group participants is in Appendix C.

II. Methodology

In addition to the formal focus groups, project staff have over the course of the year conducted dozens of key informant interviews of San Joaquin Valley stakeholders involved in the delivery of health care. These interviews were designed to obtain more focused information and to broaden the input of various constituencies such as Southeast Asian refugees and Mixteco immigrants. Our project also co-sponsored and participated in regional meetings with the Latino Coalition for a Healthy California and the EPSDT Implementation project.

An informal advisory group consisting of experts from UCSF Institute for Health Policy Studies and Primary Care Research Center, the Center for Health Care Rights, Food Policy Advocates, National Health Law Program, Lead Safe California, Center for Race Poverty and the Environment and California Rural Legal Assistance were also used to assist in the design of the project, provide feedback and review drafts. Additional assistance was obtained from the Hospital Council of Central and Northern California and the San Joaquin County Council of Governments.

C. COMMUNITY BASED DATA

This analysis primarily uses community-based, rather than county level data. When community level data were not available county data were used. Community based data allows us to identify the characteristics of communities that have certain health problems. In addition, small area data provide the opportunity to target specific communities with particular health needs to make cost-effective use of limited resources. These data also allow localities to conduct self-assessments and compare themselves to nearby communities, the region and the state. Through local information, communities can identify their own health needs and work together to meet the challenges in breaking down barriers to health care.

Data were selected on the basis of the following criteria: 1) reliability; 2) availability across the region;* and 3) usefulness and understandability on the local level.

The variables presented in this report fall into several broad categories: demographic, health access, health status, and utilization of existing programs. Many of the data, such as poverty levels, birth outcome, prenatal care, teen births, and some disease rates were available on

* Although several counties, such as San Joaquin, Stanislaus and Merced, have done health needs assessments or data collection, none met the criteria of having uniform data for all eight counties. We were thus unable to use these reports in the data analysis portion, although they were extremely useful in understanding local issues.

II. Methodology

the community level from the Census and birth certificates. We were also able to obtain data on hospital admissions for ambulatory care sensitive diagnoses (ACS)* on a local level through the University of California at San Francisco Primary Care Research Center. Other data, including Child Health and Disability Program (CHDP), Food Stamp and Special Supplemental Food Program for Women, Infants, and Children (WIC) utilization, rates of anemia, AIDS, tuberculosis, and breast, cervical, and colo-rectal cancer, are presented on a county level either due to availability or to avoid statistical reliability problems with small area analysis. In addition, we were only able to obtain hospital admissions for referral sensitive diagnoses (REF)** on a county basis. Data on transportation were not available. A full explanation of the reported variables, their relevance and sources can be found in Appendix A.

1. Small area analysis

Small area analysis allows us to reliably report on community conditions and highlight differences between communities. This is particularly important in the San Joaquin Valley where counties are a mixture of large urban centers and isolated rural agricultural communities. The geographic areas which we chose for this small area analysis are community zip code clusters, developed by UCSF Primary Care Research Center. These clusters of contiguous zip codes are similar to the Medical Service Study Areas (MSSA) used by the Office of Statewide Health Planning and Development (Smeloff 1981). In total, there are 61 community clusters in the San Joaquin Valley's eight counties. (See Table B-15).

An advantage of these zip code clusters is that they are large enough to get reliable estimates of access indicators, but small enough to capture differences between communities. In addition zip code based data are easily assigned to the clusters and local residents can more easily identify their community from among zip codes. One drawback of zip code clusters is that zip

* Ambulatory care sensitive conditions (ACS) are "medical conditions for which an admission may be avoidable with timely access to effective primary care." (Codman 1991). The rates presented here are for non-elderly adults. The conditions include asthma, chronic obstructive pulmonary disease (COPD), congestive heart failure, diabetes mellitus, and hypertension.

** Referral sensitive surgeries (REF) are "high cost/high technology surgical procedures where impediments to access or referral to specialty care may reduce the chances of having the surgery." (Codman, 1991). Referral sensitive procedures include hip/joint replacement, coronary angioplasty and mastectomy.

codes do not necessarily represent true communities, and zip codes change periodically. For this reason, we updated the clusters with new zip codes since 1990 and added new data. Another difficulty with the clusters is that they sometimes include several distinct communities thus reducing their utility for local analysis. In order to correctly name the zip code cluster using local terminology, we asked our advisory committee members for suggestions of names for the clusters.

2. Health Access Index

Communities were ranked on the basis of individual variables as well as a composite "Health Access Index" (HAI) developed by the project. The HAI was obtained by first independently ranking the communities for the following individual variables: ambulatory care sensitive hospital admissions, and rates of low birth weight, late prenatal care, and teen births. The communities were ranked from one to 61, with one being the best and 61 being the worst.

The community rankings for each variable were then averaged to provide an HAI score, and a final rank for the community. The communities were placed in 4 quartiles, with the top quartile being the best, and the bottom quartile being the worst.

For example, W. Fresno/Burrel had the highest ACS rate in the region and is ranked 61 out of 61 on this variable (see Table B-1). This same community had a high percent of babies born with low birth weight, and was ranked 58 (see Table B-3). On the other hand, W. Fresno/Burrel had better than average prenatal care, with a rank of 26. These, and the rank for teen births were averaged to give a HAI score of 51.5 and a final rank of 57.

The quartile rankings for the 61 communities' HAI scores were analyzed to determine what differences existed between the quartiles in relation to age and relative poverty of the population, Latino population, Medi-Cal recipients, rural status, and rates of AIDS, syphilis, and tuberculosis. Additional analysis was done through a Spearman rank correlation coefficient test to determine the strength and statistical significance of the correlation between the HAI rank and the independent variables.

3. County Data

County data were also analyzed to determine the differences between the counties in relation to: rates of cancer, tuberculosis, AIDS, anemia, and hospital admissions for diabetes and REF diagnoses, and participation in Food Stamps, Medi-Cal, CHDP, and WIC using methods

similar to those used for the community rankings. Comparisons to the regional and State data, and federal Healthy People Year 2000 Goals are provided when available.

Detailed tables on these findings are found in Appendix B.

4. Data limitations

All data, including those presented here, have their limitations. First, many of the data were not available on a community level, so we are limited to presenting them on a county basis. Second, accurate demographic data on a community level were available only from the 1990 Census. Updated population projections are available from the California Department of Finance, but they are limited to counties, cities, and unincorporated areas and do not include such variables as race/ethnicity, income, and language. We were therefore limited in our community analysis to using 1990 demographic figures, unless otherwise noted.

The Census has a number of shortcomings, including its undercount of migrant farmworkers, homeless persons and minorities. Also, in a number of instances, using 1990 population figures as a denominator may overstate the rate expressed, as the population in most San Joaquin Valley communities has grown since the 1990 Census. For example, when we present the percent of population on Medi-Cal in a community, we probably overstate it by a small amount because the actual population is larger than the denominator used. In this instance, the county data are more accurate.

In addition, we were unable to obtain reliable data on primary care providers, since no one data source adequately accounted for all providers.

D. INVENTORY OF HEALTH PROGRAMS

Using existing data and a project survey of providers, we attempted to produce a comprehensive inventory of health care services and programs. These resources include hospitals, primary care, family planning, public health, and school clinics, referral sources, special programs such as health fairs, and mobile clinics. Due to the plethora of programs and the constant changes in delivery systems, the list is not all inclusive, but is fairly representative of the range of potentially available services for low-income residents. This inventory is being reproduced as a separate document and is available from the Rural Health Advocacy Institute.

III. IMPEDIMENTS TO IMPROVING HEALTH IN THE HEARTLAND

There are a number of significant structural and political impediments which severely impact the health care of the underserved and uninsured persons living in the San Joaquin Valley of California. These roadblocks include the:

- underutilization and underfunding of existing health programs;
- barriers to health services;
- anti-immigrant legislation; and
- Medicaid block grants and Medi-Cal managed care.

Other important consideration which relates to the health of San Joaquin residents include:

- the relationship of race to access; and
- environmental health issues.

In this chapter we evaluate these obstacles, as well as the health concerns of two populations of special concern - migrant and seasonal farmworkers and Southeast Asian refugees.

A. EXISTING HEALTH PROGRAMS ARE SERIOUSLY UNDERUTILIZED AND UNDERFUNDED

Both the focus group comments and the data demonstrate that there are many programs potentially available to low-income residents that are severely underutilized due to lack of effective outreach or knowledge about the programs and their benefits. These underused programs, which sometimes fail to reach even half of the target population, include inexpensive preventive services such as CHDP, WIC, and immunizations. Underfunding further limits the abilities of these programs to meet public health needs.

In this section we review the utilization data on a number of programs and report on how these programs are not uniformly available to all residents of the Valley. In a number of instances, rural and low-income areas are much less likely to receive the services, despite increased need and eligibility. Before reviewing these data, it would be useful to provide a comprehensive look at one particular community, McFarland, which recently received much focus from health authorities because of a childhood cancer cluster.

III. Impediments to Improving Health in the Heartland

McFarland - A Snapshot of an Agricultural Community's Health

Perhaps the most salient example of a San Joaquin Valley community's under use of programs is the Kern County community of McFarland. It provides a snapshot of the health of a low-income farmworker community in the richest agricultural Valley in the world.

The Kern County community of McFarland provides a snapshot of the poor health and underutilization of health services in a low-income farmworker community in the richest agricultural Valley in the world.

In 1991, the California Department of Health Services issued its report on the McFarland Child Health Screening Project. This report on the health of McFarland children is the most comprehensive evaluation of a San Joaquin Valley population ever undertaken, and is indicative of the underutilization of health care in the Valley as a whole. The project was in response to community concerns of poor child health and the cluster of childhood cancers that had been identified in McFarland. The report provides a "snapshot" of the health and access to health care of a San Joaquin Valley agricultural community. The highlights of the study, which screened more than 90% of McFarland's children, are as follows:

- Seventy one percent of the children were referred for follow-up care.
- Over 36 percent of the children had no evidence of ever having seen a dentist.
- 22 percent of the children were anemic.
- A larger percent of McFarland pre-school children had incomplete immunizations compared with a sample of California's kindergarten population. This was especially true for measles, mumps, rubella, and oral polio vaccine.
- Many McFarland residents have difficulty obtaining needed health care. Parents of the screened children (especially those on Medi-Cal) must travel long distances to obtain medical care. Many reported cost, long waiting times at the doctor's office, transportation difficulties, lack of child care facilities, and language differences as barriers to medical care.

Although the screening found no additional cases of cancer, it did find massive health and health access problems. These problems, according to the state's experts, "clearly point to McFarland's need for better primary and preventive care services." The report also found that

existing State programs such as WIC, CHDP and the immunization program, as well as the community health clinic, were underutilized.

The McFarland screening report unfortunately validates our findings that primary and preventive care services are severely underutilized in poor, rural, farmworker communities, with a detrimental health effect on children and families.

The Child Health and Disability Prevention Program (CHDP) reaches less than one-third of its target population.

The Child Health and Disabilities Prevention Program (CHDP) is one of the most extensive programs available to all low-income children, regardless of source of income, type of family, or immigration status. CHDP is California's version of the mandatory Medicaid component called EPSDT (Early and Periodic Screening Diagnosis and Treatment). California meets its federal Medicaid requirement through its county-based CHDP programs, which also uses tobacco tax money to provide health screens and limited treatment for non-Medi-Cal eligible low-income children. Despite broad mandates, in 1993-94 CHDP provided preventive health assessments to less than a third of its target population in the San Joaquin Valley. Utilization varies from a high of 32% of children served in San Joaquin and Fresno Counties to a low of 23% in Stanislaus County (see Figure 1.) Although the Valley screening rates were somewhat better than the State, they are still too low to adequately serve the needy population.

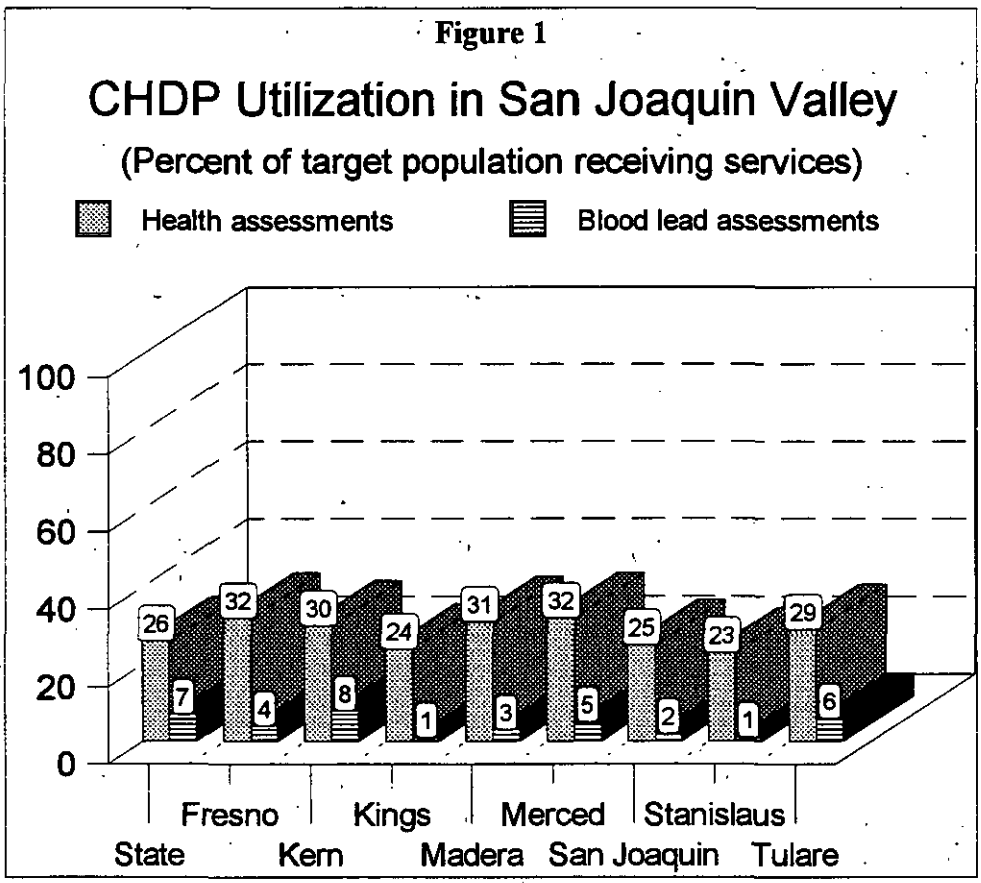
The Child Health and Disability Prevention Program (CHDP) screens less than a third of the target population of needy children in the San Joaquin Valley for medical and dental problems. The percent of high-risk children tested for lead poisoning was also very low - below 10% in all counties.

"Many parents who are referred to the lab for their children's blood lead tests are charged $15 for the test even though they are not supposed to be. This may be why they are not going to the lab." Mixteco farmworker representative in Madera.

Dental and lead poisoning screening for children had similar low utilization patterns. The percent of high-risk children tested for lead poisoning was below 10% in all counties.

III. Impediments to Improving Health in the Heartland

Figure 1



In discussions with CHDP providers, referral sources and advocates we learned of many challenges facing CHDP. First, CHDP is run as a separate, local program in every county in California. While there is a centralized state office that provides oversight, the operations of CHDP differ from county to county, and community to community.

"With only one or two public health nurses in the county, they cannot get around to everyone. We have only seen our CHDP nurse once in the last three years." Rural health clinic nurse practitioner.

Second, with funding restraints, staffing for public and provider outreach, education and interventions has been reduced. It is difficult for county CHDP staff to provide the necessary services with the minimal staffs allocated to their programs.

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Third, limited funding for the follow-up services and the lack of providers willing to accept CHDP children make accessing treatment services difficult. Access to dental care is one of the predominant problem areas cited in most communities, along with very limited mental health services. Follow-up for those children with high blood lead counts is difficult. The need for follow-up to lead poisoning would be even greater if the testing mandates were not routinely ignored.

Fourth, providers find it difficult to obtain approval for treatment and case management services identified as being necessary in the CHDP screens. The State Medi-Cal program has only recently implemented a treatment authorization request process for follow-up services, but providers are not yet familiar with the process.

Fifth, lack of transportation makes it difficult for parents to get to appointments. Lack of child care for siblings is also a problem while at appointments.

Sixth, new policy initiatives such as Medi-Cal managed care and the Governor's CalReach proposal, threaten the viability of CHDP because of their differing eligibility and service mandates. Medi-Cal managed care systems are not yet fully aware of the CHDP scope of services mandates. CalReach proposes to divert funding from CHDP into a different program that would not serve undocumented children. Perhaps the greatest threats to child health programs are the current congressional proposals to repeal Medicaid and provide smaller block grants to the States with no mandatory eligibility or services.

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Nutritional programs have failed to meet the needs of Valley residents

Many low-income families in the San Joaquin Valley go hungry:

- WIC is funded to serve less than half of the eligible population.
- Fifteen percent of the San Joaquin Valley residents are on food stamps, compared to 10% statewide.
- Over 60,000 San Joaquin Valley children are deprived of the federally subsidized school breakfast program because their schools have not implemented the program.
- The childhood anemia rates are three to ten times higher than the Year 2000 goals, about the same as the State rate of 19.3%.

In 1991, CRLAF reported the results of the Community Childhood Hunger Identification Project (CCHIP) survey in its nationally acclaimed *Hunger in the Heartland*. This report showed that more than one-third of the families interviewed in four San Joaquin Valley counties faced severe hunger. Among those interviewed, 36% reported serious problems getting enough food; 98% of hungry families ran out of money for food for an average of seven days per month, and 25% did so every month. An additional 32% of families were at risk for hunger. No re-survey has been funded but the indications are that not much has changed, as evidenced by the high rates of anemia among children in the Valley.

WIC

The Special Supplemental Food Program for Women, Infants, and Children (WIC) is a supplemental food and nutrition education program for low-income pregnant, breast feeding and post-partum women, infants and children up to the age of five who are at nutritional risk. The purpose of WIC is to prevent poor birth outcomes and improve health of participants during critical times of growth and development. Local WIC services, provided by public and local non-profit health agencies, are the gateway to other health care services. WIC helps ensure that participants are seen for health assessments and for ongoing pediatric and obstetric services, such as prenatal and well baby care, checkups and immunizations. WIC currently receives funds sufficient to serve less than 50% of the target population.

In its recent WIC 2000 report, the Department of Health Services ranked California counties by special need for WIC. All San Joaquin Valley counties rated in the bottom half, indicating higher risk and special need for WIC. On a scale of one to eleven, with one being the best, Kern County received a rank of 11; Fresno, Madera and San Joaquin 10; Tulare 9; Kings 8;

Stanislaus 7, and Merced 6. However, funds for all San Joaquin Valley counties were insufficient to serve even half of potentially eligible women and children. (See Table B-9).

Among DHS's recommendations for strengthening WIC programs were 1) requiring local WIC agencies to explore co-locating, out stationing or sub-contracting services with other agencies who request WIC in their area, particularly Comprehensive Perinatal Service Program sites, and 2) additional funding to allow for planning and development of collaborative efforts with other programs, including comprehensive integration of WIC services with managed care providers.

The local administration of WIC allows service providers to target groups most in need. Often they can work cooperatively with other agencies. For instance, the United Health Centers clinic in Parlier has a WIC office on-site which serves its year round patients, as well as migrant farmworker families. It also has outreach sites in small farming communities such as Mendota. The Economic Opportunity Commission in Fresno also provides WIC services along with its other services which include family planning and employment education. However, more needs to be done. Many service providers told us of the failure of WIC programs to coordinate services with other providers of prenatal care such as CPSP. In addition, increased funding would allow service to more of the intended beneficiaries.

Food stamps

Although food stamps supplement the incomes of many in the San Joaquin Valley, large numbers of families still go hungry because of the low amount of food stamps they receive. Far more San Joaquin Valley residents rely on food stamps than families in the State as a whole. Fifteen percent of the region's households are on food stamps, compared to 10% statewide. The county rates range from a high of 20% of Merced County to a low of 12% of Stanislaus families. (See Table B-10).

School breakfast program

The use of federally funded low-cost school breakfast funds also falls short in the Valley. Over 60,000 children were in schools with low-income enrollment exceeding 30% which did not have school breakfast programs but qualified for special federal subsidies. In Kern County alone, there were over 20,000 children deprived of essential nutrition in a program that costs the local districts little or nothing and can help prevent malnutrition and anemia, raise school attendance and aptitude scores. (See Table B-11).

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Recent successes in Fresno and other counties have resulted in increased school breakfast programs due to community collaboration and efforts to educate local districts and communities on the benefits and availability of the school breakfast program.

San Joaquin Valley residents rely heavily on Medi-Cal, which does not guarantee access.

Medi-Cal benefits are not uniformly distributed in the Valley and some poor, predominantly rural, communities underutilize the program.

Medi-Cal utilization can be viewed several ways. High Medi-Cal utilization can be used as a proxy for the high poverty rate of an area. It can also be used to demonstrate the relative lack of mainstream providers who generally shun impoverished communities of the Valley due to poor reimbursement and professional isolation. On the other hand, high Medi-Cal utilization can also be viewed as a community's success in accessing a program that provides health benefits through a combination of public and private providers. For those low-income families that are eligible, Medi-Cal pays for a full range of primary, acute care and long term care services including prenatal care, prescription drugs, services for the disabled, nursing home care, and hospital care. Undocumented immigrants, if otherwise eligible, receive only emergency and pregnancy related benefits. Clearly the 50% of the poor who are on Medi-Cal are better off than the other half of the poor who are uninsured. However Medi-Cal coverage is no guarantee of services since there are relatively few providers who accept Medi-Cal due to low reimbursement rates, red tape, limited range of services and perceptions about the Medi-Cal population.

- San Joaquin Valley residents were 50% more likely to be on Medi-Cal than the statewide population.
- Medi-Cal paid for over 60% of births in the San Joaquin Valley in 1993 compared to 48% statewide. It also paid for 55% of prenatal care, compared to 46% statewide.
- Medi-Cal benefits are not uniformly distributed in the Valley and some poor, predominantly rural, communities underutilize the program.

"Less than half of card carrying Medi-Cal recipients actually use it. And that's a real problem. They don't use it." Latino activist in San Joaquin County.

San Joaquin Valley residents rely heavily on the joint federal-state government Medi-Cal program. *Overall, San Joaquin Valley residents were 50% more likely to be on Medi-Cal than the statewide population.* Over three-quarters of a million (756,140), or one out of four (24.2%)

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San Joaquin Valley residents were on Medi-Cal in September 1994, including 442,957 children. In contrast, only approximately one out of six of all Californians (16.6%) received Medi-Cal at that time.

Medi-Cal paid for over 60% of births in the San Joaquin Valley in 1993 compared to 48% statewide. It also paid for 55% or prenatal care, compared to 46% statewide. (See Table B-12).

Participation in Medi-Cal is not uniformly distributed among low income communities. Some very low income communities, such as Huron, Coalinga/Mendota and Corcoran, use Medi-Cal much less than other more affluent communities.

Community and migrant clinics are underfunded, do not exist in all areas of the Valley, and are not available to all.

Non-profit and public health centers have become the backbone of the health delivery system in the poor, rural areas of the San Joaquin Valley. Providers such as United Health Centers, Community Medical Centers (formerly Agricultural Workers Health Clinic), and Golden Valley Health Center (formerly Merced Family Health Center), have multiple clinics with an assortment of services and programs in many communities. They provide access to preventive and primary health services to the poor and uninsured populations of the San Joaquin Valley who the mainstream providers have neglected. They may also be responsible for the lower rural ACS rates presented in this report.

This project has identified 77 community and public clinics in the San Joaquin Valley region. Licensed community health centers in the San Joaquin Valley had over 1 million encounters in 1993. Other types

- Non-profit and public health centers have become the backbone of the health delivery system in the poor, rural areas of the San Joaquin Valley.
- Licensed community health centers in the San Joaquin Valley had over 1 million encounters in 1993; many more were provided by public, private and Indian clinics.
- San Joaquin Valley residents had 50% more clinic visits per capita than the State as a whole. Utilization ranged from a high of .63 visits per capita in Merced, and .59 visits per capita in Kern, to a low of .13 in Stanislaus County. Kings County had no community clinic in 1993.
- Community and migrant health centers are facing unprecedented challenges by changes in the delivery system and by federal funding cuts.

of clinics which do not need to be licensed and file annual reports with OSHPD, such as public and Indian clinics, provided many more visits to Valley residents, but we were unable to quantify the number.

In order to determine the reliance on licensed community health centers in the various counties, we examined the number of community clinics visits per capita. Statewide the average was .2 clinic visits per person. In the Valley region, there were .33 visits per capita. The county visits ranged from a highs of .63 visits per capita in Merced and .59 visits per capita in Kern, to a low of .13 in Stanislaus County. Kings County had no community clinic in 1993. (See Table B-13).

Valley clinics are not located in all communities and reliance on them is very much a local pattern, with no uniformity throughout the Valley. Even where community health centers exist to serve the population, they are not always available to everyone. According to the GAO (1993) migrant health centers receive funding sufficient to serve only 15% of the farmworker population. The poorest uninsured residents can often not access these clinics because of the co-payments charged which can range up to $35 if sliding scale funds are available. If no sliding scale is available, uninsured patients pay full fee often close to $100. Clinic hours, locations, and lack of transportation also hinder access, as do lack of outreach and community collaboration. Further discussion of these barriers is found below.

Community and migrant health centers are also facing unprecedented challenges by changes in the delivery system and by federal funding cuts. Managed care systems, particularly in Medi-Cal, have forced health centers to become more sophisticated in their operations in order to compete. Managed care, by curtailing the ability to shift costs to other payors, has force clinics to control costs related to uncompensated care. Low capitated rates do not always provide allowance for the severity or intensity of need of the population served by the health centers threatening the centers' financial stability.

The proposed repeal of Medicaid by Congress and the distribution of block grants to the states also imperils non-profit health centers. Much of the clinic expansion in recent years has been the result of preferential Medi-Cal reimbursement provided to Federally Qualified Health Centers (FQHCs) and rural health clinics. According to the current federal law, the reimbursement for these clinics is based on actual costs of operations rather than the state fee-for-service Medi-Cal fee schedule. However, if Medicaid is repealed California will no longer have to pay these enhanced rates jeopardizing the very existence of these clinics.

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B. SIGNIFICANT BARRIERS IMPEDE ACCESS TO HEALTH CARE

Although a plethora of programs operate throughout the San Joaquin Valley, all the focus groups agreed that many programs are not used effectively. The barriers to programs involve bureaucracy, cultural and linguistic issues, knowledge about services, provider hurdles, financial roadblocks, and most important, a lack of reliable transportation.

Barriers to programs in the San Joaquin Valley involve bureaucracy, cultural and linguistic issues, knowledge about services, provider hurdles, financial roadblocks, and most important, a lack of reliable transportation.

Bureaucracy thwarts utilization of programs

Bureaucracy in the operations of government health and welfare programs results in barriers to care for the Valley's poor. Bureaucratic barriers include: inaccessibility of offices (limited times, inconvenient locations), cumbersome and time-consuming application processes, lack of linguistically and culturally appropriate staff and material, and most disturbingly, the poor attitude of the public servants who staff government offices.

Bureaucratic barriers include: inaccessibility of offices, cumbersome and time-consuming application processes, lack of linguistically and culturally appropriate staff and material, and the poor attitude of the public servants who staff government offices.

During one focus group, a County Supervisor recounted his frustrations at trying to get people the benefits to which they are entitled. He told of how he had to personally take applicants to the welfare office and demand that their application be processed. He further described how the welfare office only accepted the first thirty General Relief applicants a day, and sent away the rest without an appointment or an opportunity to apply. Other focus group participants from Fresno were upset by the large insensitive bureaucracy for disabled patients with HIV disease at one public facility where patients feel that they are shunned and ignored. Another patient representative reported instances of Spanish-speaking welfare workers speaking to monolingual Spanish-speakers only in English.

The Medi-Cal application form is many pages of tightly jammed questions about residence, income, assets, expenses, citizenship and personal history, which even a college graduate would find daunting to complete. Low-income persons, with low literacy or who may

not speak English are often overwhelmed not only by the application, but also by the required supporting documentation. With Proposition 187, many immigrant families are afraid of providing any personal information to government agencies. Migrant farmworker families are not in any one place long enough for the time it takes a public agency to render a decision on their application.

"Even when you ask workers to make referrals for people who come in to apply for Medi-Cal, they won't do it. It's bureaucratic workers who won't do something extra because it's not part of their job." Hospital outreach director in Stockton.

Because of bureaucratic barriers, applications for health benefits are often delayed until an acute medical need is encountered, or a high medical bill is incurred. It is only at this point that patients are motivated enough to confront the alienating, unyielding system. As a consequence, coverage for preventive and primary care is shunned in favor of coverage for more expensive acute care. The GAO (1995) recently found that half of Medicaid denials were for procedural reasons because applicants did not or could not provide basic documentation.

Cultural barriers discourage many from seeking needed care

Cultural barriers were also cited as impediments to care, particularly when coupled with financial, bureaucratic, and transportation barriers. Much of the low-income population is composed of recent immigrants who are unfamiliar or untrustful of the American medical system. For example, Southeast Asian immigrant women, are distrustful of American medical providers because of cultural taboos and experiences in refugee camps. They are reluctant to discuss personal health problems with male providers or to describe health issues with male translators present.

Cultural barriers are impediments to care, particularly when coupled with financial, bureaucratic, and transportation barriers. Much of the low-income population is composed of recent immigrants who are unfamiliar or untrustful of the American medical system.

Mixteco farmworkers, recent indigenous immigrants from Oaxaca, Mexico, are concentrated in Madera and Fresno Counties. They have a difficult time communicating with providers since often no one is available who speaks their language. Because of the personal nature of medical problems, they are reluctant to use their children as translators. In addition,

they traditionally have received medical care from "curanderos," and have delivered their children at home with the assistance of midwives or "parteras." For these reasons and because outreach by local providers is limited, Mixtecos largely remain outside the health system.

Comments by the focus groups reinforced research about Latino attitudes towards illness and health care. The concept of "fatalismo" and the inevitability of disease increases the effort needed to provide education on the benefits of preventive care. In addition, according to researchers, the socialization process of Latino girls has fostered their feelings of *verguenza/bochorno* (shame) in sexual matters which limits their ability to take preventive measures such as contraception, breast examination, and pap smears (Molina, 1994).

Through our focus groups we learned of many programs which try to provide culturally relevant outreach, in addition to bilingual services. For example, the Fresno County health promotion program, La Vida Caminando, works with four isolated rural predominantly Latino communities to combat the high prevalence of diabetes and to encourage appropriate diet and exercise. The Su Salud health fair in San Joaquin, one of the largest in the State, provides screening and health promotion and education to Latinos who otherwise might not access health programs.

Knowledge of available services is often lacking

Many community members are unaware of the plethora of programs and services. Many immigrants, documented and undocumented, fear applying for public benefits, leaving a large part of the population without Medi-Cal insurance and preventive health services.

As the inventory of health services documents, there are an abundance of health services in each county throughout the San Joaquin Valley. Community and migrant health centers, public health immunization clinics, CHDP child health assessment clinics, prenatal care services, family planning clinics, WIC sites, and hospital based ambulatory services provide a plethora of services throughout the Valley. Yet, focus group participants told us that many community members are unaware of the programs and services. Even other referral sources are not always aware of services. For instance, a Migrant Head Start social worker who participated in one focus group was not aware of a new migrant health center clinic close to her program and was referring her children to a different clinic further away.

The GAO (1995) recently reported that despite recent program expansions many working parents did not know that they were eligible for Medi-Cal. When you add on the fear that many

immigrants, documented and undocumented, have about applying for public benefits, it is no surprise that many families are left without Medi-Cal insurance and preventive health services.

Overlap, duplication and lack of coordination leads to inefficient use of resources

Another part of the problem expressed by the focus groups is the *overlap, duplication, and lack of coordination between existing services* operated by different agencies. Since many providers have limited resources and are funded only for limited purposes they are unable to network with other providers. Protection of institutional "turf" also leads to duplicative efforts. Programs serving pregnant mothers, such as WIC and CPSP (Comprehensive Perinatal Services Program), we were told, do not necessarily coordinate serving the same population. Responsibility for preventive services, such as immunizations, is scattered among many different providers and agencies with no overall responsibility. This leaves many children without appropriate vaccinations.

> Overlap, duplication, and lack of coordination between existing services operated by different agencies leads to underutilization.

Collaborative efforts are growing, but are still in their early stages. The rise in health fairs, spearheaded by the Su Salud fair in San Joaquin County, has led to greater promotion of services in a cooperative manner. Medi-Cal managed care in the expansion counties of San Joaquin, Stanislaus, Tulare, Fresno and Kern has brought diverse providers to the table to discuss the delivery of services to Medi-Cal beneficiaries. Healthy Start programs in the schools have acted to coordinate care for needy schoolchildren. The Family Preservation initiatives, and AmeriCorps programs, have also encouraged coalitions of health providers. Fresno and Madera county public health departments share a Mom and Kids Hotline. These local efforts are, by all accounts, making progress, but need significant additional and ongoing support in order to break down traditional institutional barriers to collaboration.

Despite the collaborative efforts by providers and agencies, they often fail to reach the community groups and recipients of services. As some focus group participants noted, it is necessary to take a bottom up, rather than a top down approach in order to provide patients and community members with a sense of ownership and participation in the health programs and collaborative activities. Communication with the community at the grass roots level is essential to the success of these programs.

III. Impediments to Improving Health in the Heartland

Provider barriers keep people away from health care

Provider barriers include financial barriers, long waits to get appointments, waiting times at the clinics, hours of operation limited to the daytime and weekdays and the perception that some providers do not treat their patients with dignity and respect.

The focus groups described a number of barriers involving providers. These include financial barriers (discussed below), long waits to get appointments, waiting times at the clinics, and hours of operation limited to the daytime and weekdays. In addition, one recurring theme involved the perception that some providers do not treat their patients with dignity and respect. This perception makes some of the population groups very reticent to utilize important services, to return for follow-up care, or to follow appropriate instructions. Participants reiterated that cultural sensitivity was as important as medical or linguistic capability.

Financial barriers force many to delay necessary care

Financial barriers severely affect San Joaquin Valley families, over a quarter of whom are at or near poverty level. At least two-thirds of Latino farmworkers are uninsured. To poor families no health insurance often means no health care. Even seemingly small co-payments for doctor visits can be an insurmountable barrier to care.

Over a quarter of San Joaquin Valley families are at or near poverty with incomes below $15,000 per year, compared to 22% statewide. All San Joaquin Valley counties have childhood poverty rates above the State average of 18%. Tulare's rate of 33% is the highest childhood poverty rate in the California. The best county in the San Joaquin Valley is Stanislaus which has 21% of its children in poverty. Fresno County, according to one focus group participant, has five of the top ten poorest cities in the State.

As shown in the community analysis, there is wide variation in poverty rates among the communities, even within a single county or a city. For instance, in the city of Fresno, 15% of families in one community had annual incomes under $15,000, while in another section of the city, 46.3% of families were low-income.

While we know that many of the Valley's poor are uninsured, specific rates of uninsured are difficult to determine on a community or county level, absent a special survey or a population large enough to make reliable statistical projections. However, we know that 23% of California's

non-elderly population lacks health insurance. When examining racial/ethnic breakdowns, we learn that the Latino rate is almost double the state rate. A full fifty-percent of non-elderly adults under the poverty level have no insurance coverage, either private or public. Further, at least two-thirds of Latino farmworkers are uninsured, a rate three times the state rate.

To families of limited means, no health insurance often means no health care. Seemingly small co-payments for doctor visits can be an insurmountable barrier to care. For example, a copayment of $10 for a farmworker family with a $5000 annual income is the equivalent of a $75 co-pay for a family of average income. When community health centers impose visit co-payments of $25 or more, many of the underserved are shut out from services.

"A Mixteco speaking farmworker family brought their sick child to the clinic. They did not have the $15 co-payment for the visit and care was delayed. The child ended up in the hospital for four days." Mixteco outreach worker in Madera.

While the ill-fated national health reform efforts of 1994 held out promise to the low-income uninsured, the Medicaid, Medicare and welfare retrenchments of 1995 will inevitably exacerbate the plight of the uninsured and underserved. With the likely repeal of Medicaid, less federal funding, and no mandatory categories of beneficiaries and services, a reduction in services seems inevitable. The hardest hit populations will be pregnant women and the children of working families, such as farmworker children, who only recently were added to the Medi-Cal rolls. Immigrants, both new and old, will disproportionately feel the pain of welfare reform, which will make most immigrants, with or without appropriate immigration documents, ineligible for AFDC, SSI, Food Stamps, Medicaid benefits, and many social services programs. Other public health services, such as community and migrant health centers, would also be required to deny services to immigrants, unless they receive an exemption from the U.S. Attorney General.

A local focus will become even more important as block grants are given to the states with little direction from the federal government. Intensive community education will be necessary for communities to learn about the substantial changes in the system and to strategize on how to ameliorate their harsh effects.

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Adequate transportation is often unavailable

Perhaps the most frequently mentioned access barrier in the San Joaquin Valley was the lack of reliable, affordable and usable transportation to health care. Transportation was mentioned as a significant problem in every focus group.

The lack of reliable, affordable and usable transportation is one of the largest barriers to health care in the San Joaquin Valley. Although medical transportation is a covered benefit for Medi-Cal beneficiaries, very few patients are aware of this benefit. Facilities are sometimes not located where patients live or near public transportation. Transportation to specialty services is a particular problem, especially in small towns.

In a recent patient survey by Fresno County's Valley Medical Center, lack of transportation was listed as the third most important reason for missing an appointment. Ironically, although medical transportation is a covered service for Medi-Cal beneficiaries, in particular children, very few patients are aware of this benefit. This is primarily due to social services officials who fail to inform Medi-Cal recipients about this mandatory service.

A second problem is the location of clinics. Facilities are sometimes not located where patients live or near public transportation. Transportation to specialty services is a particular problem, especially in small towns. For example, Merced patients who require substance abuse treatment must travel to Fresno, 60 miles away. Lack of transportation also means that patients have no choice in medical providers, since they cannot "vote with their feet."

"We brought the blood lead lab to the Head Start Center and got 100% turnout, including siblings." former Head Start worker in Stanislaus County.

Reliable private transportation is a constant struggle for low-income families. For those families with cars or trucks, the vehicles are often old and undependable. Moreover, the vehicle is often with the working parent during the day, and not available to the parent caring for the children. At times, private transportation is available from someone in the community, but often for an unaffordable price.

When reliable public transportation is available, patients are reluctant or unable to take advantage of it, according to some focus group participants. Unfamiliarity with the system or inconvenience are some of the reasons for not using public transportation. Until very recently in

Madera County the local Dial-a-Ride did not have anyone who could communicate in Spanish, let alone in other Asian or indigenous Mexican dialects. Transportation has to be scheduled two weeks in advance, making this public transport system irrelevant to sick patients. Moreover, Dial-a-Ride only operated within the city limits of Madera, leaving county residents with no public transportation.

Recent cutbacks by public carriers have left some outlying Valley communities with no public transportation at all. For instance, focus group members reported that there is now no transportation from Hanford to Visalia. Other communities, such as Vernalis in Stanislaus County, have never had public transport and remain isolated.

Local strategies do exist for confronting the gaps in the transportation system. In San Joaquin County, local health advocates told about a program that coordinates with church vans to give rides to clinics for community members. Some providers, such as St. Joseph's Hospital, use extensive outreach and mobile clinics to bring services to where people are. Stanislaus County, for example, has its "Momobile" program to bring prenatal services to hard to reach areas. Other providers have weekend clinics, at times when cars may be more available. Valley Medical Center gives out bus tokens to needy patients. CHDP staff in Madera have worked with the local Rotary Club to refurbish its "Health on Wheels" van.

The experience of these low-cost locally based strategies needs to be disseminated throughout the region. They should be replicated, if applicable, or adapted, if necessary, to improve access to existing services. Policy concerns, particularly the under use of Medi-Cal covered transportation, must be analyzed, with recommendations for improvement. State officials may not be able to cure the transportation ills of the San Joaquin Valley, but local initiative and creativity can ameliorate the current poor situation.

III. Impediments to Improving Health in the Heartland

C. THE CHANGING HEALTH CARE ENVIRONMENT PRESENTS CHALLENGES

The health care environment is changing at frenetic speed. Managed care and overhauls of safety net programs will greatly affect access to health care for the uninsured and underserved in the San Joaquin Valley. We discuss below three of these issues:

- Anti-immigrant legislation
- Medi-Cal "Reforms"
- Race/ethnicity as an indicator of access.

A resurgence of anti-immigrant policies will deny health care to many

A resurgence of anti-immigrant policies and legislation is gripping the United States. Enacted and proposed measures will have a profound effect on the health of immigrants in the United States and their ability to access essential health services. We review here the major policy initiatives and discuss their impact on the San Joaquin Valley.

Proposition 187, passed by California voters in 1994, was directed at the provision of services to persons who are in the United States without appropriate immigration documentation. On its face, Proposition 187 forbids all licensed health facilities and clinics from providing services to any person who cannot prove that they are legally in the United States. In addition, public health officials are not allowed to treat non-emergency conditions, including infectious and communicable disease. Moreover, if a facility has a suspicion that a person is not a legal resident, the patient may be turned over to the Attorney General and the Immigration and Naturalization Service.

If applied, Proposition 187 will severely hamper the work of public health and primary care providers in assuring a healthy population. Patients will wait until they are sicker and require more expensive acute and emergency care. Communicable and infectious diseases will go unchecked with increased risk for the general population.

Proposed Congressional welfare reform legislation will bar all immigrants from Medi-Cal, Food Stamps, SSI, and AFDC and other vital federally funded health programs leaving the many people with no services.

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The passage of 187 was a sharp rebuke to the immigrant population, both documented and undocumented, and heralded a new era of discrimination against those who look or speak differently than the stereotypical Anglo population. It also imbued the immigrant population with fear and distrust of all public institutions in California, including health programs. Following the approval of the initiative, many health centers reported a distinct drop in visits by immigrants who were afraid of being turned over to INS. Intensive community outreach by health providers, and a growing movement of providers who have promised to ignore 187, has convinced many immigrants to return to the clinics. However, the underlying anxiety and suspicion remains.

Although the enforcement of Proposition 187 has been effectively barred by a federal court injunction, its ultimate fate is unknown. If applied, 187 will severely hamper the work of public health and primary care providers in assuring a healthy population. Patients will wait until they are sicker and require more expensive acute and emergency care, which is the only care available under 187. Communicable and infectious diseases will go unchecked with increased risk for the general population. Community, migrant, and public health clinics will not be legally permitted to see many of their patients, with even legal immigrants shunning the centers because of the demands for documentation.

While many physicians have vowed to continue to see patients and not act as immigration police, there has been no systemic response to providing care for this population. The burden will fall on independent private providers who are not subject to 187. However, the private sector's ability to serve this population is limited, especially since undocumented immigrants are very likely to be uninsured and have few resources to pay for care. With public funding cut off, local community solutions will be key to serving the needs of undocumented neighbors.

The anti-immigrant fervor that gripped California in 1994, has now propelled Congress to pass legislation that would deny essential health and social services to all immigrants, legal and illegal. Even some new citizens will be denied government services under the welfare reform bill passed by Congress.

The final House/Senate Conference Agreement on welfare reform bars almost all immigrants, including current residents from Food Stamps, SSI, and child nutrition programs including WIC and school lunches. It further grants the states the option to bar legal immigrants already here from Medicaid (Medi-Cal) and Title XX (Social Services) block grants. In addition,

the bill would extend the "deeming"* requirements to all federal, state and local means tested programs, with a few exceptions for emergency care and treatment of communicable diseases.

In addition to SSI, Medicaid, AFDC and Food Stamps, other means-tested programs that would be unavailable to non-citizens include family planning clinics, community and migrant health center sliding scale programs, and state and local programs such as CHDP and medically indigent adult programs.

Clearly the federal immigration restrictions will have a severe impact not only on the immigrant population, but also on the providers that serve them. Health centers and public facilities that rely on Medi-Cal reimbursement for otherwise uncompensated care would no longer have sufficient revenue to sustain their operations. Without adequate sources of payments, many health facilities will undoubtedly be forced to close. Again, preventable and treatable conditions will go untreated until the person is sicker and requires more intensive and costly care. When immigrants do finally seek care, they will find that the usual source of care may no longer be in business or able to treat them. Immigrants will increase their reliance on the already strained public facilities which will incur greater losses. The California Senate Office of Research has estimated that the Congressional welfare reform bills will shift over billions to California counties.

A final new barrier to care for new immigrants are the English-only proposals. Should all government funded agencies be required to communicate in English, necessary health and medical information would be denied to many persons, immigrants and citizens alike.

Proposed Medicaid block grants and Medi-Cal managed care will further challenge access for the poor

There are two crucial issues that will determine the future of care for the underserved in the San Joaquin Valley. The first is Congressional activity to repeal Medicaid and turn over the program entirely to the states with reduced funding. The second issue is the conversion of Medi-Cal from fee-for-service to managed care.

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*Deeming means that the income of the sponsor who signs an affidavit of support when the immigrant comes to the United States is deemed to be available to the immigrant, whether or not any support is actually available. This is a particular problem for victims of domestic violence, where the abusing spouse is often the sponsor.

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Medicaid block grants

Congressional Medicaid block grant proposals would cost the San Joaquin Valley over $1.5 billion in anticipated federal revenue to serve low income elderly, disabled, and families with children. Medicare cuts would cost another $2.5 billion to San Joaquin Valley providers.

Congress has embarked on eliminating the 30-year old Medicaid program and turning it into a block grant system. Under the current plan, California will lose in excess of $16 billion from anticipated federal Medicaid funds over the next seven years. (Medicare losses would exceed $27 billion under a different proposal.) The San Joaquin Valley counties would see over $1.5 billion in reduced federal revenue. In addition, under one version of the plan, California would also be able to spend less than its current 50% share of Medi-Cal costs, leading to further reductions in funding.

In addition, eligibility for Medi-Cal would be decided entirely by the State, with no entitlement to benefits for any group of people.* Uninsured children, pregnant women, disabled persons, and the elderly could lose their benefits for a full array of health services, depending on state decision. Migrant and seasonal farmworker families would also be severely affected by these proposals. Only recently have farmworker families been able to take advantage of Medicaid. Previously they were often excluded from coverage because they live in intact, working families, and Medicaid was restricted to families on welfare, the disabled and the elderly. Now poor children and pregnant women have expanded coverage under Medicaid, opening up this vital health coverage to thousands of farmworker families. Medicaid for farmworker families is in jeopardy under the block grant and funding reductions proposals.

*The loss of entitlements in the Medicaid block grant proposals, is in addition to the welfare reform bills, discussed above, that would eliminate immigrant eligibility for Medicaid.

Table 1
7-year losses in Medicaid and Medicare revenue Under Congressional Proposals

County	Medicaid	Medicare
State	$16,526,000,000	$27,540,000,000
San Joaquin Valley	$1,556,517,737	$2,505,300,283
Fresno	$373,702,885	$611,228,080
Kern	$252,473,988	$465,104,961
Kings	$47,024,694	$68,831,795
Madera	$47,207,712	$96,328,756
Merced	$92,764,746	$144,903,900
San Joaquin	$292,857,929	$468,342,257
Stanislaus	$188,157,914	$354,243,256
Tulare	$262,327,869	$296,317,278

Source: Federal Cuts on California's Health, Health Access Foundation, 1995

At further risk with block-granting is the enhanced Medi-Cal reimbursement formula enjoyed by community and migrant health centers that are certified as "federally qualified health centers" or FQHCs. These clinics are reimbursed for Medi-Cal on the basis of their cost of providing the service, rather than on the basis of the fee-for-service schedule. This highly advantageous method of reimbursement is a creature of federal law and may be eliminated with the block grant legislation. Undoubtedly, much of the expansion seen in recent years by San Joaquin Valley health clinics would be eroded.

Despite the impending dismantling of the Medi-Cal program, there is some opportunity to the San Joaquin Valley in block grants. With appropriate guidance California can embark on an approach to expanding eligibility to include the low-income uninsured in a newly configured program. Similar to national health reform, various plans will undoubtedly be debated in the coming months. Principles of reform need to be delineated so that the changes to the program provide adequate protection to those currently served, as well as seek to provide services to the underserved.

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Medi-Cal managed care

> Medi-Cal managed care will be mandatory for beneficiaries in San Joaquin, Stanislaus, Fresno, Tulare and Kern Counties, raising a risk of under service in capitated systems.

The State Medi-Cal program has begun an aggressive push to shift almost half of all Medi-Cal enrollees (approximately 3 million low-income persons) into managed care arrangements by 1996. Five of the San Joaquin Valley counties* have been selected by the State Department of Health Services (DHS) to participate in its managed care initiative. Under the DHS "two-plan" model, Medi-Cal recipients would be given a choice between a "local initiative" plan and "mainstream" plan. The "local initiative" is to be a program of public and traditional providers of care to Medi-Cal patients which develop a managed care system as an option for Medi-Cal patients. The "mainstream" plan is intended to be a private managed care corporation which would be awarded a contract by DHS to provide care to Medi-Cal patients. Medi-Cal beneficiaries would have a choice between the plans.

The development of local initiative plans has been slow and laborious. Currently, San Joaquin is the farthest ahead of the Valley counties and is scheduled to soon enroll recipients. Kern County's local initiative known as Kern Family Health Care will begin enrolling patients in February or March, with services beginning in April. Tulare County is proceeding with its local initiative despite provider concerns about it's low capitation rate of $61 per month. Fresno and Stanislaus Counties are much further behind in getting their local initiatives on line.

"The way managed care is being introduced in Tulare, it will dramatically negatively impact access. The capitation rate in Tulare County is the lowest in the State, and California has the lowest rates in the country." Community health clinic representative.

In late October DHS announced the grantees of the mainstream plans for each of the affected counties. Blue Cross was awarded contracts in Kern, San Joaquin and Stanislaus counties. Foundation Health Plan was awarded Tulare County. The awardee for Fresno County is to be announced later. Appeals from other plans are pending and slowing the process.

*San Joaquin, Stanislaus, Fresno, Tulare and Kern Counties.

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Because low-income consumers are at particular risk of under service in managed care plans, plan administrators must be highly sensitive to low-income issues in order to provide improved access to health care. First, because of their financial status, often due to disability, low-income consumers have greater and often more specialized health needs than the general population. Second, they are frequently unsophisticated in dealing with the increasingly complex health care models which have been previously used predominantly by more affluent, employed populations. Third, many poor persons cannot communicate well in English and the health plans sometimes do not have appropriate translating services. Fourth, the health plans servicing the poor are more likely to be underfinanced by the government funds in an effort to save money. Fifth, Medi-Cal managed care plans are often unaware of the comprehensive child health screening, prevention and treatment requirements of the federal Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) program, and California's corresponding Child Health and Disability Prevention (CHDP) program.* Lastly, Medi-Cal patients are not as likely as privately insured patients to remain in the managed care plans for long periods due to erratic Medi-Cal eligibility, thus reducing the incentives for plans to provide preventive care. Recent studies have also shown that private providers are more reluctant to treat Medi-Cal recipients who are perceived to be less compliant, have more complex social-economic problems, and be more litigious.

Due to the financial incentives in capitated programs, providers and plan administrators cannot be relied upon as the advocates for consumers in managed care. Independent patient advocates, without the financial self-interest that is inherent in pre-payment systems, must be available to consumers on a local level to assist them to understand their rights and responsibilities, and to ensure that the public sources of funding are receiving value for their investment. Managed care has the potential to provide more equitable access to low-income persons, and constant monitoring can make that a reality.

*A recent report comparing EPSDT and CHDP regulations with the Medi-Cal managed care requirements can be obtained from the EPSDT Implementation Project of the Youth Law Center and the National Center for Youth Law (415-543-3307).

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Race/ethnicity is inextricably bound to access

Race is an important predictor of access to health care in the San Joaquin Valley. The communities with poorer access to health care have almost twice the Latino population that than those with better access. Culturally sensitive outreach is essential to overcome this discrimination.

Race is an important issue in health care which cannot be ignored. While the recent O.J. Simpson trial and the political attacks on affirmative action have heightened awareness of the racial divide, we need to be aware that race continues to play a predominant factor in the San Joaquin Valley in determining the access to health care enjoyed by a community. As shown by our data, the communities with poorer access to health care were more heavily Latino than those with better access. The bottom quartile of communities were 42% Latino, compared to 25% in the top quartile.

These findings are consistent with Grumbach, *et al.* (1995) which studied the association of physician supply, community demographics and health outcomes. When analyzing how the distribution of physicians and clinics in the state varies according to income and the racial/ethnic composition of communities, the researchers found that race played a more important role than income. Physician supply was strongly and inversely associated with a community's proportion of African American and Latino residents.

The same study revealed that people living in low-income non-minority areas in California had more health services than did people living in higher-income areas with high proportions of African-American or Latino residents. Minority race, combined with low income level, and often associated with lack of health insurance, resulted in more costly avoidable hospitalizations reflecting the lack of primary care.

Even among the poor insured by Medi-Cal and Medicare, striking differences exist on the basis of race. In a study of elderly Medicare recipients in low-incomes areas of Los Angeles, Dallek and Valdez (1994) found that the poor elderly living in predominantly Latino and African American areas, were more likely to have avoidable hospitalizations than those living in low-income Anglo areas. Conversely, these minority residents had significantly lower admissions for conditions that required referrals by a specialist (e.g. hip/joint replacement, mastectomy, coronary artery bypass, and coronary angioplasty). These findings demonstrate that race and ethnicity exacerbate economic and systemic barriers to health care.

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Because of the grave disparities in health access due to race, we must constantly strive to overcome discrimination. Local programs must target the racial minorities who have traditionally received less service in the health system. Community health workers, who have the trust and respect of local communities, have proven effective in breaking down these barriers and opening up access for all groups.

D. SPECIAL POPULATIONS - MIGRANT AND SEASONAL FARMWORKERS AND SOUTHEAST ASIANS REQUIRE ADDITIONAL ATTENTION

Two marginalized populations with unique health needs require special focus. We present here short summaries of issues affecting migrant and seasonal farmworkers, and Southeast Asian refugees.

Migrant and seasonal farmworkers face additional barriers to health

Farmworkers and their families face serious health and health care problems:

- Farmworkers live and work in dangerous environments
- Farmworkers have less access to health care than the rest of the population
- Farmworkers have special concerns which include issues of cultural and linguistic access, transportation, financial barriers and immigration status.

Half of the State's approximately 800,000 farmworkers live and work in the San Joaquin Valleys. They are poorly paid, work in dangerous conditions, and are exposed to pesticides and other agricultural chemicals. Access to health care is severely limited and utilization is low.

According to the Employment Development Department (EDD), nearly half the State's agricultural workers, or an average of 170,000 workers, are in San Joaquin Valley. During peak harvest in August and September, EDD estimates that there are 240,000 workers. These numbers are generally believed to be low since they reflect full-time equivalent and many farmworkers can only find temporary, seasonal, or part-time work. In addition, the wage information is derived from employer reports, who may underreport their employees and corresponding payroll in order to reduce their employer tax obligation (Villarejo 1993). Generally accepted estimates are that the number of California farmworkers exceeds 800,000, which would place approximately 400,000 in the San Joaquin Valley.

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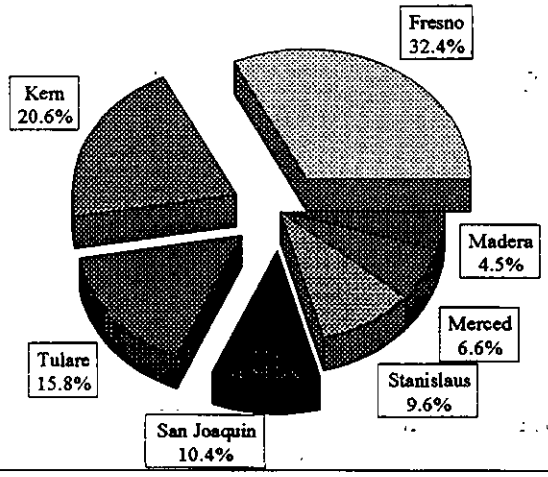
Figure 2

Farmworker distribution
in the San Joaquin Valley 1991



Although migration patterns among farmworkers are difficult to determine, research suggests that most San Joaquin Valley farmworkers permanently reside in the area. According to the National Agricultural Workers Survey (NAWS) four in ten California perishable crop workers migrates during the year. Three of ten "shuttle" back to Mexico during the off season and one in ten "follows" the crops (Villarejo 1993). An earlier study of Tulare County farmworkers found that the farm labor population was almost entirely non-migratory (Mines and Kearney 1982).

Agriculture is the second most dangerous occupation in the United States. In 1990, there were over 22,000 work related disabling injuries to farmworkers in California alone. Each year 40 California farmworkers die on the job. Reproductive hazards are particularly alarming since the agricultural work force is predominantly young, and over a quarter are women.

Farmworkers and their families are in daily contact with the deadly toxins contained in pesticides. Nationally, nearly 4 million farmworkers are exposed to pesticides. Their children are exposed by drift, by living and playing near the fields, by drinking the water, and by hugging their parents who may have residue on their clothes. Childhood cancer clusters have been identified in several San Joaquin Valley farmworker towns, including McFarland and Earlimart. These health threats, including the long-term cancer dangers of low-level pesticide exposure, must be addressed.

Farmworkers, particularly in California's abundant agricultural valleys, lack basic access to affordable health care. A UCLA study team found that a startling 65% of Latino farmworkers are uninsured. This is over 4 times the national average. Even fewer of their dependents are insured. The U.S. General Accounting Office reports that existing rural and migrant health clinics receive only enough funds to meet 15% of the need for services.

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Farmworkers often live and work in isolated rural areas. Many migrate from region to region following the seasons and the crops. They may be based in one state but travel the entire length of the country in a season. With the proposed "balkanization" of Medi-Cal into regional managed care networks, farmworkers and their representatives need to be especially concerned about the transportability of coverage from plan to plan and region to region.

Historically, farmworkers have been low users of health services compared to other populations. Among the reasons for this low utilization pattern are lack of available providers willing to treat them, inability to pay for services, unwillingness to lose pay to seek medical attention unless absolutely necessary, perceptions about disease and the potential benefits of medical care, transportation difficulties, language and cultural barriers, and inconvenient clinic hours.

"Migrants have a real hard time going to see a doctor when they start out in Coachella and go north following the crops two weeks at a time. They are not going to stop all day to see a doctor and then get a prescription which may require sterile water and refrigeration when they are living out of their car." Migrant Health Center health worker

Cultural and linguistic barriers are an additional problem for farmworkers. Not only do many California farmworkers not speak English as their first language, but in recent years more and more farmworkers do not even speak Spanish as their first language. The recent wave of immigrants from Oaxaca and surrounding regions has created a new-underclass of Mixtecos who not only confront the language and cultural barriers of Spanish-speaking immigrants, but also confront additional discrimination from their inability to communicate in Spanish (Bade 1993). An estimated 50,000 Mixtecos live in California (Mydans 1995). One survey found that over one-third of Mixtecos, representing 122 villages, live in Madera County. (Survey of Oaxacan Village Networks, 1995). Health programs must take into account this population's vast cultural diversity and needs.

Financial barriers, including co-payments, deductibles, and out-of-pocket costs have a disproportionate impact on low-wage farmworkers. In 1994, the average hourly earnings of a farmworker in the San Joaquin Valley was $6.36. However, because farmworkers are not able to find full-time work year round, their average annual income is approximately $7500. Critical primary care and preventive health services need to be provided without imposing costs on recipients.

III. Impediments to Improving Health in the Heartland

Immigration issues will have a profound impact on farmworkers. Nine out of ten workers entering farm work are born in Mexico. Although many farmworkers are legal immigrants, many more are undocumented. With the recent passage of Proposition 187, and the federal anti-immigrant initiatives which will deny necessary medical care and social programs to legal and illegal immigrants, and even some new citizens, farmworkers will undoubtedly suffer.

Southeast Asian refugees are often left out of the system

Each year many Southeast Asian refugees and their families settle in the San Joaquin Valley which is home to over 65,000 Lao, Hmong and Mien. Southeast Asian refugees are distributed in the Valley as follows: Merced County (12,000), Fresno County (37,000), San Joaquin County (14,000) and Stanislaus County (4,500).

Southeast Asian health care issues differ from those of the general population. Access problems, such as translation and appropriate care including understanding cultural differences, and health problems are all important areas of concern.

The health issues associated with the Southeast Asian refugee population are heavily impacted by the physical and emotional stresses of war and conflict, a transient lifestyle during relocation, difficulties with assimilating to western cultures and lifestyles, and the cumulative effects of long term untreated chronic medical conditions.

Translation is a significant barrier to health care. A limited number of bilingual staff are available in health care provider settings to Southeast Asian patients. This can be critical during times when full understanding is needed for urgent needs such as surgical consents. Patients who are not English proficient may have difficulties with making appointments and dealing with follow-up care. The use of pharmacy and specialty care services is also made more difficult by lack of translation services, especially when some English medical terms have no equivalent in the Southeast Asian languages.

In order to obtain acceptable care, many Southeast Asians utilize a limited number of providers who make care more accessible, for instance, by not requiring appointments, or who employ Southeast Asian staff to provide at least limited translation services.

Cultural differences are another barrier to health care for many Southeast Asians. Staff may expect patients to conform to office routines and social standards that are comfortable for them, such as not walking in without an appointment or prior telephone call and properly bathing

and dressing children whereas many Southeast Asians have differing expectations and visit multiple providers if they perceive their condition is not being treated effectively.

Other cultural differences including different beliefs about the causes and cures of health conditions are reasons why many are either partially or non-compliant with treatment plans.

Differing expectations also affects the provision of prenatal care to this population. Southeast Asian women do not fully utilize prenatal care and often do not seek care until after the first trimester. Most Southeast Asian immigrant women do not like the physical exam and many did not have similar health care during past pregnancies.

Southeast Asian children have high rates of anemia and dental disease. Prolonged bottle-feeding and lack of breast feeding contribute to these problems. Obesity is seen more often than would be expected in young children. Chronic diseases are being seen with increasing frequency in this population, especially diabetes mellitus (often poorly controlled,) hypertension, and renal failure (unrelated to diabetes). Other common problems seen among Southeast Asians include arthritis or "body pains," and depression. This population has a much greater incidence of hepatitis B carriers and tuberculosis infection than the population as a whole.

E. ENVIRONMENTAL ISSUES ENDANGER PUBLIC HEALTH

Although this report concentrates primarily on health status and the utilization of health services, several categories of health related environmental issues bear discussion as they adversely affect the health of San Joaquin Valley residents. These environmental issues include drinking water, air quality, pesticides usage, lead poisoning, and toxic waste.

Many Valley communities, particularly the smaller, rural towns, rely on well water. Wells are often shallow and poorly constructed making them particularly susceptible to the infusion of groundwater contaminants such as pesticides and other elements such as selenium. The state has identified over 2800 contaminated wells, 1500 of which are contaminated by DBCP. Because of the relative poverty of the areas with poor water, residents lack resources for upgrading their water systems and are thus confronted on a daily basis with poor quality water. In addition, almost all of these substandard water systems do not fluoridate thus depriving the population of an important source of preventive dental care. Despite new State legislation mandating fluoridation, without funds to upgrade, fluoridation may be many years off.

Health access problems are exacerbated by environmental issues such as:

- Poor quality drinking water with few financial resources to upgrade contaminated water supplies;
- Poor ambient air quality, second only to Los Angeles in the United States;
- Heavy reliance on pesticides and agricultural chemicals, which endanger workers and the public, and contaminate the air and water supply;
- Threat of lead poisoning in the poor housing stock, with little screening and surveillance of at-risk children; and
- Siting of toxic waste dumps and hazardous industries in low-income, minority areas.

Air quality in the Central Valley is the second worst in the nation, next to that of Los Angeles. Ozone and particulate matter in the air, much of which is related to automobiles and agriculture, make the air unhealthy. The shape of the Valley, winter weather patterns, and the influx of pollution from the Bay Area keeps air quality out of compliance with health based air quality standards. In contrast to the Los Angeles basin which has seen improvements in air quality in recent years, air quality in the San Joaquin Valley has been steadily eroding.

III. Impediments to Improving Health in the Heartland

Dangerous pesticides and other agricultural chemicals are used more in the Central Valley than anywhere else in the country. Not only does heavy pesticide usage affect farmworkers, their families, and those that live near the fields, but the toxins also lead to the unhealthy ambient air quality, including reports of "acid fog."

Lead poisoning in children was once thought to be an urban, predominantly East Coast phenomenon. We now know that it affects children everywhere, with the largest impact on low-income children whose parents live in older, dilapidated housing. The Centers for Disease Control has stated that lead poisoning is the greatest health threat facing children. Rural children are at heightened risk because of their relatively higher poverty, and the poor condition of the older housing stock in which they live.

Documentation of lead poisoning cases in most of the Central Valley is rare, probably because mandated testing is not done. Because less than 10% of CHDP eligible children under age 6 were tested for lead poisoning in 1993-94, we cannot be certain as the extent of the problem. We do know, however, that a large number of cases have been found in San Joaquin County.

Rural areas also suffer from a disproportionate share of toxic waste dumps and other polluting facilities. Low-income, minority communities are forced to shoulder the unhealthy burdens of the more affluent areas. Kettleman City and Buttonwillow, two small, rural, predominantly Latino, Central Valley communities are the sites of major toxic waste dumps. The entire Valley is affected by these sites as the toxic waste is transported through many towns and cities on its way to the dumps.

IV. FINDINGS ON ACCESS AND HEALTH IN THE SAN JOAQUIN VALLEY

HEALTH ACCESS FINDINGS IN SAN JOAQUIN VALLEY COUNTIES

- All San Joaquin Valley counties, except Tulare, were significantly above the State infant mortality rate, and in the bottom half of the State. Kern County and Fresno County have the worst overall infant death rates in the State, as well as the worst infant death rates for Latinos.
- The San Joaquin Valley has a lower rate of cancer deaths than State as a whole. Of the three cancers we examined - breast, cervical and colo-rectal - only cervical cancer deaths exceeded the State rate. The death rates for all three cancers exceed the Year 2000 Goals.
- The Valley tuberculosis rate of 15.8 cases per 100,000 population, was below the State rate of 16.9, but well above the Year 2000 Goal of 3.5 cases per 100,000.
- The rate of syphilis in the San Joaquin Valley (6.5 cases per 100,000) was worse than the State rate of 5.6, but better than the Year 2000 goal of 10.0 cases per 100,000 population.
- All the San Joaquin Valley counties are better than the State average for AIDS, and all are in the first half of the State rankings since they have the lowest rates in the State.
- All counties exceeded the Year 2000 goals of 3% prevalence for childhood anemia, and four San Joaquin Valley counties (Kings, Madera, Merced, and Tulare) exceeded the state average of 19.3% for children under age five. The 1993 childhood anemia rates exceed the Year 2000 goals by three to ten times in San Joaquin Valley counties indicating poor nutrition and access to preventive screening programs.

IV. Findings on Access and Health in the San Joaquin Valley

A. HOW DO THE COUNTIES RATE ON ACCESS TO HEALTH CARE?

In the various measures of disease and health available for analysis on a county level, we find wide disparities among the San Joaquin Valley counties. San Joaquin Valley rates were better than the state norm on some measures and worse than the state norms in others, indicating diverse need for health services among the population.

1. Infant Mortality

We analyzed the infant death rates for all counties in the Valley for which a reliable rate could be calculated. Because the occurrence of infant deaths is relatively rare, and can fluctuate from year to year, we were not able to calculate reliable rates for Madera County or on a community level.

All San Joaquin Valley counties, except Tulare, were significantly wore than the State infant mortality rate, and in the bottom half of the State. Kern County and Fresno County have the worst overall infant death rates in the State, as well as the worst infant death rates for Latinos.

"Our African-American population, although small in number, comes up much higher in terms of health needs. Some zip codes like Central Stockton or Fresno have terrible indicators. Fetal infant death rates are off the chart! The rate is 26% for Fresno's 93706 zip code." County Maternal and Child Health Director.

The national objective is to have no more that 7 infant deaths per 1,000 live births. The California rate average from 1990-1992, was 6.9 infant deaths per 1,000 live births and 7.5 infant deaths for Latinos. *Unfortunately, all San Joaquin Valley counties, except Tulare, were significantly worse than the State infant mortality rate, and in the bottom half of the State.* Kern County with a rate of 10.0 and Fresno with a rate of 9.4, have the worst rates in the State. These counties also have the worst infant death rates for Latinos (Fresno - 8.8, Kern - 8.6). See Table B-7.

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2. Cancer death rates

The San Joaquin Valley has a lower rate of cancer deaths than State as a whole. The rate of death from all cancers in the San Joaquin Valley was 118.3 per 100,000 population, compared to the California rate of 120.3, and the Year 2000 objective of 130.0 deaths per 100,000. The San Joaquin Valley Counties of San Joaquin, Kern, Merced and Stanislaus exceed the State rate, while the Counties of Fresno, Kings, Madera and Tulare are below the State rate.

The San Joaquin Valley has a lower rate of cancer deaths than State as a whole. Of the three cancers we examined - breast, cervical and colo-rectal - only cervical cancer deaths exceeded the State rate. The death rates for all three cancers exceed the Year 2000 Goals.

We examined three cancers -- breast, cervical, and colo-rectal -- which are easily diagnosable in early stages, and also treatable with good results. High rates in these cancers are in part due to poor access to early screening and care.

The rate of *breast cancer* deaths was lower than the State rate (25.8 per 100,000 population), in all but San Joaquin County. They did, however, exceed the Year 2000 objective of no more than 20.6 per 100,000 women in all San Joaquin Valley counties. One reason for the lower than average rates of breast cancer deaths is probably due in part to the large Latina population in the Valley, since the rate for Latinas (17.8 per 100,000) is almost half that of non-Latino white women (28.0) (Cancer Incidence and Mortality 1994).

The rate of *cervical cancer* deaths exceeded the State rate of 2.8 deaths per 100,000 women in Kern (3.7) and San Joaquin (3.2). The remaining counties were below the State rate, or had too few cases to reliably calculate a rate. All counties exceeded the Year 2000 objective of no more than 1.3.

The rate of deaths from *colo-rectal cancer* in the San Joaquin Valley was at or below the State rate of 16.6 per 100,000 in all counties except Kern which had a rate of 17.3 and Merced which had a rate of 17.0. All counties had rates higher than the Year 2000 goal of no more than 13.2 except Tulare which had a rate of 13.1. See Table 2.

Table 2
County cancer death rates

County	All cancers (age adj.)	Female Breast	Cervical	Colo-rectal
State	120.3	25.8	2.8	16.6
Year 2000	130.0	20.6	1.3	13.2
San Joaquin Valley	118.3	23.2	3.7	15.8
Fresno	116.4	22.5	2.7	14.1
Kern	123.5	23.4	3.7	17.3
Kings	112.6	23.7	*	16.3
Madera	111.4	21.4	*	16.4
Merced	122.9	23.1	*	17.0
San Joaquin	121.1	26.8	3.2	16.3
Stanislaus	123.9	21.8	2.5	15.6
Tulare	114.7	22.6	2.5	13.1

1988-1992 Five year mortality counts and average annual age-adjusted rates per 100,000 population by county.
Sources: County Health Status Profiles (1995); Cancer Incidence and Mortality (1994).

3. Incidence of Disease

Limited data exist on the incidence of disease on a county level. On a community level, data are even less available, and when they are, large fluctuations in the small numbers make the rates statistically unreliable. The following summary of San Joaquin Valley rates for five diseases (tuberculosis, syphilis, AIDS, anemia, diabetes) are derived from the Department of Health Services County Health Profiles. A full table is in Table B-3.

Tuberculosis

The Valley tuberculosis rate of 15.8 cases per 100,000 population, was below the State rate of 16.9, but well above the Year 2000 Goal of 3.5 cases per 100,000.

The recent resurgence of tuberculosis is alarming to public health officials. It is more common among socially disadvantaged populations and those with impaired immune systems. There were an annual average of 456 cases of tuberculosis cases diagnosed from 1991-1993 in the San Joaquin Valley. Overall the Valley tuberculosis rate of 15.8 per 100,000 population was comparable to the State rate of 16.9. No San Joaquin Valley counties met the Year 2000 goal of 3.5 cases per 100,000 population. Kern, San Joaquin, Tulare and Kings fell below the State rate, with Fresno, Merced, Stanislaus above the State average. Madera, with a three year average of 9 cases, did not have sufficient cases to calculate a reliable rate.

Syphilis

The rate of syphilis in the San Joaquin Valley (6.5 cases per 100,000) was worse than the State rate of 5.6, and better than the Year 2000 goal of 10.0 cases per 100,000 population.

As shown in Table 3 below, the rate of syphilis in the San Joaquin Valley (6.5 cases per 100,000) was worse than the State rate of 5.6, and better than the Year 2000 goal of 10.0 cases per 100,000 population. However, Kern, Fresno and San Joaquin Counties, are worse than the State rate, with rates of 6.5, 6.6, and 10.0, respectively. Only Stanislaus County falls below the State rate. The remaining counties had too few cases to reliably calculate a rate.

AIDS

California, with an AIDS incidence rate of 36.7 per 100,000 population, is currently below the Year 2000 objective of 39.2. All the San Joaquin Valley counties are better than the State average for AIDS, and all are in the first half of the State rankings since they have the lowest rates in the State. These crude data do not reflect the disproportionate impact of AIDS on various populations, nor where any increases in the disease are taking place.

All the San Joaquin Valley counties are better than the State average for AIDS, and all are in the first half of the State rankings since they have the lowest rates in the State.

Table 3
Incidence of communicable disease
1991-1993 three-year average annual rate per 100,000

County	AIDS	Tuberculosis	Syphilis
State	36.7	16.9	5.6
Year 2000	39.2	3.5	10.0
San Joaquin Valley	12.5	15.8	6.5
Fresno	16.5	11.3	6.6
Kern	16.5	17.0	6.5
Kings	11.9	24.4	1.2
Madera	12.3	8.7	*
Merced	6.1	14.3	*
San Joaquin	15.2	19.4	10.0
Stanislaus	14.6	8.2	2.8
Tulare	7.0	23.0	*

*not statistically reliable
Source: California Department of Health Services, County Health Profiles 1995

Anemia

The incidence of childhood *anemia* is very high in a number of San Joaquin Valley counties. Anemia is a blood condition which indicates not only a nutritional deficiency, but also the general nutritional and health status of a population, food adequacy, prenatal and well-baby care, and the efficacy of prevention and screening services such as WIC and CHDP.

All counties exceeded the Year 2000 goals of 3% prevalence for childhood anemia, and four San Joaquin Valley counties (Kings, Madera, Merced, and Tulare) exceeded the state average of 19.3% for children under age five. The 1993 childhood anemia rates exceed the Year 2000 goals by three to ten times in San Joaquin Valley counties indicating poor nutrition and access to preventive screening programs

All counties exceeded the Year 2000 goals of no higher than 3% prevalence for childhood anemia, and four San Joaquin Valley counties (Kings, Madera, Merced, and Tulare) exceeded the state average of 19.3% for children under age five. The 1993 childhood anemia rates exceed the Year 2000 goals by three to ten times in San Joaquin Valley counties indicating poor nutrition and access to preventive screening programs such as WIC and CHDP. The incidence of anemia for children under age 5, ranges from a low of 11% in San Joaquin County to a startling high of 31% in Kings County. The State average is 19%. Rates for Latino children were higher than the rate for whites in all Counties except Madera and Tulare (Pediatric Anemia among Low Income Children, 1995). See Table 4.

Table 4
Anemia Incidence per 100,000 Children Ages 1-4 (1993)

County	Anemia incidence (ages 1-4)	County	Anemia incidence (ages 1-4)
State	19.3%	Year 2000	<3%
San Joaquin Valley	7.6%	Madera	17.7%
Fresno	14.7%	Merced	22.9%
Kern	14.7%	San Joaquin	11.4%
Kings	31.0%	Stanislaus	16.3%
		Tulare	19.9%

Source: California Food Policy Advocates

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Diabetes

The frequency of diabetes among the Latino population was a concern raised a number of the focus groups. Since uniform data do not exist on the incidence of diabetes, we obtained the rate of hospital admissions for diabetes, a condition which generally can be controlled in an outpatient setting. A high rate of hospital admissions indicates more severe cases and lack of access to primary care. As reflected in Table 5, six of eight San Joaquin Valley counties had a higher rate of hospital admissions for diabetes than the State as a whole. Kern County's rate (1.26) was more than 25% higher than the State rate (.96).

Table 5
Diabetes Hospitalization Rate
(1990-91)

County	Diabetes hospitalization rate per 100,000 (ages 15 and over)
State	0.96
Year 2000	n/a
San Joaquin Valley	1.05
Fresno	1.00
Kern	1.26
Kings	0.99
Madera	1.05
Merced	1.13
San Joaquin	0.91
Stanislaus	0.92
Tulare	1.12

Source: Western Consortium for Public Health

Access to specialty care (Referral Sensitive Diagnoses)

We report here on hospitalization for referral sensitive diagnoses (REF) on a county level. A high rate of hospital admissions for REF diagnoses would tend to indicate adequate access to specialty care. For example, a individual with severe arthritis of the hip is unlikely to undergo a hip replacement if she lacks access to both primary care and specialty referral services (Dallek 1994).

The rate of referral sensitive diagnoses in the San Joaquin Valley was somewhat higher than the State rate, indicating adequate access to specialty care. However, several counties had low rates, e.g. Fresno, Madera, Merced and Tulare.

Overall, the San Joaquin Valley appeared to have better access to specialty care than the State as a whole. However, there was great variability among the counties with San Joaquin, Stanislaus and Kern Counties having rates above 4.4 admissions per 1,000 population. Fresno, Madera, Merced and Tulare had rates below 3.5 admission per 1,000 persons. See Table 6.

Table 6
Hospital Admission for Referral Sensitive Diagnoses (REF)
(1990-91)

County	Rate of admission per 1,000 population
State	3.55
San Joaquin Valley	3.84
Fresno	3.35
Kern	4.47
Kings	3.65
Madera	3.45
Merced	3.44
San Joaquin	4.70
Stanislaus	4.42
Tulare	3.26

Source: Western Consortium for Public Health

B. SAN JOAQUIN VALLEY COMMUNITIES: ACCESS AND HEALTH

1. How Do Individual Communities Rank in Access to Health Care?

In this section we describe our findings on the health conditions of the 61 community zip code clusters that comprise the San Joaquin Valley. In order to conduct our analysis we developed a Health Access Index which is the composite ranking of the following factors:

1. Hospitalization rate for ambulatory care sensitive diagnoses
2. Late prenatal care
3. Low birth weight
4. Teen births

We first ranked the individual San Joaquin Valley communities using these four variables. We then describe the characteristics of the communities relative to their Health Quality Index

SAN JOAQUIN VALLEY COMMUNITY HEALTH ACCESS FINDINGS

- *San Joaquin Valley residents were hospitalized more often for ambulatory care conditions than the State as a whole.* There is great disparity throughout the Valley, even within cities, as exemplified by the City of Stockton where admission rates are eight times higher in Central Stockton than in East Stockton.
- *San Joaquin Valley women were slightly less likely than California women as a whole to receive early prenatal care.* Over half the women in the rural Fresno County community of Huron received late or no prenatal care.
- *Infants born in the San Joaquin Valley were slightly more likely to be of low birth weight than the State as a whole.* Over 11% of the births in N. Modesto/Salida were low birth weight, compared to a State rate of 5.9%.
- *Teen births were higher than the State average* in all San Joaquin Valley counties, with Kings, Fresno, Yuba, Madera and Tulare having rates of 7% or higher.

score, dividing them into quartiles, from best to worst, for further analysis. Individual community rankings are contained in Appendix B.

a. Access measure

To measure access to primary health care, we used the rate of hospital admissions for chronic conditions that are generally treatable in an outpatient primary care setting (known as ambulatory care sensitive (ACS) diagnoses). The ACS rates presented here are for non-elderly adults.

This variable, along with the inventory of resources, gives an indication of how a community as a whole is served by primary care resources. The variables, however, do not measure how specific segments of a community are served, such as the poor or uninsured. Although many of the impacted communities may have primary care resources, much of the population may have trouble accessing them because of financial, transportation, and other barriers.

i. Avoidable Hospitalization and Ambulatory Care Sensitive Diagnoses (ACS) rankings

San Joaquin Valley residents were hospitalized more often for ambulatory care conditions than the State as a whole indicating poor access to primary care. There is great disparity throughout the Valley, even within cities. In Stockton, for example, the ACS admission rate in Central Stockton is eight times higher than in East Stockton.

Because they report on hospital admissions for conditions which can usually be effectively managed through primary care, ACS rates are generally used as indicators of poor access to primary care resources. Lower admission rates represent better access to care, with 50% of the variation in rates attributable to access. Other factors such as disease rates can also affect the hospital rate. The rates presented here are from Grumbach, *et al.* (1995) who calculated them for non-elderly adults aged 18-64 for the following diagnoses: asthma, chronic obstructive pulmonary disease (COPD), congestive heart failure (CHF), diabetes mellitus (DM), and hypertension (HTN). The rates are presented as hospital admissions per 10,000 population.

Residents in the San Joaquin Valley were hospitalized more often for ambulatory care sensitive conditions than the State as a whole. The ACS rate for the State was 34.3 hospitalizations per 10,000 persons, while the Valley rate was 38.3.

Great disparity throughout the Valley can be seen by the variation in the rates of admission. Even within cities, there was great disparity -- *Central Stockton had an admission rate that was eight times higher than East Stockton.* The ten best and the ten worst communities are listed below in Table 7. This table indicates that ACS admission rates varied almost nine-fold from a low of 10.6 in East Stockton to 89.4 in West Fresno. The rankings for all communities are contained in Table B-1.

Table 7

Ambulatory Care Sensitive (ACS) Hospital Admissions Per 10,000 Population
Ten Best Communities and Ten Worst Communities

Best Communities			Worst Communities		
Community	Rate	County	Community	Rate	County
E. Stockton	10.6	San Joaquin	W. Fresno/Burrel	89.4	Fresno
N. Modesto/Salida	11.1	Stanislaus	Central Stockton	81.9	San Joaquin
Frazier Park	14.2	Kern	S. Stockton/French Camp	66.2	San Joaquin
Kerman/Biola	14.9	Fresno	Delano/McFarland	61.5	Kern
Herndon/Pinedale	15.6	Fresno	Earlimart/Pixley	59.7	Tulare
Arvin/Tehachapi	16.0	Kern	W. Modesto/Empire	56.5	Stanislaus
North Fresno	17.3	Fresno	Mojave	55.1	Kern
Clovis/Sanger	17.5	Fresno	Porterville	54.7	Tulare
The Mountains	17.7	Madera	Inyokern	53.5	Kern
Huron	18.8	Fresno	Chowchilla	52.2	Madera

Source: 1990 Hospital Discharge and Census Data, Grumbach, *et al.* 1995

b. Pregnancy and birth variables

Several variables were available to review access to prenatal care, birth outcome and teen pregnancy issues. We analyzed the data on percent of births with no or late prenatal care (defined as starting in the second trimester), low birth weight (under 2500 grams, about 5.5 pounds) and births to mothers under age 20.

i. Late prenatal care

San Joaquin Valley women were slightly less likely than California women as a whole to receive early prenatal care.

The receipt of prenatal care after the first trimester can indicate a lack of access to prenatal care or a lack of education about the necessity for early and comprehensive prenatal care. The Year 2000 national objective is that only 10% of infants be born to mothers with late or no prenatal care. None of the San Joaquin Valley Communities met that goal. *The average percent of births to women with late prenatal care in San Joaquin Valley was 26.4%, which was slightly higher than the State rate of 24.6%.*

In communities that fell in the bottom quartile, nearly a third or more of women received late or no prenatal care. As shown in Table 8, the percent of births with late or no prenatal care varied four-fold from 12% in Herndon/Pinedale to 51% of women in Huron. Both of these communities are in Fresno County. Detailed findings are in Table B-2.

Table 8

Percent of Births with Late or No Prenatal Care
Ten Best Communities and Ten Worst Communities

Best Communities			Worst Communities		
Community	%	County	Community	%	County
Herndon/Pinedale	12.0%	Fresno	Huron	50.9%	Fresno
N. Modesto/Salida	12.6%	Stanislaus	Avenal	42.1%	Kings
Frazier Park	13.7%	Kern	Woodlake	41.3%	Tulare
Clovis/Sanger	15.2%	Fresno	Los Banos/Dos Palos	40.5%	Merced
North Fresno	16.1%	Fresno	Merced/Atwater	40.1%	Merced
Tracy	16.6%	San Joaquin	Central Stockton	39.1%	San Joaquin
The Mountains	16.8%	Madera	Corcoran	38.5%	Kings
Turlock	16.8%	Stanislaus	S. Stockton/French Camp	37.0%	San Joaquin
Buttonwillow/Elk Hills	16.9%	Kern	N. Visalia/ Exeter/ Farmersville	36.1%	Tulare
Ceres/Keyes	18.6%	Stanislaus	Porterville	35.3%	Tulare

Source: California Department of Health Services, 1993 Birth Certificate Data

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ii. Low birth weight

Low birth weight is associated with poor birth outcomes and is also an indicator of access problems and/or the need for prenatal care. Generally, it is assumed that poor access to prenatal care leads to poor birth outcome.

Infants born in the San Joaquin Valley were slightly more likely to be of lower birth weight than the State as a whole. Over 11% of babies born in N. Modesto/ Salida were of low birth weight.

The Healthy People 2000 Goal for low birth weight is that no more than 5.0% of babies be born with weights under 2500 grams. *In the San Joaquin Valley, 6.0% of babies born in 1993 had low birth weight, compared to 5.9% of babies in California from 1991-1993.* The rates throughout the Valley ranged from a high of 11.3% in N. Modesto/Salida in Stanislaus County to a low of 2.5% in the San Joaquin County community of Woodbridge. See Table 9 below, and Table B-3 for detailed findings.

In the San Joaquin Valley, it is possible that the heavily Latino population mitigates the otherwise expected higher rates of low birth weight babies brought about by late prenatal care. Research has shown Latinas tend to have better birth outcomes even though they may have poorer access to prenatal care.

Table 9

Percent of Infants Born with Low birth weight (Under 2500 g.)
Ten Best Communities and Ten Worst Communities

Best Communities			Worst Communities		
Community	%	County	Community	%	County
Woodbridge	2.5%	San Joaquin	N. Modesto/Salida	11.3%	Stanislaus
The Mountains	2.9%	Madera	S. Stockton/French Camp	10.3%	San Joaquin
Kerman/Biola	4.1%	Fresno	Avenal	9.6%	Kings
Lindsay	4.2%	Tulare	W. Fresno/Burrel	9.5%	Fresno
Lodi	4.4%	San Joaquin	E. Bakersfield/ Lamont	9.0%	Kern
Reedley/Parlier	4.5%	Fresno	Delano/McFarland	7.7%	Kern
Arvin/Tehachapi	4.6%	Kern	Central Stockton	7.6%	San Joaquin
Caruthers/W. Selma	4.7%	Fresno	Oakdale	7.4%	Stanislaus
Buttonwillow/Elk Hills	4.8%	Kern	N. Bakersfield	7.4%	Kern
Porterville	5.1%	Tulare	Southeast Fresno	7.1%	Kern

Source: California Department of Health Services, 1993 Birth Certificate Data

iii. Births to teens

Births to teens is an indicator for high risk pregnancy. Teen mothers are less likely than older women to have early prenatal care, to not complete high school, and to spend a portion of their lives on welfare. High teen birth rates also indicate a lack of effective sex education, family planning and other social services

Births to adolescents (under 18) were higher than the State average in all San Joaquin Valley counties. Kings, Fresno, Madera and Tulare Counties had rates of 50% higher than the State average.

All San Joaquin Valley counties are well above the State rate of 4.6% of all births to adolescents (ages 17 and under) with Kings, Fresno, Madera and Tulare having rates of 7% or higher.

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Our ranking of San Joaquin Valley communities shows an average rate of births to teens (under age 20)* of 16.8%, ranging from 24.8% in urban Fresno to 5.2% in Bakersfield. Teen births are concentrated in Fresno County (with 6 communities in the bottom quartile), and Madera (two of their three communities in the bottom quartile). See Table 10 below and Table B-4 for detailed findings.

Table 10

Percent of Births to Teens
Ten Best Communities and Ten Worst Communities

Best Communities			Worst Communities		
Community	%	County	Community	%	County
Frazier Park	5.2%	Kern	W. Fresno/Burrel	24.8%	Fresno
Herndon/Pinedale	8.9%	Fresno	Kerman/Biola	24.4%	Fresno
Tracy	9.2%	San Joaquin	Avenal	23.6%	Kings
The Mountains	9.2%	Madera	S. Fresno	23.4%	Fresno
Woodbridge	9.6%	San Joaquin	Shafter-Wasco	22.0%	Kern
N. Modesto/Salida	9.8%	Stanislaus	Central Stockton	21.9%	San Joaquin
Waterford/Hughson	10.7%	Stanislaus	Taft	21.6%	Kern
Ceres/Keyes	11.1%	Stanislaus	Lindsay	20.6%	Tulare
Mojave	11.6%	Kern	E. Bakersfield/ Lamont	20.4%	Kern
Buttonwillow/Elk Hills	11.8%	Kern	Madera	20.1%	Madera

Source: California Department of Health Services, 1993 Birth Certificate Data

*Data for births to adolescents (under age 18) were not readily available on the community level; however, data indicating births to teens (under age 20) were available and are reported here.

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Health Access Index Ranks

The rankings for the various health indicators discussed above show great variability within communities, making it difficult to present a cohesive picture of a community or an analysis of the San Joaquin Valley. In order to provide a composite ranking of the communities, we used the Health Access Index and averaged the ranks for the four variables into a single score. Those communities in the first quartile had the best overall scores, and those in the fourth quartile had the worst overall score. The ten best and ten worst communities on the Health Access Index are listed in Table 11 and details are provided in Table B-5.

Our analysis showed that those communities who ranked the worst in our Health Access Index were more likely to:

- be poor,
- have a higher percent of Latino residents,
- have a greater percent of Medi-Cal recipients, and
- have higher incidences of AIDS, TB & syphilis

Conversely, the communities in the top quartile were more likely to have a wealthier population, fewer Latinos, and fewer Medi-Cal recipients.

The age of the population, as measured by both percent of children and seniors did not affect the outcomes. The rural or urban designation of the community did not significantly affect access.

Table 11
Health Access Index
Ten Best Communities and Ten Worst Communities

Best Communities		Worst Communities	
Community	County	Community	County
The Mountains	Madera	Central Stockton	San Joaquin
Frazier Park	Kern	Avenal	Kings
Herndon/Pinedale	Fresno	S. Stockton/French Camp	San Joaquin
Lodi	San Joaquin	E. Bakersfield/Lamont	Kern
Buttonwillow/Elk Hills	Kern	W. Fresno/Burrel	Fresno
Clovis/Sanger	Fresno	Earlimart/Pixley	Tulare
North Fresno	Fresno	Chowchilla	Madera
Arvin/Tehachapi	Kern	Delano/McFarland	Kern
Tracy	San Joaquin	Shafter/Wasco	Kern
Reedley/Parlier	Fresno	Tulare	Tulare

*The Health Access Index was calculated by combining the ranks for avoidable hospital admissions, late prenatal care, low birth weight, and teen births.

2. What are the relationships between access to health care and other indicators?

To learn more about the types of communities in each quartile, we compared the community Health Access Index rankings to demographic characteristics such as income, ethnicity, rural or urban character, Medi-Cal population, and three communicable diseases.

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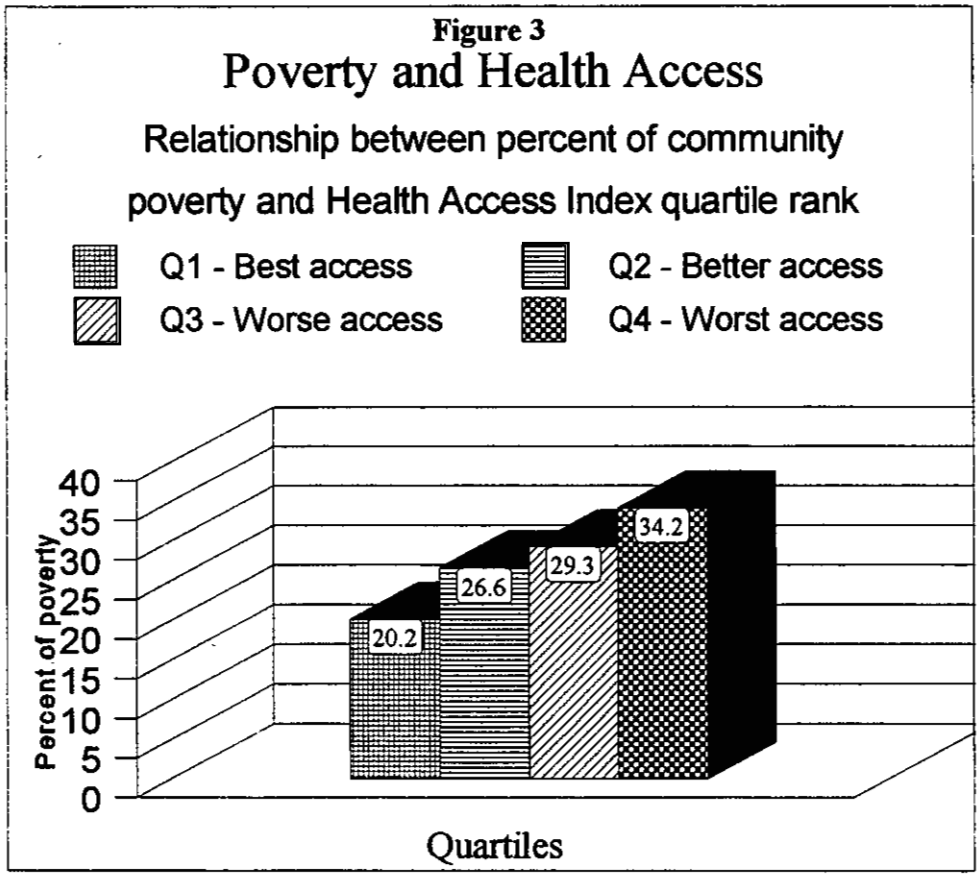
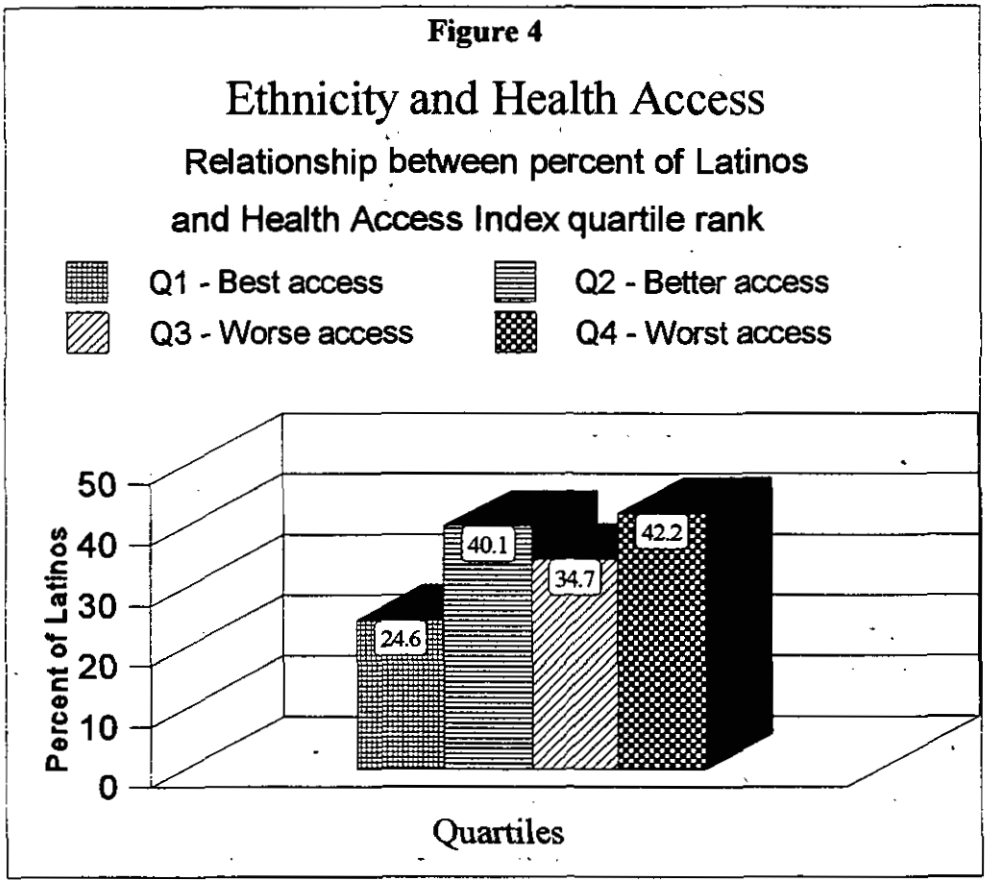
Figure 3



We analyzed the rankings to assess if our assumption that communities with poorer access generally had lower incomes. The data supported this assumption, as shown in Figure 3. *There was a direct relationship between the quality of health access and household income.* As health access worsened, the percent of households with incomes lower than $15,000 per year (approximate poverty level for a family of four) increased. The percent of poor families in the fourth quartile, was almost 70% higher than the communities in the first quartile.

Figure 4



Since San Joaquin Valley Latinos are more likely to work in low-paying jobs that do not offer health insurance we believed that their health access would also be poor. As shown in Figure 4, communities with the worst access (Quartile 4) had nearly 70% more Latinos than communities with the best access (Quartile 1). Conversely, communities with good access (Quartile 2) had a higher percent of Latinos than those with fair access (Quartile 3).

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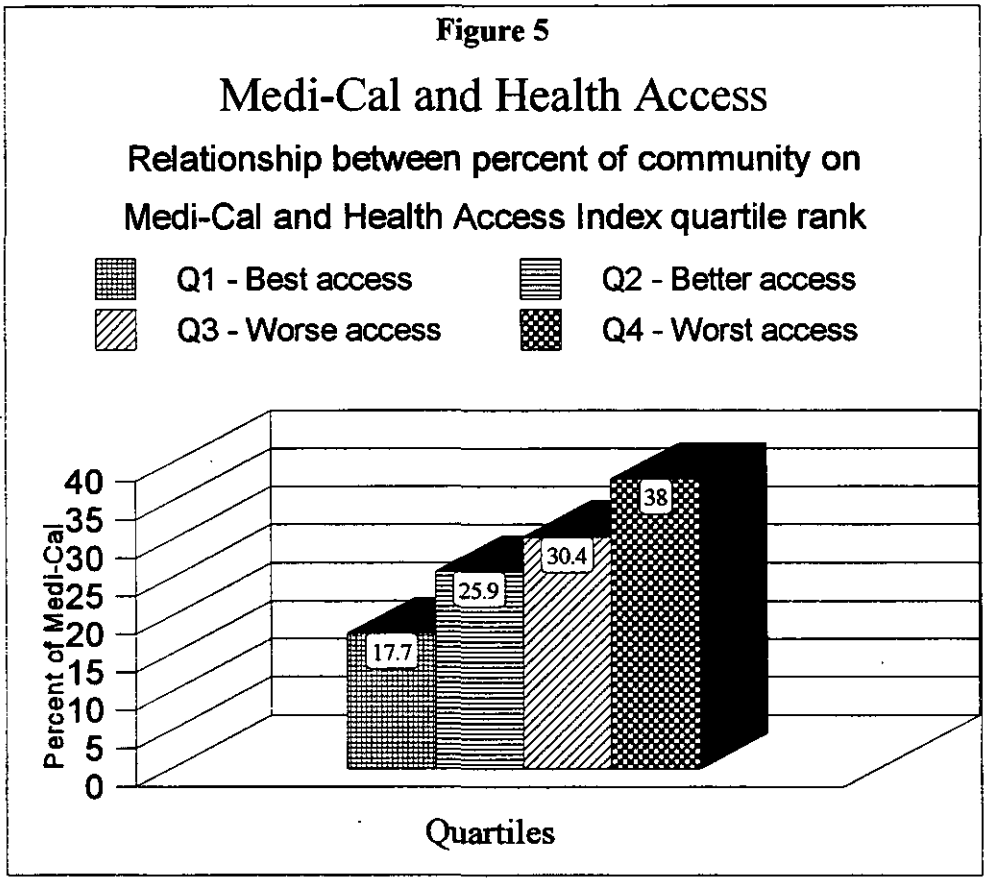
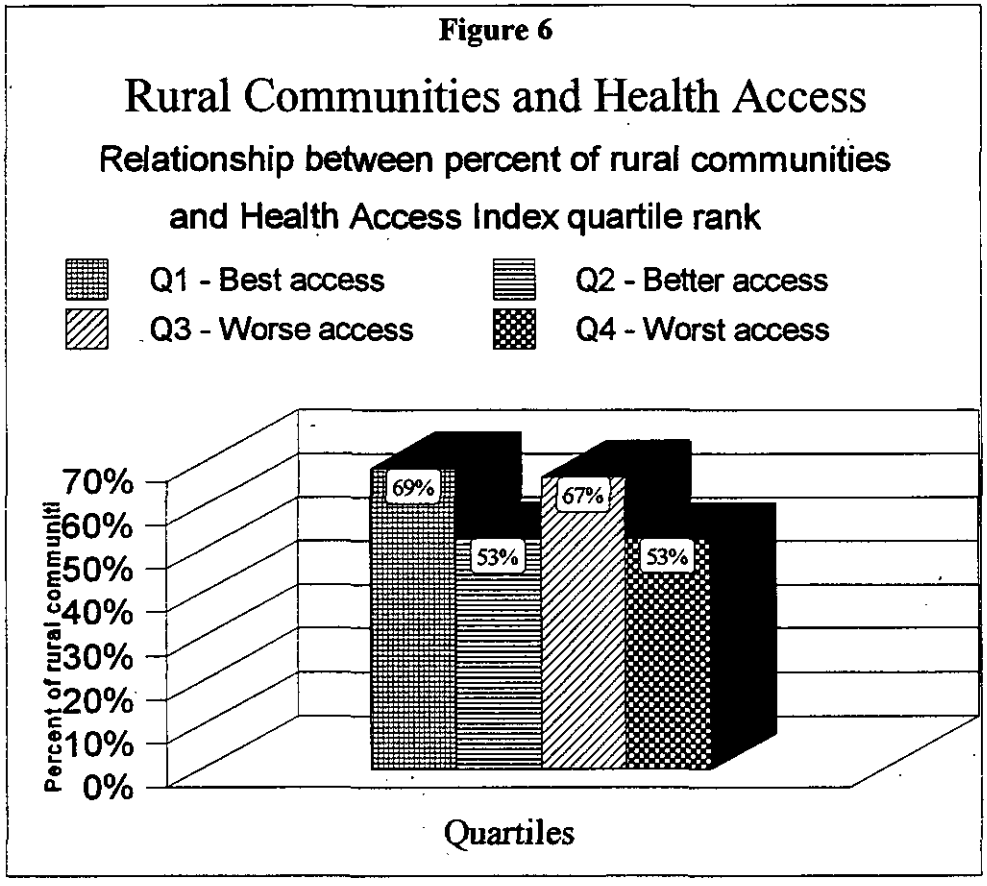
Figure 5



We hypothesized that those communities with poorer access to care would have a higher percentage of persons on Medi-Cal. We used 1994 Medi-Cal figures, and 1990 Census population figures to determine the percent of population on Medi-Cal. We could not account for population growth since 1990, since updated population estimates are not available on a community level.

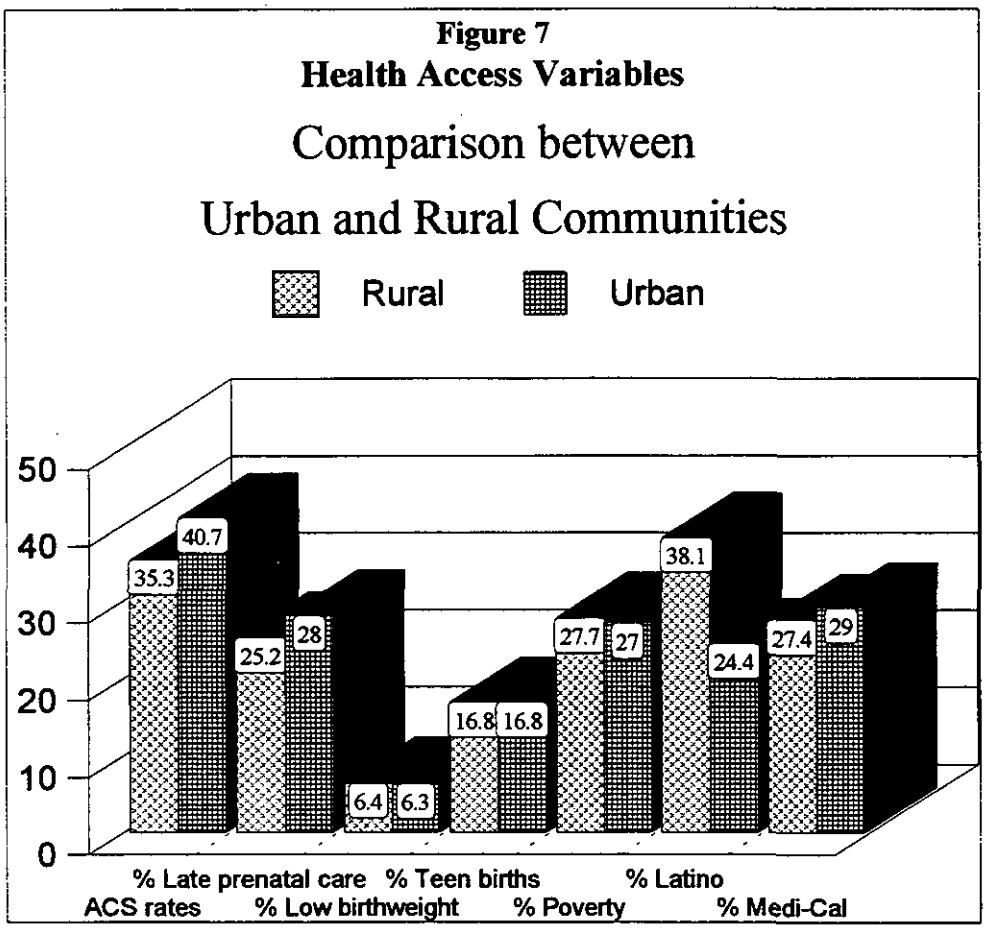
The data show a direct relationship between the percent of Medi-Cal eligibles and poorer access to care (See Figure 5). Those communities with the worst access (Quartile 4) had more than twice the percent of Medi-Cal recipients than communities with the best access (Quartile 1).

Figure 6



Our hypothesis had been that rural communities had poorer access to health care than more urban communities. To determine if this were true we performed several analyses. First, we compared the communities on the basis of whether they had been classified as urban or rural by Office of Statewide Health Planning and Developments (OSHPD). We then compared rural and urban communities to determine differences in the key variables that composed the Health Access Index: ACS rates, late prenatal care, low birth weight, and births to teens. In addition we compared rural and urban communities on the basis of percent of poverty population, percent of population on Medi-Cal, and percent of Latino residents.

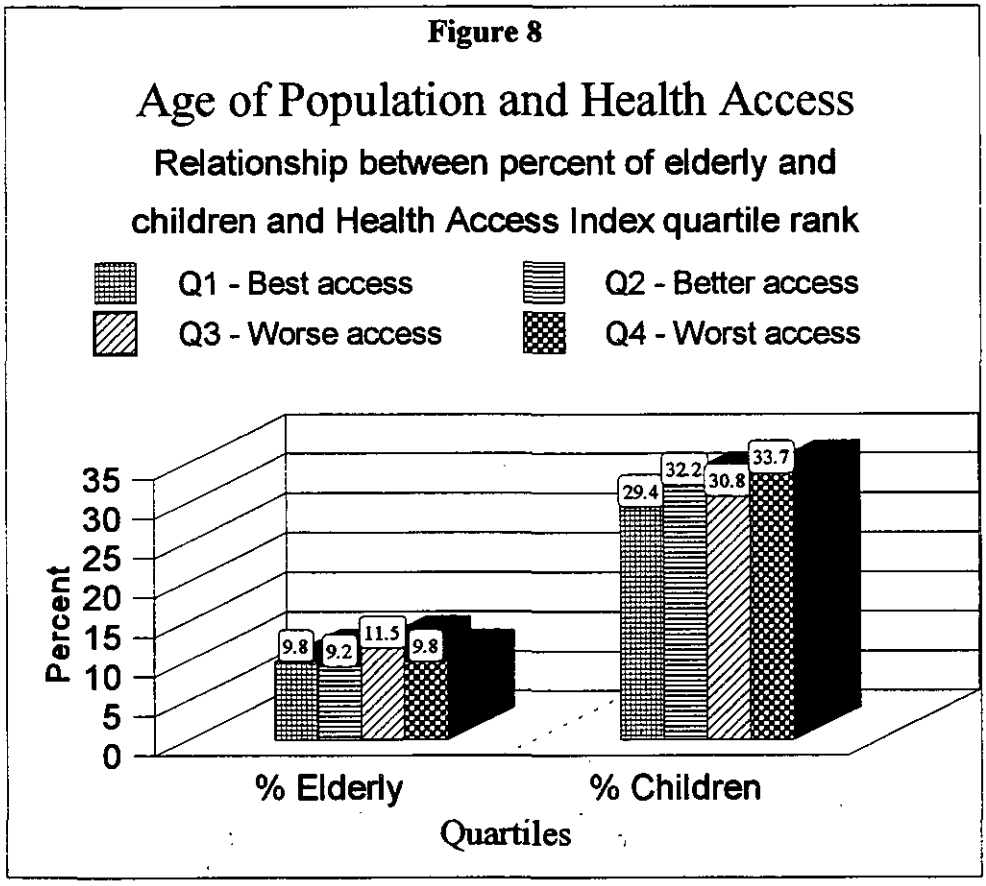
Figure 7
Health Access Variables



As shown in Figure 6, the data do not support the assumption that those communities with poor access were more likely to be rural. Indeed, the communities with the best access (Quartile 1) had a higher percent of rural communities than any other quartile.

When comparing the various health and demographic indicators (Figure 7), we find that the differences between rural and urban communities to be small. The percent of births with late prenatal care, of low birthweight and to teens, as well as the rates of poverty and the Medi-Cal eligibility were very similar for both urban and rural areas. Hospital admissions for ambulatory care diagnoses were lower in rural areas, indicating either better access to primary care or possibly very poor access to hospital care. Rural areas were more heavily Latino than urban areas.

Figure 8



We also tested the ranking to determine what, if any differences there were between the ages of the populations. We had hypothesized that communities with a greater percent of children would have generally poorer access, since the poverty in these communities is often greater. We also believed that a higher senior population might positively affect access since seniors are usually insured through Medicare, and providers are generally willing to treat them. However, we found no significant differences in either the percent of children in the communities or in the percent of seniors (See Figure 8).

Figure 9

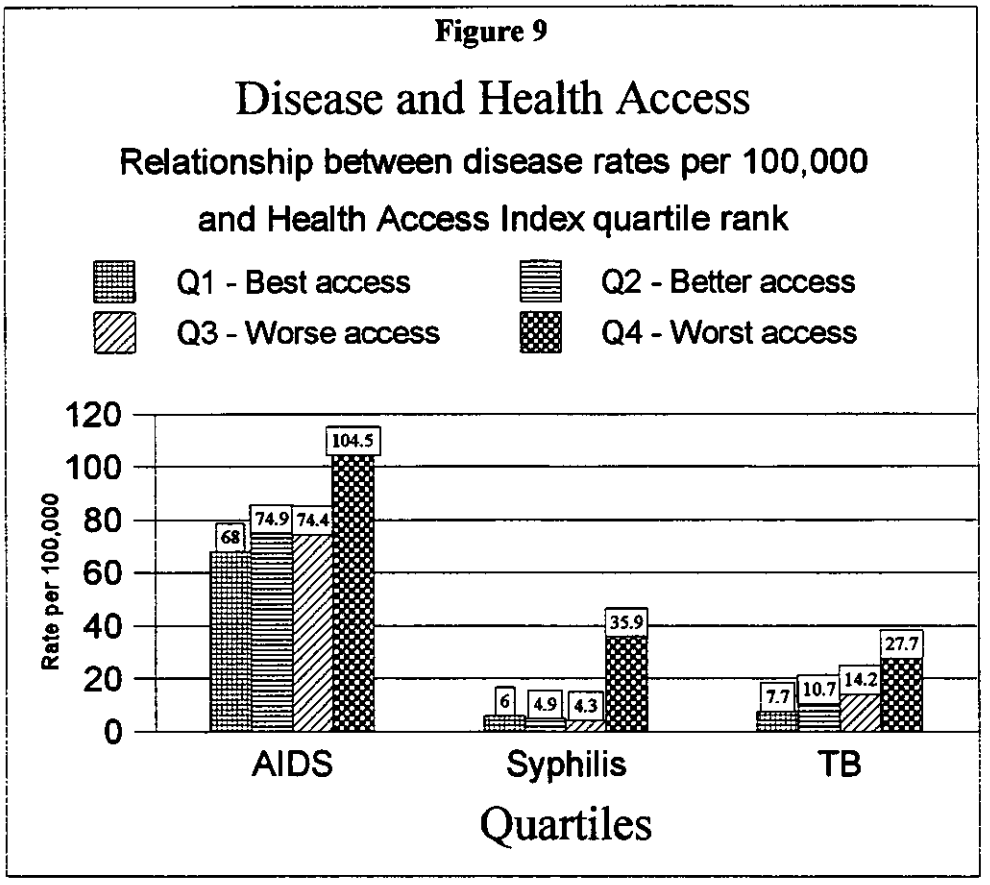


Figure 9 presents the quartile rates for AIDS, syphilis, and tuberculosis to determine whether communities with poorer access had higher disease rates.* We believed that lack of access to primary and preventive care, and lack of effective outreach and education, would correlate with higher disease rates. The data, as shown in Figure 9, bore out this assumption. All three diseases were the highest in those communities with the poorest access. **AIDS** rates were

*For reasons of statistical reliability, we were unable to report rates of AIDS, syphilis and tuberculosis on a community level. However, when aggregated into quadrants, these rates are more reliable.

similar for Quartiles 1, 2, and 3, (68, 74.9, 74.4, per 100,000 respectively) and then jumped to 104.5 in Quartile 4.

Syphilis rates were similar for the first three quartiles (6, 4.9, and 4.3 per 100,000, respectively); but Quartile 4 had a rate (35.9) six times higher than Quartile 1.

Tuberculosis rates increased in an upward fashion from the best to the worst communities, with a large jump from the third to fourth quartile. The rate for TB was more than three times higher in Quartile 4 than in Quartile 1 (27.7 and 7.7 per 100,000 respectively).

Statistical analysis of results

In order to determine the strength of the relationships between our rankings based on the HAI index and the variables analyzed (poverty, Latinos, Medi-Cal eligibility, and age of population), and the statistical significance of the findings, we performed statistical tests using the Spearman rank correlation-coefficient test. In this test a correlation coefficient of 1 would indicate that the two variables are always correlated; a coefficient of 0 would indicate no correlation at all. The results of this analysis confirmed the high positive correlation between poor access to health care and poverty and Medi-Cal eligibility. Weaker correlations were shown between access and Latino ethnicity and percent of children in the population. The percent of elderly in the community had a very weak correlation to health access. See Table 12.

Table 12
Statistical Correlation of Health Access Index

Variable	Spearman Rank Correlation Coefficient (R^2)	Statistical Significance
Poverty	0.7006	.005
Latinos	0.3979	.005
Medi-Cal	0.7043	.005
Children	0.3579	.005
Elderly	-0.0812	NSD

V. RECOMMENDATIONS

Several key considerations drive our recommendations for programs that will assist in improving the overall health of the underserved San Joaquin Valley residents.

- Government health programs will see no new growth in the coming years and major cuts in services and eligibility must be anticipated. The populations that are currently the most impacted by the maldistribution of health services, primarily the poor and Latinos, will see their situations worsen with new restrictions placed on Medi-Cal and immigrant eligibility for programs.

- Structural changes in the delivery of health care, including increased managed care penetration in mainstream and Medi-Cal care, and the proposed closures of several public hospital facilities, will have a significant impact on marginalized populations.

Key considerations:

- Government health programs will see major cuts in services and eligibility.
- Increased managed care and closure of several public hospital facilities, will have a significant impact on marginalized populations.
- Health issues differ significantly among communities and must be confronted on a local level.
- Race and poverty are primary indicators of health care access; culturally sensitive programs are critical.

- Issues of health care status and access differ significantly from community to community and must be confronted on a local level. Local community programs to improve the health of residents are highly effective in reaching out to populations who would otherwise be left out of the health system.

- Race and poverty are the primary indicators of health care access. Culturally sensitive programs geared to specific populations are critical to improved health for these populations.

V. Recommendations

With these key issues in mind, and with the help of our local advisory committees composed of medical providers, social services providers, and community advocates, we have developed a health improvement program with five major components:

- Community health "promotores"
- Health cross-referral pilot project
- Child health stakeholders conference
- Medical transportation policy initiative
- Dissemination of health data and policy advice to communities and providers

A. COMMUNITY HEALTH "PROMOTORES"

Local community based programs provide the most effective health care outreach and community education. Research has shown that community health workers can increase access to care and facilitate appropriate use of services through outreach and cultural linkages to the community and providers; provide cost-effective health education; and improve quality by assisting in patient-provider communication (Witmer 1995).

Community Health "Promotores"

We recommend a program of bilingual/bicultural community health "promotores" for each of the San Joaquin Valley counties.

We recommend a program of bilingual/bicultural community health promoters/advocates for each of the San Joaquin Valley counties to work with local community groups and individuals on reducing barriers to health care, and promotion of preventive programs and healthy behaviors. Promoters would strive to make the health systems more accessible to low-income families and farmworkers, and more accountable to the community by providing information on programs and services, educating governmental and community groups such as social services agencies, health care providers, churches, social groups, etc., and convening meetings of these agencies to collaborate on health promotion programs.

V. Recommendations

In addition to geographically based "promotores" in each county, an additional community worker is needed to work with more marginalized groups of Mixtecos and Southeast Asian immigrants.

"You have to gain people's trust first before you can do anything for them." San Joaquin Valley County Supervisor.

The "promotores" would use the data and community fact sheets developed by the project to work with the communities to identify: 1) gaps in the delivery system, 2) potential services to fill those gaps, and 3) public officials responsible for those services. Through local community education, these community groups would be empowered to seek assistance from local and state public health officials, providers, and funding sources.

While the "promotores" will be selected from their communities and work locally, they will also collaborate regionally through training sessions, regular meetings, sponsorship of regional conferences, electronic communications, and a regional newsletter. Through a community presence of informed and involved health advocates, we will be able to quickly disseminate national and state information to the local level. Community health workers would initiate monthly meetings of key stakeholders to discuss community concerns, changes in the health delivery system, and integration of community resources.

With time and effort, the "promotores" can gain the trust of their communities, educate them about the need for improved health programs and behavior, and work with them to create local community solutions. Many of the barriers, such as transportation, knowledge, and cultural impediments, can be removed through local planning and action. Public officials and health providers can be made aware of the needs of different communities and can prioritize existing local resources to meet those needs.

Community involvement is critical in this time of changing government health systems. With increased local control and responsibility being passed on to the local level, communities can have a greater influence in the allocation of resources to ensure that they are not left out of the system.

B. HEALTH CROSS-REFERRAL PILOT PROJECT

Health Care Cross-Referral Pilot Project

We recommend a pilot project which would establish a system of cross-referrals to health programs by other government funded programs with which low-income persons come in contact.

One of the greatest gaps in the San Joaquin Valley's health care system comes from people not knowing about available programs and services. A wide array of public programs exist throughout the San Joaquin Valley, but these are highly fragmented and focus on different populations and services. Many people only have limited contact with the government, and are not informed about the range of available government services. With increased information and referral when a person first makes contact with a public agency, those in need of services can have an easier time accessing the various programs available to them.

There are many missed opportunities for reaching out with help on existing health programs. We propose to establish a pilot project, in one or more counties to identify the existing health programs, determine where people go for other non-health services (e.g. unemployment offices, welfare departments, educations institutions), develop local resource material, enlist service providers and public officials, train public employees, and provide ongoing support and material for distribution.

This pilot project would establish a system of cross-referrals to health programs by other government funded programs with which low-income persons come in contact. For instance, when a farmworker is laid off and applies for unemployment compensation at the Employment Development Department, he or she would receive information of available sources of health coverage (e.g. Medi-Cal or the county medical programs), or family preventive services (e.g. CMSP, WIC). The same types of referrals would be made for workers who are injured and are in the workers compensation system. As a final example, parents of a child enrolled in Head Start or in the school system, would receive information about services available to the entire family, including immunizations for younger sibling, and senior nutrition programs for older relatives.

C. CHILD HEALTH STAKEHOLDERS' CONFERENCE

Child Health Stakeholders' Conference

We recommend a summit of the San Joaquin Valley stakeholders in child health to collaborate on strategies for confronting the threats to children's health and the CHDP program.

One of the most extensive health programs currently available to all low-income children, regardless of a parent's work or immigration status, is the state CHDP (Child Health and Disability Prevention) program. As described above, CHDP is California's version of the mandatory Medicaid component called the EPSDT (Early and Periodic Screening Diagnosis and Treatment) program. California meets its federal Medicaid requirements through its county-based CHDP programs. It also uses tobacco tax money to provide health screening and limited treatment to non-Medi-Cal eligible low-income children.

As shown in this report, CHDP is facing serious challenges. It is reaching less than 30% of eligible children in the San Joaquin Valley. A number of services such as dental and mental health are unobtainable in many areas. Medi-Cal managed care plans and private practitioners have not received sufficient guidance on the appropriate level of services required to meet the CHDP requirement. Private providers are not able to obtain authorization for the full array of treatment services. In addition, the Governor's CalReach proposal could eliminate CHDP and the federal Medicaid block grant proposals would remove any EPSDT minimum requirements.

The San Joaquin Valley stakeholders in child health need to be brought together to collaborate on strategies for confronting the threats to children's health. This conference, which recently received the endorsement of the San Joaquin Valley CHDP providers, would bring together the diverse stakeholders including medical and dental providers, public health officials, schools and Healthy Start programs, clients, child development specialists and advocates to strategize on methods to improve child health services within existing programs. We envision a full-day conference with plenary sessions, different tracks for medical, policy and community issues, and a series of recommendations to be implemented in the ensuing months through committees and alliances formed at the conference. Diversity in representation could be obtained through offering continuing education units, appropriate translation services, and child care.

D. POLICY INITIATIVE ON MEDICAL TRANSPORTATION

Every focus group mentioned lack of transportation to available services as a major impediment to people receiving preventive services and medical care. Little policy work has been done on health transportation problems leaving local communities without guidance on designing effective systems. Although some communities have developed innovative volunteer transportation systems and some providers have developed transportation systems, these creative efforts meet only a small part of the problem.

Policy Initiative on Medical Transportation

We recommend a program on transportation which would investigate community options for improving transportation services and research legal and regulatory requirements for these programs.

Transportation barriers exist despite coverage of this service in the Medi-Cal program. Few social service agencies and community workers are aware of the availability of transportation assistance, nor is there any enforcement activity in regard to transportation.

The proposed program would investigate community options for improving transportation services, and research the legal and regulatory requirements of these programs. The project, with the assistance of providers, planners, local government, volunteer groups and community health workers, will study innovative transportation programs, collaborate to replicate these programs, and adapt programs and policy initiatives to benefit transportation scarce communities.

E. POLICY AND DATA ADVICE TO COMMUNITY AND PROVIDERS

This report summarizes much of the health data that is available on a community basis for the San Joaquin Valley. Additional data will become available in the coming months as the State and managed care organizations develop more sophisticated data collection systems. Furthermore, with the major regulatory changes in poor people's programs and the devolution of the responsibility for these programs to the local

Policy and Data Advice to Community and Providers

We recommend a program to act as a resource and clearinghouse to provide community providers, public officials, and local groups with statistical data and policy analysis on changes and initiatives that are affecting the health of their communities.

level, accurate and up-to-date analysis of program statistics and the health of communities will be critical.

We have already developed drafts of "user-friendly" community fact sheets designed to educate communities about their health care. They can be found in Appendix E. These fact sheets, when refined and finalized for all 61 San Joaquin Valley communities, can serve as "report cards" on the communities' health and the progress made to improve the communities' health care delivery system.

We propose to act as a resource and clearinghouse to provide community providers, public officials, and local groups with statistical data and policy analysis on changes and initiatives that are affecting the health of their communities. With a network of researchers, community outreach workers and policy analysts working on local, state and national issues, we can provide an invaluable service to inform key stakeholders through electronic communications (HandsNet, fax reports, etc.), newsletters, forums and conferences. These communications will keep rural California communities up-to-date on developments and strategies, and provide a forum for collaborative efforts.

VI. CONCLUSION

This report has presented the first comprehensive view of access to care in the San Joaquin Valley. Through community-based data, focus groups and key informant interviews we have identified those areas where access to care for the uninsured and underserved populations of the San Joaquin Valley falls short of Healthy People 2000 goals, as well as established State norms.

The picture painted by the health indicators and the information gathered in our research is incomplete; much remains to be known. Yet, this study provides greater definition to what we do know about the health of San Joaquin Valley residents.

Overall what we found was that the health and the delivery systems within the San Joaquin Valley are as varied as the populations served by these systems. Some areas and populations are well served and have good access and health outcomes, comparable to California as a whole. Other areas have very poor transportation and delivery systems, underutilization of existing sources of care, and inadequate financing of health programs, resulting in high rates of disease, poor birth outcomes, poor nutrition, and ill health. Immigrants in particular face cultural and linguistic barriers which severely impede access.

In some instances, the findings surprised researchers. Health access in rural communities was not significantly different than in more urban communities. This lack of disparity is undoubtedly due in large part to the growing network of community and migrant clinics established in rural areas. On the other hand, great disparities existed within counties, and even within cities. For instance, the rate of avoidable hospitalizations is eight times higher in Central Stockton than in East Stockton.

Communities also differed dramatically in their approaches to health access issues. In San Joaquin County a collaborative effort has resulted in the highly successful Su Salud health fair which has expanded to providing critical outreach and follow-up services. In Tulare County, a local hospital has funded the free Good News clinic which provides services to the uninsured. In Fresno County, the city of Parlier has a comprehensive community health center and jointly sponsors an exercise program with the County which targets Latinos at-risk of diabetes.

We have learned that the Valley is not one homogenous region; significant variations exist in the health of Valley communities. Our findings point to the need to go beyond analysis of

regional or even county data. Only by looking at communities can we understand what impediments to health care exist and how to tear down those barriers. Only by working with communities can we devise strategies to most effectively use scarce health care dollars to make lives better for those who toil in the heartland.

We were able to provide individual communities with information about themselves so they can make their own conclusions and begin to chart their own futures. Further refinement of the local data will allow communities to take charge of their own systems of care, and also allow funders and providers to target scarce resources to the communities most in need. More reliable and up-to-date data on availability of primary care services, hospital admissions, disease rates, demographics, and health status will provide additional information to assist in this ongoing process.

We have proposed five community-based programs which, in the absence of new public programs and funding, will assist in making access to health services more universally available for all the residents in the Valley. They involve local approaches to what are local problems. Through community involvement with culturally competent programs, we can provide a healthier life for everyone in the Valley.

Agriculture in the San Joaquin Valley is the envy of the world. Yet, care for those that make this industry work - farmworkers and their families - is a national disgrace. We can and must do better.

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APPENDIX A - DESCRIPTION OF DATA

Demographics:

The percentage of *Latinos* in a community was determined using 1990 census data.

Poverty is reported here as family income of less than $15,000 per year using the 1990 census, as reported in Grumbach, Primary Care Resources and Preventable Hospitalizations in California. An income of $15,000 is approximately the current federal poverty level for a family of four.

Rural and urban status were determined by the following rule: An urban zip code cluster is an cluster with a population density of 250 or more per persons per square mile or any town over 20,000. All other clusters are rural. This designation was used in Primary Care Resources and Preventable Hospitalizations in California which in turn based its determination on the Office of Statewide Health Planning and Development Medical Service Study Area designations.

Health Access:

Hospitalizations for *Ambulatory Care Sensitive (ACS)* conditions are those for which hospitalization can often be avoided with adequate primary and preventive outpatient care. An example of an ACS condition is hypertension which, when monitored regularly by a physician, is less likely to result in hospitalization. ACS rates are key indicators of access to health care, and higher ACS rates are closely associated with lack of adequate access to primary care. ACS hospitalizations analyzed here include: asthma, chronic obstructive pulmonary disease (COPD), congestive heart failure (CHF), diabetes mellitus (DM), and hypertension (HTN) for non-elderly adults in 1990. ACS data was provided by the Primary Care Research Center of University of California, San Francisco, and San Francisco General Hospital. These findings were previously reported in Grumbach, *et al.* Rates are reported as hospital admissions per 10,000 persons.

Hospitalizations for *referral sensitive procedures (REFs)*, are those requiring access to and care by a specialist. REF data is an important indicator of access and quality of health care. Patients unable to pay for certain procedures may be referred to specialists less than those who are insured. Referral sensitive procedures include hip/joint replacement, coronary angioplasty and mastectomy. REF data was obtained from the Western Consortium for Public Health using discharge summaries for 1991 and is reported as the number of hospitalizations per 1,000 persons.

The *Health Access Index (HAI)* was developed by the Central Valley Health Access Project for this report. It is the score for each San Joaquin Valley community determined by adding together the community's rank for the following variables: rates for ACS hospital admissions, low birth weight births, late prenatal care and births to teens. The HAI was designed to be a summary score measuring access to primary health care services.

The rate of *Medi-Cal eligibility* was determined using 1994 Medi-Cal data provided by the Department of Health Services. For the community level analysis, 1990 census data were used as the denominator because more recent population projections were not available for all areas. For the county level analysis, 1995 Department of Finance population projections were used for the denominator.

Birth and pregnancy:

High rates of *Births to teens* are viewed as a health problem as teen pregnancies are often high risk and associated with poor prenatal care and unstable social support systems. The county level data on births to adolescents (under age 17) are a three year average percent of births from 1991-1993 as reported County Health Status Profiles, 1995. The community level data on birth to teens (under age 20) are from the California Department of Health Services Center for Health Statistics using 1993 birth certificates.

Infant mortality is an indicator of overall maternal health and access to prenatal and delivery care. The infant mortality rates presented here are three year averages from 1990-1992 of the number of deaths among infants under one year of age per 1,000 live births are reported in County Health Status Profiles, 1995.

Prenatal care is pregnancy-related health care services provided to a woman between conception and delivery. These services aim to prevent poor outcomes for both the mother and baby. Prenatal care helps ensure a healthy birth and can prevent the need for costly health care either at birth or later in life. Numerous studies have demonstrated that early and comprehensive prenatal care reduces rates of low birth weight and infant death. Late prenatal care is defined as the percentage of mothers giving birth who did not begin prenatal care in the first trimester. Data was obtained from the California Department of Health Services, Center for Health Statistics using 1993 birth certificates.

Low birth weight infants are at increased risk of developmental problems and death, and are 40 times more likely to die within their first month than normal weight babies. Moreover, if low birth weight infants survive, they are more likely to suffer complications. These infants are at increased risk of mental retardation, birth defects, growth and developmental problems, visual and hearing defects, delayed speech, autism, cerebral palsy, epilepsy, learning difficulties, chronic lung problems, and abuse and neglect. Low birth weight is a key indicator of the health and welfare of a community reflecting disparities in socioeconomic and educational status, access to early and continuous maternity care, and adequate prenatal nutrition. Low birth weight is defined as weighing less than 2500 grams (5 pounds, 8 ounces). Low birth weight data was obtained from the Department of Health Services Center for Health Statistics using 1993 birth certificates.

Health Conditions:

AIDS rates are increasing disproportionately among women and minority populations. According to Healthy People 2000, to reduce AIDS rates, objectives should target reducing experience with

sexual intercourse among adolescents; increasing condom use among sexually active, unmarried people; increasing outreach and access to treatment programs for intravenous drug abusers; expanding testing and counseling for people at risk; and increasing education in schools and colleges. The data presented here are the three year average annual case rates per 100,000 persons from 1991-1993 as reported in County Health Status Profiles, 1995.

Anemia is a blood condition characterized by a decrease in the number of circulating red blood cells or hemoglobin. Anemia lowers motor and cognitive skills, hindering development in infants. A victim of severe anemia may be fatigued, irritable or hyperactive. Anemia can be caused by undernutrition or poor digestion, and typically resulting from a lack of iron in the diet. Public health officials consider anemia to be a key indicator or yardstick of the general nutritional and health status of a population. Anemia indicates food adequacy, prenatal and well-baby care, and the efficacy of prevention and screening care. Anemia data reported here are the percent of the population affected taken from the California Food Policy Advocates' report, *Pediatric Anemia among Low-Income California Children: Causes, Consequences, Solutions.*

Breast cancer, the most commonly diagnosed cancer among women in nearly all race/ethnic groups, accounts for nearly one of every three female cancer diagnoses in California. Without consistent check-ups and treatment breast cancer can grow out of control and kill. Early detection has an important impact on breast cancer death rates. The Healthy People 2000 goal is to decrease breast cancer deaths to 20.6 per 100,000 women. Health education and increased access to primary care physicians is key to achieving increased breast cancer exams and reducing breast cancer mortality. Data analyzed are five year average annual age-adjusted rates for mortality for female breast cancer per 100,000 women, as reported in Cancer Incidence and Mortality by Race/Ethnicity in California, 1988-1992.

Cervical cancer is nearly totally curable if diagnosed and treated early. According to Healthy People 2000, a Pap test can reduce cervical cancer death rates by an estimated 75%. Increased Pap tests can only be achieved through increased health education and increased access to primary care physicians. Cervical cancer data is indicated in numbers of deaths per 100,000. Data analyzed are five year average annual age-adjusted rates for mortality for cervical cancer per 100,000 women, as reported in Cancer Incidence and Mortality by Race/Ethnicity in California, 1988-1992.

Colo-rectal cancers account for fifteen percent of all cancers in the United States. They are second only to lung cancer in causes of cancer deaths in the United States. Several techniques are available for detection of colo-rectal cancer which is highly curable in its early stages. Because of this, greater health access means greater detection rates and reduced death rates. Environmental factors contributing to the development of colo-rectal cancers include diet (high in saturated fat, low in fiber and possibly low in calcium), advancing age and lack of exercise. Data analyzed are five year average annual age-adjusted rates for colo-rectal cancer deaths per 100,000 persons, as reported in Cancer Incidence and Mortality by Race/Ethnicity in California, 1988-1992.

Diabetes is a condition that is generally controllable in an outpatient setting. Diabetes also disproportionately affects Latinos whose incidence is three to five times that of the general population. Only about half of the population with diabetes is aware of their condition. No reliable community based data on the incidence of diabetes were available. However, diabetes is one of the conditions reported in the *ACS* variable. Hospital admissions for diabetes are also reported separately because of the growing concern over this disease expressed to us at focus group meetings.

The federal Department of Health and Human Services has declared *Lead poisoning* "the most common and societally devastating disease in young children." Lead poisoning can harm virtually every system in the human body. It is particularly harmful to the developing brain and nervous system of fetuses and young children. Elevated blood levels can cause mental retardation, learning disabilities, impaired growth, hearing loss, limited attention span and behavioral problems. At even higher levels, lead poisoning can cause convulsions, coma, death. Lead poisoning can be prevented in two ways. First, excessive lead exposure can be reduced by reducing or eliminating lead in older household paint, bare soil and drinking water. Second, lead screenings by health professionals can prevent extended damage. 1991 State legislation called for the mandatory blood screening of all 'at-risk' children ages 6 to 72 months who were covered by Child Health and Disability Prevention (CHDP) program. We report here on the percent of CHDP's target population that has received a blood test for lead poisoning.

Syphilis cases have increased over 55 percent between 1986 and 1989, to the highest level in the U.S. since the early 1950's. The Healthy People 2000 goal is to reduce the number of syphilis infections to no more than 10 per 100,000 by the year 2000. Syphilis data presented here are three year average annual case rates per 100,000 persons from 1991-1993, as reported in County Health Status Profiles, 1995.

Tuberculosis is caused by bacterial infection and can affect many parts of the body including the pulmonary system, bones and joints, lymph nodes, blood stream, kidneys, ovaries, and skin. The disease can be deadly but is treatable if identified. Recent trends demonstrate a resurgence in tuberculosis due in part to the rise in AIDS, greater numbers of people occupying smaller areas, and reduced control and funding for TB. The socially disadvantaged are most likely to acquire TB. The Healthy People 2000 goal is to reduce the number of TB to no more than 3.5 cases per 100,000 by the year 2000. The data presented here are three year average annual case rates per 100,000 persons from 1991-1993 as reported in County Health Status Profiles, 1995.

Table B-1 - Ambulatory Care Sensitive (ACS) Hospitalization Rates per 10,000

County	Community name	ACS rate per 10,000	Rank	Overall Health Access Index Rank
San Joaquin	E. Stockton	10.6	1	14
Stanislaus	N. Modesto/ Salida	11.1	2	11
Kern	Frazier Park	14.2	3	2
Fresno	Kerman/ Biola	14.9	4	22
Fresno	Herndon/ Pinedale	15.6	5	3
Kern	Arvin/ Tehachapi	16.0	6	8
Fresno	North Fresno	17.3	7	7
Fresno	Clovis/ Sanger	17.5	8	6
Madera	The Mountains	17.7	9	1
Fresno	Huron	18.2	10	26
San Joaquin	Lodi	21.9	11	4
Fresno	Reedley/ Parlier	23.3	12	10
Tulare	Dinuba	24.1	13	18
Kern	Buttonwillow/Elk Hills	24.1	14	5
Fresno	San Joaquin	25.5	15	26
Fresno	Caruthers/ W. Selma	25.8	16	13
Merced	Gustine	29.6	17	28
Kern	Greater Bakersfield	30.8	19	34
Tulare	N. Visalia/ Exeter/ Farmersville	30.8	18	22
Merced	N. Merced Co./ Livingston	31.0	20	16
San Joaquin	N. Stockton	31.1	21	30
San Joaquin	Tracy	31.2	22	9
Fresno	Southeast Fresno	31.3	23	35
Stanislaus	Patterson/Newman	31.6	24	40
Tulare	Woodlake	31.6	25	19
Tulare	Visalia	32.8	26	32
Kern	Taft	33.7	27	49
Kings	Hanford/Lemoore	34.2	28	28
Tulare	Lindsay	34.9	29	36
Fresno	Coalinga/ Mendota	37.0	30	31
San Joaquin	E. Lodi	37.2	31	36
Stanislaus	Turlock	38.3	32	17
Fresno	Selma/ Fowler	38.5	33	33
San Joaquin	Manteca/Lathrop/Escalon/Ripon	39.3	34	20
Madera	Madera	39.7	35	42
San Joaquin	Woodbridge	39.8	36	12
Merced	Merced/Atwater	39.8	37	41
Fresno	Central Fresno	39.8	38	43
Stanislaus	Modesto	41.2	39	21
Stanislaus	Waterford/Hughson	41.5	40	15
Stanislaus	Riverbank	41.9	41	36
Kern	N. Bakersfield	42.3	42	51
Fresno	S. Fresno	42.3	43	49
Merced	Los Banos/Dos Palos	43.8	44	47
Stanislaus	Oakdale	44.8	45	39
Tulare	Tulare	45.5	46	52
Kings	Avenal	48.1	47	60
Kern	Shafter/Wasco	48.5	48	55
Kings	Corcoran	48.9	49	46
Stanislaus	Ceres/ Keyes	50.0	50	22
Kern	E. Bakersfield/Lamont	51.2	51	58
Madera	Chowchilla	52.2	52	53
Kern	Inyokern	53.5	53	44
Tulare	Porterville	54.7	54	44
Kern	Mojave	55.1	55	22
Stanislaus	W. Modesto/ Empire	56.5	56	48
Tulare	Earlimart/ Pixley	59.7	57	56
Kern	Delano/McFarland	61.5	58	54
San Joaquin	S. Stockton/French Camp	66.2	59	59
San Joaquin	Central Stockton	81.9	60	61
Fresno	W. Fresno/ Burrel	89.4	61	57

Source: Grumbach, K., *et. al.*, Primary Care Resources and Preventable Hospitalizations in California, 1995

Table B-2 - Percent of Births with Late or No Prenatal Care

County	Community name	% Late or no Prenatal Care	Rank	Overall Health Access Index Rank
Fresno	Herndon/ Pinedale	12.0%	1	3
Stanislaus	N. Modesto/ Salida	12.6%	2	11
Kern	Frazier Park	13.7%	3	2
Fresno	Clovis/ Sanger	15.2%	4	6
Fresno	North Fresno	16.1%	5	7
San Joaquin	Tracy	16.6%	6	9
Madera	The Mountains	16.8%	7	1
Stanislaus	Turlock	16.8%	8	17
Kern	Buttonwillow/Elk Hills	16.9%	9	5
Stanislaus	Ceres/ Keyes	18.6%	10	22
San Joaquin	Lodi	18.6%	11	4
Fresno	Southeast Fresno	19.8%	12	35
Fresno	San Joaquin	20.2%	13	26
San Joaquin	Manteca/Lathrop/Escalon/Ripon	20.3%	14	20
Stanislaus	Waterford/Hughson	20.7%	15	15
Stanislaus	Modesto	20.8%	16	21
Fresno	Central Fresno	21.1%	17	43
Stanislaus	Oakdale	21.4%	18	39
Fresno	Coalinga/ Mendota	21.6%	19	31
Kern	Mojave	21.9%	20	22
Stanislaus	Patterson/Newman	22.2%	21	19
Fresno	Reedley/ Parlier	22.9%	22	10
Fresno	S. Fresno	23.3%	23	49
Kern	Greater Bakersfield	23.7%	24	22
Fresno	Selma/ Fowler	24.1%	25	33
Fresno	W. Fresno/ Burrel	24.5%	26	57
Madera	Madera	24.6%	27	42
Fresno	Caruthers/ W. Selma	25.2%	28	13
San Joaquin	N. Stockton	25.4%	29	30
Kern	Arvin/ Tehachapi	25.6%	30	8
Merced	N. Merced Co./ Livingston	26.0%	31	16
San Joaquin	Woodbridge	26.1%	32	12
Stanislaus	Riverbank	26.3%	33	36
Stanislaus	W. Modesto/ Empire	27.1%	34	48
San Joaquin	E. Stockton	27.4%	35	14
Tulare	Dinuba	27.8%	36	18
Kings	Hanford/Lemoore	27.9%	37	28
Tulare	Visalia	28.3%	38	32
Tulare	Tulare	28.8%	39	52
Tulare	Lindsay	28.9%	40	36
Kern	Inyokern	29.3%	41	44
Kern	Delano/McFarland	29.4%	42	54
Fresno	Kerman/ Biola	30.4%	43	22
Merced	Gustine	30.7%	44	28
Kern	Taft	31.4%	45	49
Kern	N. Bakersfield	31.5%	46	51
Kern	E. Bakersfield/Lamont	31.7%	47	58
San Joaquin	E. Lodi	32.8%	48	36
Madera	Chowchilla	33.5%	49	55
Kern	Shafter/Wasco	33.9%	50	53
Tulare	Earlimart/ Pixley	34.8%	51	56
Tulare	Porterville	35.3%	52	44
Tulare	N. Visalia/ Exeter/ Farmersville	36.1%	53	34
San Joaquin	S. Stockton/French Camp	37.0%	54	59
Kings	Corcoran	38.5%	55	46
San Joaquin	Central Stockton	39.1%	56	61
Merced	Merced/Atwater	40.1%	57	41
Merced	Los Banos/ Dos Palos	40.5%	58	47
Tulare	Woodlake	41.3%	59	40
Kings	Avenal	42.1%	60	60
Fresno	Huron	50.9%	61	26

Source: California Department of Health Services, 1993 birth certificate data (1994)

Table B-3 - Percent of Births with Low Birth Weight (under 2500 grams)

County	Community name	% Low Birth Weight (<2500 gms.)	Rank	Overall Health Acess Index Rank
San Joaquin	Woodbridge	2.5%	1	12
Madera	The Mountains	2.9%	2	1
Fresno	Kerman/ Biola	4.1%	3	22
Tulare	Lindsay	4.2%	4	36
San Joaquin	Lodi	4.4%	5	4
Fresno	Reedley/ Parlier	4.5%	6	10
Kern	Arvin/ Tehachapi	4.6%	7	8
Fresno	Caruthers/ W. Selma	4.7%	8	13
Kern	Buttonwillow/Elk Hills	4.8%	9	5
Tulare	Porterville	5.1%	10	44
Merced	N. Merced Co./ Livingston	5.2%	11	16
San Joaquin	E. Stockton	5.3%	12	14
Fresno	Huron	5.3%	13	26
Tulare	Woodlake	5.4%	14	40
Kings	Corcoran	5.4%	15	46
Tulare	N. Visalia/ Exeter/ Farmersville	5.4%	16	34
Tulare	Dinuba	5.4%	17	18
Stanislaus	Turlock	5.5%	18	17
Fresno	Selma/ Fowler	5.5%	19	33
Stanislaus	Waterford/Hughson	5.5%	20	15
Merced	Gustine	5.5%	21	28
Kern	Frazier Park	5.6%	22	2
Fresno	Coalinga/ Mendota	5.6%	23	31
Kings	Hanford/Lemoore	5.6%	24	28
Merced	Merced/Atwater	5.6%	25	41
Kern	Mojave	5.6%	26	22
Fresno	Herndon/ Pinedale	5.7%	27	3
San Joaquin	E. Lodi	5.8%	28	36
Merced	Los Banos/ Dos Palos	5.8%	29	47
Tulare	Visalia	5.8%	30	32
San Joaquin	Tracy	5.9%	31	9
Fresno	North Fresno	6.0%	32	7
Kern	Shafter/Wasco	6.0%	33	53
Stanislaus	Modesto	6.1%	34	21
Kern	Inyokern	6.2%	35	44
Fresno	Clovis/ Sanger	6.2%	36	6
Stanislaus	W. Modesto/ Empire	6.2%	37	48
Madera	Madera	6.2%	38	42
Stanislaus	Riverbank	6.2%	39	36
Stanislaus	Patterson/Newman	6.2%	40	19
Madera	Chowchilla	6.3%	41	55
Stanislaus	Ceres/ Keyes	6.3%	42	22
San Joaquin	Manteca/Lathrop/Escalon/Ripon	6.5%	43	20
Kern	Greater Bakersfield	6.6%	44	22
San Joaquin	N. Stockton	6.6%	45	30
Kern	Taft	6.7%	46	49
Fresno	San Joaquin	6.7%	47	26
Tulare	Earlimart/ Pixley	7.0%	48	56
Fresno	S. Fresno	7.1%	49	49
Fresno	Central Fresno	7.1%	50	43
Tulare	Tulare	7.1%	51	52
Fresno	Southeast Fresno	7.1%	52	35
Kern	N. Bakersfield	7.4%	53	51
Stanislaus	Oakdale	7.4%	54	39
San Joaquin	Central Stockton	7.6%	55	61
Kern	Delano/McFarland	7.7%	56	54
Kern	E. Bakersfield/Lamont	9.0%	57	58
Fresno	W. Fresno/ Burrel	9.5%	58	57
Kings	Avenal	9.6%	59	60
San Joaquin	S. Stockton/French Camp	10.3%	60	59
Stanislaus	N. Modesto/ Salida	11.3%	61	11

Source: California Department of Health Services, 1993 birth certificate data (1994)

Table B-4 - Percent of Births to Teens

County	Community name	% Teen births (<20 yrs.)	Rank	Overall Health Access Index Rank
Kern	Frazier Park	5.2%	1	2
Fresno	Herndon/ Pinedale	8.9%	2	3
San Joaquin	Tracy	9.2%	3	9
Madera	The Mountains	9.2%	4	1
San Joaquin	Woodbridge	9.6%	5	12
Stanislaus	N. Modesto/ Salida	9.8%	6	11
Stanislaus	Waterford/Hughson	10.7%	7	15
Stanislaus	Ceres/ Keyes	11.1%	8	22
Kern	Mojave	11.6%	9	22
Kern	Buttonwillow/Elk Hills	11.8%	10	5
Fresno	Clovis/ Sanger	12.1%	11	6
San Joaquin	Lodi	12.2%	12	4
Stanislaus	Oakdale	12.4%	13	39
Stanislaus	Riverbank	12.7%	14	36
San Joaquin	Manteca/Lathrop/Escalon/Ripon	13.4%	15	20
Fresno	North Fresno	13.6%	16	7
Stanislaus	Patterson/Newman	13.6%	17	19
Kern	Arvin/ Tehachapi	13.9%	18	8
Stanislaus	Modesto	14.1%	19	21
San Joaquin	E. Lodi	14.5%	20	36
San Joaquin	N. Stockton	14.9%	21	30
Merced	N. Merced Co./ Livingston	14.9%	22	16
Kern	Greater Bakersfield	15.1%	23	22
Fresno	Caruthers/ W. Selma	15.7%	24	13
Kings	Hanford-Lemoore	16.3%	25	28
Fresno	Reedley/ Parlier	16.3%	26	10
Tulare	Visalia	16.5%	27	32
Stanislaus	Turlock	16.8%	28	17
Fresno	Huron	17.2%	29	26
Merced	Merced/Atwater	17.2%	30	41
Kern	Inyokern	17.2%	31	44
Merced	Gustine	17.3%	32	28
San Joaquin	E. Stockton	17.3%	33	14
Merced	Los Banos/ Dos Palos	17.3%	34	47
Kern	Delano/McFarland	17.6%	35	54
Tulare	Dinuba	17.6%	36	18
Tulare	N. Visalia/ Exeter/ Farmersville	17.7%	37	34
Fresno	San Joaquin	18.1%	38	26
Fresno	Southeast Fresno	18.3%	39	35
Stanislaus	W. Modesto/ Empire	18.5%	40	48
Kern	N. Bakersfield	18.6%	41	51
Kings	Corcoran	18.9%	42	46
Tulare	Woodlake	19.0%	43	40
Tulare	Porterville	19.1%	44	44
San Joaquin	S. Stockton/French Camp	19.2%	45	59
Fresno	Selma/ Fowler	19.2%	46	33
Fresno	Coalinga/ Mendota	19.3%	47	31
Tulare	Earlimart/ Pixley	19.4%	48	56
Tulare	Tulare	19.6%	49	52
Fresno	Central Fresno	19.7%	50	43
Madera	Chowchilla	20.1%	51	53
Madera	Madera	20.1%	52	42
Kern	E. Bakersfield/Lamont	20.4%	53	58
Tulare	Lindsay	20.6%	54	36
Kern	Taft	21.6%	55	49
San Joaquin	Central Stockton	21.9%	56	61
Kern	Shafter-Wasco	22.0%	57	55
Fresno	S. Fresno	23.4%	58	49
Kings	Avenal	23.6%	59	60
Fresno	Kerman/ Biola	24.4%	60	22
Fresno	W. Fresno/ Burrel	24.8%	61	57

Source: California Department of Health Services, 1993 birth certificate data (1994)

Table B- 5 - Health Access Index
Rankings across the Central Valley
(from best to worst)

County	*Community name*	*%Low Birth Weight Rank*	*% Late Prenatal Care Rank*	*% Teen Births Rank*	*ACS rates Rank*	*Average of Ranks*	*Overall Rank*	
Tulare	Visalia	30	38	27	26	30.3	**32**	
Fresno	Selma/ Fowler	19	25	46	33	30.8	**33**	
Tulare	N. Visalia/ Exeter/ Farmersville	16	53	37	18	31.0	**34**	
Fresno	Southeast Fresno	52	12	39	23	31.5	**35**	
San Joaquin	E. Lodi	28	48	20	31	31.8	**36**	
Tulare	Lindsay	4	40	54	29	31.8	**36**	
Stanislaus	Riverbank	39	33	14	41	31.8	**36**	*3rd*
Stanislaus	Oakdale	54	18	13	45	32.5	**39**	*Quartile*
Tulare	Woodlake	14	59	43	24	35.0	**40**	
Merced	Merced/Atwater	25	57	30	37	37.3	**41**	
Madera	Madera	38	27	52	35	38.0	**42**	
Fresno	Central Fresno	50	17	50	38	38.8	**43**	
Kern	Inyokern	35	41	31	53	40.0	**44**	
Tulare	Porterville	10	52	44	54	40.0	**44**	
Kings	Corcoran	15	55	42	49	40.3	**46**	
Merced	Los Banos/ Dos Palos	29	58	34	44	41.3	**47**	
Stanislaus	W. Modesto/ Empire	37	34	40	56	41.8	**48**	
Fresno	S. Fresno	49	23	58	43	43.3	**49**	
Kern	Taft	46	45	55	27	43.3	**49**	
Kern	N. Bakersfield	53	46	41	42	45.5	**51**	
Tulare	Tulare	51	39	49	46	46.3	**52**	*4th*
Kern	Shafter/Wasco	33	50	51	52	46.5	**53**	*Quartile -*
Kern	Delano/McFarland	56	42	35	58	47.8	**54**	*Worst*
Madera	Chowchilla	41	49	57	48	48.8	**55**	*Communities*
Tulare	Earlimart/ Pixley	48	51	48	57	51.0	**56**	
Fresno	W. Fresno/ Burrel	58	26	61	61	51.5	**57**	
Kern	E. Bakersfield/Lamont	57	47	53	51	52.0	**58**	
San Joaquin	S. Stockton/French Camp	60	54	45	59	54.5	**59**	
Kings	Avenal	59	60	59	47	56.3	**60**	
San Joaquin	Central Stockton	55	56	56	60	56.8	**61**	

Table B- 5 - Health Access Index
Rankings across the Central Valley
(from best to worst)

County	*Community name*	*%Low Birth Weight Rank*	*% Late Prenatal Care Rank*	*% Teen Births Rank*	*ACS rates Rank*	*Average of Ranks*	*Overall Rank*	
Madera	The Mountains	2	7	4	9	5.5	**1**	
Kern	Frazier Park	22	3	1	3	7.3	**2**	
Fresno	Herndon/ Pinedale	27	1	2	5	8.8	**3**	
San Joaquin	Lodi	5	11	12	11	9.8	**4**	
Kern	Buttonwillow/Elk Hills	9	9	10	14	10.5	**5**	*1st*
Fresno	Clovis/ Sanger	36	4	11	8	14.8	**6**	*Quartile -*
Fresno	North Fresno	32	5	16	7	15.0	**7**	*Best*
Kern	Arvin/ Tehachapi	7	30	18	6	15.3	**8**	*Communities*
San Joaquin	Tracy	31	6	3	22	15.5	**9**	
Fresno	Reedley/ Parlier	6	22	26	12	16.5	**10**	
Stanislaus	N. Modesto/ Salida	61	2	6	2	17.8	**11**	
San Joaquin	Woodbridge	1	32	5	36	18.5	**12**	
Fresno	Caruthers/ W. Selma	8	28	24	16	19.0	**13**	
San Joaquin	E. Stockton	12	35	33	1	20.3	**14**	
Stanislaus	Waterford/Hughson	20	15	7	40	20.5	**15**	
Merced	N. Merced Co./ Livingston	11	31	22	20	21.0	**16**	
Stanislaus	Turlock	18	8	28	32	21.5	**17**	
Tulare	Dinuba	17	36	36	13	25.5	**18**	
Stanislaus	Patterson/Newman	40	21	17	25	25.8	**19**	
San Joaquin	Manteca/Lathrop/Escalon/Ripon	43	14	15	34	26.5	**20**	
Stanislaus	Modesto	34	16	19	39	27.0	**21**	
Stanislaus	Ceres/ Keyes	42	10	8	50	27.50	**22**	
Kern	Greater Bakersfield	44	24	23	19	27.50	**22**	*2nd*
Fresno	Kerman/ Biola	3	43	60	4	27.50	**22**	*Quartile*
Kern	Mojave	26	20	9	55	27.50	**22**	
Fresno	Huron	13	61	29	10	28.25	**26**	
Fresno	San Joaquin	47	13	38	15	28.25	**26**	
Merced	Gustine	21	44	32	17	28.50	**28**	
Kings	Hanford/Lemoore	24	37	25	28	28.50	**28**	
San Joaquin	N. Stockton	45	29	21	21	29.0	**30**	
Fresno	Coalinga/ Mendota	23	19	47	30	29.8	**31**	

Table B-6 - Summary of Health Access Data, by Community

County	Community name	% Low Birth Weight (<2500 grams)	% Poor Prenatal Care [1]	% Teen births (<20yrs)	ACS rate [2]
Merced	Gustine	5.5	30.7	17.3	29.6
	Los Banos / Dos Palos	5.8	40.5	17.3	43.8
	N. Merced Co. / Livingston	5.2	26.0	14.9	31.0
	Merced / Atwater	5.6	40.1	17.2	39.8
San Joaquin	Tracy	5.9	16.6	9.2	31.2
	Manteca / Lathrop / Escalon / Ripon	6.5	20.3	13.4	39.3
	E. Stockton	5.3	27.4	17.3	10.6
	Woodbridge	2.5	26.1	9.6	39.8
	E. Lodi	5.8	32.8	14.5	37.2
	Lodi	4.4	18.6	12.2	21.9
	N. Stockton	6.6	25.4	14.9	31.1
	Central Stockton	7.6	39.1	21.9	81.9
	S. Stockton / French Camp	10.3	37.0	19.2	66.2
Stanislaus	Oakdale	7.4	21.4	12.4	44.8
	Turlock	5.5	16.8	16.8	38.3
	Patterson / Newman	6.2	22.2	13.6	31.6
	Waterford / Hughson	5.5	20.7	10.7	41.5
	W. Modesto / Empire	6.2	27.1	18.5	56.5
	Modesto	6.1	20.8	14.1	41.2
	Ceres / Keyes	6.3	18.6	11.1	50.0
	Riverbank	6.2	26.3	12.7	41.9
	N. Modesto / Salida	11.3	12.6	9.8	11.1
Tulare	Dinuba	5.4	27.8	17.6	24.1
	N. Visalia / Exeter / Farmersville	5.4	36.1	17.7	30.8
	Woodlake	5.4	41.3	19.0	31.6
	Earlimart / Pixley	7.0	34.8	19.4	59.7
	Porterville	5.1	35.3	19.1	54.7
	Lindsay	4.2	28.9	20.6	34.9
	Visalia	5.8	28.3	16.5	32.8
	Tulare	7.1	28.8	19.6	45.5

[1] Poor Prenatal Care - after first trimester or none

[2] Hospitalization for Ambulatory Care Sensitive (ACS) Diagnoses rate per 10,000 admissions

Table B-6 - Summary of Health Access Data, by Community

County	Community name	% Low Birth Weight (<2500 grams)	% Poor Prenatal Care [1]	% Teen births (<20yrs)	ACS rate [2]
Fresno	San Joaquin	6.7	20.2	18.1	25.5
	Coalinga / Mendota	5.6	21.6	19.3	37.0
	Huron	5.3	50.9	17.2	18.2
	Kerman / Biola	4.1	30.4	24.4	14.9
	Caruthers / W. Selma	4.7	25.2	15.7	25.8
	Clovis / Sanger	6.2	15.2	12.1	17.5
	Selma / Fowler	5.5	24.1	19.2	38.5
	Reedley / Parlier	4.5	22.9	16.3	23.3
	Herndon / Pinedale	5.7	12.0	8.9	15.6
	North Fresno	6.0	16.1	13.6	17.3
	Central Fresno	7.1	21.1	19.7	39.8
	Southeast Fresno	7.1	19.8	18.3	31.3
	W. Fresno / Burrel	9.5	24.5	24.8	89.4
	S. Fresno	7.1	23.3	23.4	42.3
Kern	Frazier Park	5.6	13.7	5.2	14.2
	Taft	6.7	31.4	21.6	33.7
	Shafter-Wasco	6.0	33.9	22.0	48.5
	Buttonwillow / Elk Hills	4.8	16.9	11.8	24.1
	Delano / McFarland	7.7	29.4	17.6	61.5
	E. Bakersfield / Lamont	9.0	31.7	20.4	51.2
	Arvin / Tehachapi	4.6	25.6	13.9	16.0
	Inyokern	6.2	29.3	17.2	53.5
	Mojave	5.6	21.9	11.6	55.1
	N. Bakersfield	7.4	31.5	18.6	42.3
	Greater Bakersfield	6.6	23.7	15.1	30.8
Kings	Avenal	9.6	42.1	23.6	48.1
	Corcoran	5.4	38.5	18.9	48.9
	Hanford / Lemoore	5.6	27.9	16.3	34.2
Madera	The Mountains	2.9	16.8	9.2	17.7
	Chowchilla	6.3	33.5	20.1	52.2
	Madera	6.2	24.6	20.1	39.7

[1] Poor Prenatal Care - after first trimester or none

[2] Hospitalization for Ambulatory Care Sensitive (ACS) Diagnoses rate per 10,000 admissions

Table B-7 - Infant mortality (by county)

Infant death rates per 1,000 live births; 1990-1992 averages

County	Infant Mortality (All race/ethnic groups)	Infant Mortality (Latino)
State	7.5	6.9
San Joaquin Valley	8.6	7.2
Fresno	9.4	8.8
Kern	10.0	8.6
Kings	9.0	*
Madera	*	*
Merced	7.9	5.9
San Joaquin	8.7	6.7
Stanislaus	8.0	6.8
Tulare	6.9	6.6

Source: Department of Health Services County Health Profiles (1995)
*Not statistically reliable

Table B-8 - County disease rates per 100,000

County	AIDS incidence 1991-1993	Tuberculosis incidence 1991-1993	Syphilis incidence 1991-1993	Anemia incidence (ages 1-4) 1993	Diabetes ACS rate (age 15 & over) 1991
State	36.7	16.9	5.6	19.3%	0.96
Year 2000	39.2	3.5	10.0	<3%	n/a
San Joaquin Valley	13.9	15.6	6.6	18.6%	1.05
Fresno	16.5	11.3	6.6	14.7%	1.00
Kern	16.5	17.0	6.5	14.7%	1.26
Kings	11.9	24.4	1.2	31.0%	0.99
Madera	12.3	8.7	1.7	17.7%	1.05
Merced	6.1	14.3	0.9	22.9%	1.13
San Joaquin	15.2	19.4	10.0	11.4%	0.91
Stanislaus	14.6	8.2	2.8	16.3%	0.92
Tulare	7.0	23.0	2.9	19.9%	1.12

Sources: AIDS, Syphilis, Tuberculosis: County Health Status Profiles, 1995; Anemia: Ca. Food Policy Advocates, 1995; Diabetes: Western Consortium for Public Health, 1990-91.

Table B-9 - Special Supplemental Food Program for Women, Infants and Children (WIC) rankings

County	WIC Rank by Special Need (11=highest need)	Allocation of Funding as Percent of Potential Eligibles
Fresno	10	45
Kern	11	50
Kings	8	37
Madera	10	49
Merced	6	46
San Joaquin	10	37
Stanislaus	7	34
Tulare	9	40

Source: WIC 2000 (1994)

Table B-10- Food Stamp utilization

County	Percent of Households Receiving Food Stamps
State	10
San Joaquin Valley	15
Fresno	17
Kern	14
Kings	15
Madera	13
Merced	20
San Joaquin	13
Stanislaus	12
Tulare	19

Source: State Department of Social Services, Dec. 1994

Table B-11
San Joaquin Valley Schools Without School Breakfast
30% or More Low-Income Enrollment
Eligible for School Breakfast Start-up Grant

County	District	School	% of free or reduced lunch	Total enrollment
Fresno	Clovis Unified	Gateway High	.5	206
Fresno	Coalinga-Huron	Cheney Kindergarten	.686	271
Fresno	Coalinga-Huron	Coalinga Jr High	.522	527
Fresno	Fresno Unified	Fresno Continuation	.469	83
Fresno	Fresno Unified	Lawless Elementary	.322	744
Fresno	Laton Unified	Conejo Middle	.708	216
Fresno	Laton Unified	Laton High	.627	180
Kern	Belridge Elementary	Belridge Elementary	.343	64
Kern	Buttonwillow Union	Buttonwillow Elem.	.761	389
Kern	DiGiorgio	DiGiorgio Elem.	.773	181
Kern	El Tejon Unified	El Tejon Elementary	.303	497
Kern	El Tejon Unified	Frazier Park Elem.	.385	600
Kern	El Tejon Unified	Mettler Elementary	.965	141
Kern	Fruitvale Elementary	Greenacres Elem.	.321	165
Kern	Kern Union	Arvin High	.47	2000
Kern	Kern Union	Central Valley Con.	.391	69
Kern	Kern Union	East Bakersfield High	.449	1650
Kern	Kern Union	Foothill High	.358	1911
Kern	Kern Union	Highland High	.301	2008
Kern	Kern Union	Kern Valley High	.323	616
Kern	Kern Union	Nueva Contin. High	.476	164
Kern	Kern Union	Phoenix Learning Ctr	.47 0	17
Kern	Kern Union	Shafter High	.461	1198
Kern	Kern Union	South High	.312	1823
Kern	Kern Union	Summit High	.674	43
Kern	Kern Union	Vista Contin. High	.525	236
Kern	Maple	Maple Elementary	.347	225
Kern	McFarland Unified	McFarland High	.546	553
Kern	McFarland Unified	San Joaquin H.S.	.453	64
Kern	McKittrick	McKittrick Elem.	.58	50
Kern	Mojave Unified	Calif. City Middle	.313	453
Kern	Mojave Unified	Ulrich Elementary	.340	1031
Kern	Muroc Joint Unified	Bailey Avenue Elem.	.381	548
Kern	Muroc Joint Unified	Branch Elementary	.369	539
Kern	Muroc Joint Unified	West Boron Elem.	.370	434
Kern	Panama-Buena Vista	Castle Elementary	.304	797
Kern	Pond Union	Pond School Elem.	.574	183
Kern	Rio Bravo-Greeley	Rio Bravo-Greeley	.300	593
Kern	Semitropic	Semitropic Elem.	.936	172
Kern	So. Kern Unified	Rare Earth Cont.High	.394	38

County	District	School	% of free or reduced lunch	Total enrollment
Kern	Taft City	Parkview Elementary	.347	363
Kern	Taft City	Taft Primary Elem.	.406	293
Merced	Alview-Dairyland	Alview Elementary	.656	122
Madera	Alview-Dairyland	Dairyland Elementary	.756	234
Madera	Bass Lake	Oakhurst Elementary	.390	438
Madera	Bass Lake	Wasuma Elementary	.391	327
Madera	Bass Lake	Wawona Elementary	.333	21
Merced	Dos Palos Oro	G. Christian Elem	.820	195
Merced	Hilmar Unified	Hilmar Jr./Sr. High	.363	650
Merced	Hilmar Unified	Irwin High Contin.	.388	49
Merced	Le Grand Union	Le Grand High	.699	428
Merced	Los Banos Unified	Los Banos High	.327	1217
Merced	Los Banos Unified	Los Banos Jr. High	.454	799
Merced	McSwain Union	McSwain Elementary	.316	775
Merced	Merced River	Hopeton Elementary	.715	137
Merced	Merced River	Washington Elem.	.666	135
Merced	Plainsburg Elem.	Plainsburg Elem.	.516	122
Merced	Snelling-Merced Falls	Snelling-Merced Falls	.554	128
San Joaquin	Escalon Unified	Collegeville Elem.	.567	171
San Joaquin	Escalon Unified	Dent Elementary	.329	847
San Joaquin	Escalon Unified	El Portal Middle	.359	676
San Joaquin	Escalon Unified	Farmington Elem.	.433	157
San Joaquin	Escalon Unified	Van Allen Elem.	.394	180
San Joaquin	Escalon Unified	Vista High Contin.	.342	35
San Joaquin	Lincoln Unified	Barron Elementary	.362	744
San Joaquin	Lincoln Unified	Colonial Heights El.	.394	613
San Joaquin	Lodi Unified	Clements Elementary	.407	123
San Joaquin	Lodi Unified	Dorothy Mahin TMR	.667	21
San Joaquin	Lodi Unified	Live Oak Elementary	.362	444
San Joaquin	Lodi Unified	Tokay Colony El.	.488	160
San Joaquin	Lodi Unified	Tokay High	.320	2381
San Joaquin	Lodi Unified	Victor Elementary	.415	282
San Joaquin	Lodi Unified	Woodbridge Middle	.364	683
San Joaquin	Manteca Unified	August Knodt Elementary	.339	439
San Joaquin	Manteca Unified	Calla High	.348	184
San Joaquin	Manteca Unified	Golden West Elementary	.418	76
San Joaquin	Manteca Unified	Lathrop Elementary	.556	1160
San Joaquin	Manteca Unified	New Haven Elementary	.345	835
San Joaquin	Manteca Unified	Nile Garden Elementary	.328	731
San Joaquin	Manteca Unified	Shasta Elementary	.365	931
San Joaquin	Manteca Unified	Yosemite Elementary	.528	286
San Joaquin.	New Jerusalem	New Jerusalem Elem.	.417	230
San Joaquin	Oak View Union	Oak View Elementary	.312	320
San Joaquin	Stockton City Unified	Kohl Open Elementary	.411	180
San Joaquin	Stockton City Unified	Valenzuela Multilingual El	.426	197

County	District	School	% of free or reduced lunch	Total enrollment
Stanislaus	Denair Unified	Denair Elementary	.467	493
Stanislaus	Denair Unified	Denair Middle	.379	401
Stanislaus	Hickman	Hickman Elementary	.389	355
Stanislaus	Modesto City	Sonoma Elementary	.330	575
Stanislaus	Newman-Crows Landing	Orestimba High	.444	475
Stanislaus	Newman-Crows Landing	Yolo Elementary	.595	395
Stanislaus	Oakdale Union	Valley Home	.324	188
Stanislaus	Paradise Elementary	Paradise Elementary	.308	143
Stanislaus	Patterson Unified	La Palmas Elementary	.488	694
Stanislaus	Patterson Unified	Northmead Elementary	.561	908
Stanislaus	Patterson Unified	Rising Sun Elementary	.8	40
Stanislaus	Riverbank	California Avenue El.	.737	468
Stanislaus	Riverbank	Cardozo Elementary	.502	603
Stanislaus	Riverbank	Milnes Elementary	.454	77
Stanislaus	Riverbank	Rio Altura Elementary	.524	797
Stanislaus	Salida Union	Sisk Elementary	.378	664
Stanislaus	Stanislaus Union	A. Moses Baptist Elem.	.452	613
Stanislaus	Stanislaus Union	Chrysler Elementary	.787	790
Stanislaus	Stanislaus Union	Eisenhut Elementary	.323	464
Stanislaus	Stanislaus Union	Muncy Elementary	.484	485
Stanislaus	Sylvan Union	Standiford Elementary	.300	546
Stanislaus	Turlock Joint Union	Roselawn Contin/ High	.5	184
Tulare	Columbine Elementary	Columbine Elementary	.578	135
Tulare	Ducor Union	Ducor Union Elementary	.649	262
Tulare	Liberty	Liberty Elemtary	.513	257
Tulare	Palo Verde Union	Palo Verde Elementary	.798	466
Tulare	Pleasant View	Pleasant View Elementary	.858	492
Tulare	Porterville Elementary	Bartlett Intermediate	.352	706
Tulare	Porterville Elementary	Hot Springs Elementary	.472	36
Tulare	Rockford	Rockford Elementary	.611	237
Tulare	Saucelito Elementary	Saucelito Elementary	.52	100
Tulare	Sequoia Union	Sequoia Elementary	.439	355
Tulare	Springville Union	Springville Union Elem.	.307	365
Tulare	Tulare City	Cherry Avenue Jr High	.479	557
Tulare	Tulare City	Garden Elementary	.31	859
Tulare	Tulare City	Live Oak Middle	.380	581
Tulare	Visalia Unified	Crestwood Elementary	.310	798
Tulare	Visalia Unified	Divisadero Jr High	.304	1149
Tulare	Visalia Unified	Elbow Elementary	.5	128
Tulare	Visalia Unified	Golden Oak Elementary	.351	658
Tulare	Visalia Unified	Linwood Elementary	.445	445
Tulare	Visalia Unified	Packwood Elementary	.762	80
Tulare	Visalia Unified	Veva Blunt Elementary	.349	842
Total				61064

Source: Ca. Dept. of Education, Child Nutrition and Food Dist. Division (1995). Subject to change as schools apply.

Table B-12 - Medi-Cal payment for births 1993

County	Total Births	Medi-Cal births	% of births paid by Medi-Cal	Medi-Cal prenatal care	% PNC Paid by Medi-Cal
State	584,483	278,185	48%	266,948	46%
San Joaquin Valley	61,556	37,475	61%	33,962	55%
Fresno	16,122	10,903	68%	10,612	66%
Kern	12,529	7,208	58%	6,961	56%
Kings	2,305	1,229	53%	927	40%
Madera	1,993	1,380	69%	1,355	68%
Merced	4,371	2,815	64%	279	6%
San Joaquin	9,492	5,194	55%	5,108	54%
Stanislaus	7,464	3,909	52%	3,849	52%
Tulare	7,280	4,837	66%	4,871	67%

Source: Department of Health Services, Vital Statistics Section, Birth Records, 1993.

Table B-13 - Community Clinic Encounters

County	1/95 population	Community clinic encounters	Community Clinic encounters per capita	No. of clinics - community and public
State	32,344,074	6,319,666	0.20	N/A
San Joaquin Valley	3,126,940	1,030,168	0.33	77
Fresno	764,810	204,036	0.27	22
Kern	627,693	369,932	0.59	15
Kings	116,312	0	0	0
Madera	109,456	44,294	0.40	4
Merced	202,789	128,527	0.63	8
San Joaquin	530,725	116,933	0.22	8
Stanislaus	419,970	56,427	0.13	6
Tulare	355,185	110,019	0.31	14

Source: Community Clinic Fact Book (1993); Grumbach (1995)

Table B- 14 - Summary of Demographic Data, by Community

County	Community name	1990 Population	Urban=1 Rural=0	% (<18) Children	% Seniors	% Latinos	% HH <$15,000	% MediCal Eligibles	% < 21 yrs. MCal Eligible
Fresno	San Joaquin	5,784	0	40.1	5.2	74.3	27.7	41.4	57.6
	Coalinga / Mendota	18,412	0	34.7	7.1	63.6	33.7	28.6	43.7
	Huron	7,262	0	34.2	1.8	94.6	42.2	26.0	42.5
	Kerman / Biola	11,124	0	33.4	9.6	53.6	34.6	34.2	51.8
	Caruthers / W. Selma	5,966	0	33.4	10.1	47.9	29.1	25.6	40.3
	Clovis / Sanger	98,563	0	30.4	9.2	24.9	21.1	18.5	30.3
	Selma / Fowler	46,391	0	33.0	11.0	56.4	32.7	35.7	55.9
	Reedley / Parlier	33,285	0	32.8	10.3	64.3	30.1	30.6	47.7
	Herndon / Pinedale	115,528	1	27.2	10.0	17.5	14.7	18.4	32.2
	North Fresno	29,698	1	23.0	8.3	12.3	20.5	15.7	27.9
	Central Fresno	64,862	1	33.4	11.8	35.7	37.2	42.9	70.7
	Southeast Fresno	118,428	1	29.2	12.0	22.8	30.5	32.9	58.8
	W. Fresno / Burrel	39,387	1	32.0	12.1	39.9	46.3	57.0	87.7
	S. Fresno	44,657	1	42.8	8.4	51.5	44.6	65.3	89.1
Kern	Frazier Park	16,010	0	31.1	6.8	11.7	9.5	5.9	9.1
	Taft	17,933	0	29.2	11.9	8.1	24.6	23.0	39.0
	Shafter/Wasco	28,049	0	36.2	8.5	57.8	32.9	31.4	46.9
	Buttonwillow / Elk Hills	18,147	0	33.6	6.2	15.7	13.4	10.9	16.7
	Delano / McFarland	32,465	0	35.7	9.6	66.7	34.0	39.1	56.6
	E. Bakersfield / Lamont	63,844	0	36.8	7.5	51.3	35.3	39.3	58.1
	Arvin / Tehachapi	36,618	0	27.5	7.9	34.4	23.8	15.8	29.8
	Inyokern	56,972	0	25.3	16.4	7.5	31.7	23.2	39.8
	Mojave	33,205	0	33.9	6.3	12.4	18.7	17.4	27.1
	N. Bakersfield	93,613	1	31.7	11.5	33.6	29.4	29.9	49.9
	Greater Bakersfield	111,165	1	30.4	9.2	15.9	21.0	19.9	33.0
Kings	Avenal	9,914	0	20.9	4.6	49.4	24.1	23.9	65.3
	Corcoran	19,043	0	28.2	5.9	57.7	33.7	27.5	51.6
	Hanford/Lemoore	76,643	1	32.3	8.8	25.6	26.8	23.2	36.4
Madera	The Mountains	19,756	1	22.4	18.6	4.1	19.6	11.0	20.3
	Chowchilla	10,797	0	31.0	14.0	22.6	30.2	32.2	50.5
	Madera	64,384	0	34.0	9.1	50.0	27.8	34.5	53.0
Merced	Gustine	5,809	0	28.4	15.4	22.5	26.4	22.2	38.6
	Los Banos / Dos Palos	27,632	0	32.8	11.9	38.6	31.6	32.2	51.8
	N. Merced Co. / Livingston	38,320	0	34.9	8.7	38.5	25.4	31.6	48.6
	Merced / Atwater	107,458	1	34.4	8.3	28.6	26.4	36.7	58.2

Source: U.S. Bureau of the Census, 1990; Medi-Cal data: Ca. Department of Health Services, September 1994.

Table B- 14 - Summary of Demographic Data, by Community

County	Community name	1990 Population	Urban=1 Rural=0	% (<18) Children	% Seniors	% Latinos	% HH <$15,000	% MediCal Eligibles	% < 21 yrs. MCal Eligible
San Joaquin	Tracy	47,258	0	27.8	8.2	24.9	16.4	11.5	20.5
	Manteca / Lathrop / Escalon / Ripon	80,311	1	31.3	9.2	20.1	18.1	12.9	20.2
	E. Stockton	22,641	0	28.1	12.1	25.5	29.9	20.4	34.7
	Woodbridge	9,969	1	27.5	11.0	20.8	15.0	13.2	22.2
	E. Lodi	45,709	0	25.7	16.4	19.6	25.1	20.3	38.5
	Lodi	46,712	0	30.1	9.2	11.9	12.5	16.0	27.6
	N. Stockton	134,087	1	28.7	12.0	14.8	21.3	28.8	49.9
	Central Stockton	56,869	1	30.8	11.7	37.1	42.2	45.0	71.4
	S. Stockton / French Camp	36,682	1	35.2	9.7	48.2	36.3	47.7	68.2
Stanislaus	Oakdale	20,994	0	27.7	13.2	13.5	22.7	16.7	27.3
	Turlock	55,937	1	29.6	12.0	19.8	24.9	24.2	38.0
	Patterson / Newman	20,606	0	33.2	9.7	90.7	23.5	22.9	36.0
	Waterford / Hughson	14,295	0	31.5	11.0	25.4	25.9	23.4	36.5
	W. Modesto / Empire	69,304	1	35.9	8.5	32.9	30.9	27.2	41.2
	Modesto	120,925	1	28.1	12.1	13.4	21.9	27.2	45.0
	Ceres / Keyes	29,006	1	30.7	9.9	21.3	26.4	27.0	41.4
	Riverbank	9,853	1	31.3	9.8	38.6	26.2	27.3	39.7
	N. Modesto / Salida	29,472	1	28.9	9.3	13.4	15.5	14.4	23.9
Tulare	Dinuba	43,610	0	34.0	10.2	59.2	32.5	32.1	50.8
	N. Visalia / Exeter / Farmersville	67,264	0	34.9	8.9	36.9	30.4	36.5	56.2
	Woodlake	18,251	0	33.1	10.9	56.5	30.9	33.5	53.3
	Earlimart / Pixley	19,337	0	40.9	7.2	62.5	40.4	44.9	60.9
	Porterville	64,392	0	32.7	11.9	35.8	34.2	38.8	59.7
	Lindsay	16,850	0	30.7	14.1	42.9	27.8	32.9	55.2
	Visalia	51,869	1	28.6	12.7	17.8	22.8	16.5	27.8
	Tulare	45,598	1	34.0	10.2	33.2	29.6	31.7	47.9

Source: U.S. Bureau of the Census, 1990; Medi-Cal data: Ca. Department of Health Services, September 1994.

Table B-15 - Zip Code Clusters

County	*Community name*	*Zip Codes*
Fresno	San Joaquin	93608, 93624, 93660, 93668
	Coalinga/ Mendota	93210, 93640
	Huron	93234
	Kerman/ Biola	93606, 93630
	Caruthers/ W. Selma	93609, 93627, 93652
	Clovis/ Sanger	93602, 93605, 93611, 93612, 93613, 93621, 93629, 93633, 93634, 93641, 93651, 93657, 93664, 93667, 93675
	Selma/ Fowler	93625, 93662, 93725, 93745
	Reedley/ Parlier	93616, 93648, 93649, 93654
	Herndon/ Pinedale	93650, 93704, 93711, 93720, 93722, 93741, 93755, 93765
	North Fresno	93710, 93729, 93740, 93759, 93784
	Central Fresno	93701, 93705, 93728, 93744, 93761, 93790, 93791, 93792, 93793, 93794
	Southeast Fresno	93703, 93726, 93727, 93782, 93844, 93888
	W. Fresno/ Burrel	93607, 93706, 93707, 93708, 93709, 93712, 93714, 93715, 93716, 93717, 93718, 93721, 93724, 93760, 93762, 93764, 93771, 93772, 93773, 93774, 93775, 93776, 93777, 93778, 93779, 93780, 93786
	S. Fresno	93702, 93750
Kern	Frazier Park	93222, 93225, 93311
	Taft	93224, 93251, 93252, 93268, 93276
	Shafter-Wasco	93249, 93263, 93280
	Buttonwillow/Elk Hills	93206, 93312
	Delano/McFarland	93215, 93216, 93250
	E. Bakersfield/Lamont	93217, 93220, 93241, 93307
	Arvin/ Tehachapi	93203, 93518, 93531, 93561, 93570, 93581, 93582
	Inyokern	93205, 93226, 93238, 93240, 93255, 93283, 93285, 93287, 93302, 93303, 93308, 93380, 93388, 93527
	Mojave	93501, 93502, 93504, 93505, 93516, 93523, 93524, 93528, 93554, 93560, 93596
	N. Bakersfield	93301, 93305, 93306, 93381, 93386, 93387
	Greater Bakersfield	93304, 93309, 93313, 93382, 93383, 93384, 93385, 93389
Kings	Avenal	93204
	Corcoran	93212, 93239, 93266
	Hanford/Lemoore	93202, 93230, 93231, 93232, 93242, 93245, 93246, 93656
Madera	The Mountains	93604, 93614, 93626, 93643, 93644, 93645, 93669
	Chowchilla	93610
	Madera	93622, 93637, 93638, 93639
Merced	Gustine	95322
	Los Banos/Dos Palos	93620, 93635, 93661, 93665
	N. Merced Co./ Livingston	95303, 95312, 95315, 95324, 95334, 95369, 95374, 95388
	Merced/Atwater	95301, 95317, 95333, 95340, 95341, 95342, 95343, 95344, 95348, 95365

Table B-15 - Zip Code Clusters

San Joaquin	Tracy	95304, 95376, 95377, 95378, 95385
	Manteca/Lathrop/Escalon/Ripon	95320, 95330, 95331, 95336, 95366
	E. Stockton	95215, 95236
	Woodbridge	95220, 95227, 95258
	E. Lodi	95237, 95240, 95241, 95253
	Lodi	95209, 95242, 95686
	N. Stockton	95204, 95207, 95210, 95211, 95212, 95219, 95267, 95269, 95297
	Central Stockton	95202, 95203, 95205, 95290
	S. Stockton/French Camp	95201, 95206, 95208, 95213, 95231, 95234
Stanislaus	Oakdale	95230, 95361, 95384
	Turlock	95316, 95380, 95381, 95382
	Patterson/Newman	95313, 95360, 95363, 95387
	Waterford/Hughson	95323, 95326, 95386
	W. Modesto/ Empire	95319, 95351
	Modesto	95350, 95352, 95353, 95354, 95355, 95357, 95358
	Ceres/ Keyes	95307, 95328
	Riverbank	95367, 95390
	N. Modesto/ Salida	95356, 95368
Tulare	Dinuba	93615, 93618, 93631, 93646, 93666, 93673
	N. Visalia/ Exeter/ Farmersville	93221, 93223, 93227, 93235, 93291, 93292, 93670
	Woodlake	93237, 93244, 93262, 93271, 93286, 93603, 93628, 93647
	Earlimart/ Pixley	93201, 93218, 93219, 93256, 93261, 93272
	Porterville	93257, 93258, 93267, 93270
	Lindsay	93207, 93208, 93247, 93260, 93265
	Visalia	93277, 93278, 93279
	Tulare	93274, 93275, 93282

APPENDIX C - FOCUS GROUP PARTICIPANTS

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APPENDIX D - DESCRIPTION OF THE COUNTIES

FRESNO COUNTY

Population, Cities & Communities:

In 1995, Fresno County had a population of 764,810 and 258,217 households according to the State Department of Finance. Fresno County is the largest San Joaquin Valley county per population. Fresno County has 15 incorporated cities. The City of Fresno is the county seat with a fast-growing population of 402,122. The Fresno/Clovis metropolitan area has a population of 463,600. The smallest city in Fresno County is San Joaquin with a population of 2,300. Other cities in Fresno County include Coalinga, Firebaugh, Fowler, Huron, Kerman, Kingsburg, Mendota, Orange Cove, Parlier, Reedley, Sanger and Selma. Communities in Fresno County include Auberry, Caruthers, Del Rey, Easton, Laton, Riverdale, Tranquillity, Five Points, Huron, and San Joaquin.

Location:

Fresno County is located at the heart of the Central San Joaquin Valley extending from the Sierras on the east to the coastal mountains on the west. Surrounding counties include Madera to the north and Tulare/Kings to the south. The city of Fresno is approximately 220 miles from Los Angeles, 180 miles from San Francisco, and 170 miles from Sacramento.

Employment:

Fresno County is considered the agribusiness center of the world. Over 250 crops drive the local economy. However, the county has expanding manufacturing, service, and industrial sectors. The top five agricultural commodities are cotton, grapes, tomatoes, milk, and cattle and calves. The top private sector employers are the Community Hospitals of Central California, Zacky Farms, and St. Agnes Medical Center. The largest public sector employers are city and county government, education and the Internal Revenue Service. Fresno County has a total civilian labor force of 359,500 with an unemployment rate of 15.5% in 1995.

Health:

Fresno County has 15 hospitals providing a wide range of health care services. In addition to being the top private sector employer, Community Hospitals of Central California has the largest hospital in the area: Fresno Community Hospital and Medical Center with 458 beds. Valley Medical Center has Fresno County's Trauma Center and the Valley's only burn center. Valley Children's Hospital is a private, non-profit facility that is the only children's hospital between San Francisco and Los Angeles. The Fresno Surgery Center is considered the nation's first freestanding outpatient surgery and recovery care center. The UCSF-Fresno Medical Education Program, a major clinical branch of the University of California, San Francisco School of Medicine, provides training, clinical clerkships, and continuing education for physicians. According to the Fresno-Madera Medical Society, there are over 1,000 physicans and surgeons in the two-county area.

KERN COUNTY

Population, Cities & Towns:

In January 1995, Kern County had a population of 627,693 and 219,227 households. Bakersfield is the county seat with a population of 212,000 in January 1995. The annual population growth rate for Kern County is 2.9%. Other incorporated cities are Arvin, California City, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi and Wasco. Other unincorporated areas are China Lake, Lake Isabella, Frazier Park, Rosamond, Mojave and Boron.

Location:

Kern County is located at the southern end of the San Joaquin Valley surrounded by Tulare, Kings, San Bernardino, Los Angeles, Ventura and San Luis Obispo counties.
The main City of Bakersfield is located 110 miles from Los Angeles and 112 from Fresno.

Employment:

Employment in Kern County is primarily agriculture and mineral extraction. However, the county has been diversifying its economy for several years. As a result, job growth is expected in the areas of health care, business services, light manufacturing, retail, warehouse/distribution, and food processing. In 1993, Kern County was the nation's leading oil producing county and the third most productive agricultural county. The top five crops are grapes, cotton, citrus, almonds and carrots.

Kern County's five largest employers in 1992 were: Government - 21.8%, Services - 19.3%, Agriculture - 17.3%, Retail Trade - 15.9%, and Mineral Extraction - 5.7%. Kern County has an average unemployment rate of 13.1%.

Health:

Kern County has nine general hospitals and ten emergency medical facilities. The County's newest hospital is Mercy Center. Bakersfield Memorial Hospital is the County's largest hospital. In addition, several urgent care facilities and clinics are located within the county. In 1995, there were approximately 1,500 physicians and surgeons, 215 dentists, 48 optometrists and 123 chiropractors. Health care employment is projected to grow at a rate of 31.2% through 1996.

KINGS COUNTY

Population, Cities & Communities:

In January 1995, Kings County had a population of 116,312 and 33,573 households. Kings County is the second smallest county in the San Joaquin Valley per population. The largest city is Hanford, the county seat, with a population of 37,389 in 1995. Other cities in Kings County are Avenal, Corcoran, and Lemoore. Communities include Kettleman City, Armona, Guernsey, and Stratford.

Location:

Kings County is located in the central San Joaquin Valley to the west of Tulare County. Hanford is located one hour southeast of Fresno and less than four hours from Los Angeles, San Francisco, and Sacramento.

Employment:

Agriculture is the primary industry in Kings County producing over 100 commodities. The top five agricultural commodities are milk, alcala cotton lint, cattle and calves, alcala cotton seed, and tomatoes. Agriculture is also a primary employer. Other large employers are retail trade, services, and manufacturing. However, the largest employer is government. The unemployment rate in 1993 was 14.4%.

Health:

Kings County has two major hospitals: Hanford Community Medical Center and Central Valley General Hospital. Hanford Community Medical Center has several health clinics located in the county. There are approximately 100 physicians and surgeons in the county.

MADERA COUNTY

Population, Cities & Communities:

In January 1995, Madera County had a population of 109,456 and 36,461 households. Madera County is the smallest San Joaquin Valley county per population. The City of Madera is the county seat with a population of 33,911 in 1994. The other city in Madera County is Chowchilla. Communites are Oakhurst, North Fork, Coarsegold, and Bass Lake.

Location:

Madera County is located at the exact center of California. The City of Madera is 22 miles north of the City of Fresno, 240 miles north of Los Angeles, and 166 miles southeast of San Francisco. Madera County extends east into the Sierra Nevada mountain range.

Employment:

Employment in Madera County is primarily agriculture and manufacturing. The top five agricultural commodities are almonds, raisin grapes, wine grapes, milk, and cotton lint. Manufacturing concentrations are in wines, glass bottles, food machinery, farm equipment, air conditioning, and steel. The largest manufacturing employers include: Mission Bell Winery, Madera Glass Company, FMC Corporation, and Oberti Olive Company. The largest public employers are city, county, state, federal government, education, and health care. The unemployment rate is 15.7%.

Health:

There is one general hospital in the City of Madera and one health center. The local community also has 75 physicians and surgeons, 25 dentists, 14 chiropractors, and 6 optometrists. Valley Children's Hospital of Fresno is expanding its services to Madera in 1995.

MERCED COUNTY

Population, Cities & Communities:

In January 1995, Merced County had a population of 202,789 and 64,970 households. The county seat is the City of Merced which had a 1993 population of 59,800. Other cities in Merced County include Los Banos, Delhi, Atwater, Livingston, Dos Palos, and Gustine. Communities include Planada, Le Grand, Hilmar, Stevinson, Winton, Ballico, Cressey, Snelling, El Nido, Volta, and Santa Nella.

Location:

Merced County is located in the San Joaquin Valley. The City of Merced is 260 miles north of Los Angeles, 128 miles southeast of San Francisco, and 113 miles south of Sacramento.

Employment:

The primary employment sectors in Merced County are agriculture and manufacturing. The top five agricultural commodities are milk, chickens, almonds, cotton, and cattle. There are approximately 60 manufacturing firms in Merced County. The top manufacturing employers are Foster Farms - chicken processing, Merced Color Press - printing, Keller Industries - aluminum parts, Wood Fruit - frozen food, and E & J Gallo - wine/brandy. The largest non-manufacturing employers are education and city and county government. Other leading employers are Farmers Insurance and Mercy Hospital. The unemployment rate is approximately 16.2 percent.

Health:

The Merced community has 2 general hospitals with a total bed capacity of 277, two acute care clinics, 208 physicians and surgeons, 69 dentists, 18 chiropractors, and 10 optometrists. Golden Valley Health Centers is a community health center providing services in various communities throughout Merced and Stanislaus counties. In 1993, Merced County had the highest Medi-Cal user to general population ratio in California. Also, the number of primary care physicians available to see underserved populations is well below the national standard.

SAN JOAQUIN COUNTY

Population, Cities & Counties:

In January 1995, San Joaquin County had a population of 530,725 and 178,243 households. The largest city is Stockton, the county seat, with a population of 228,700. Cities in San Joaquin County are Escalon, Lathrop, Lodi, Manteca, Ripon, and Tracy. Communities include Linden, Farmington, Bellota, Waterloo, Lockeford, and Clements.

Location:

San Joaquin County is located towards the northern part of the San Joaquin Valley. Stockton is a two hour drive to San Francisco and less than 1 hour to Sacramento. The San Joaquin Delta is immediately west of the city where the Sacramento and San Joaquin rivers meet. The Port of Stockton serves deep water vessels from all over the world. Stockton also has the closest link between Interstate 5 and Highway 99.

Employment:

The main employment sectors in San Joaquin County are primarily agriculture and manufacturing. Agriculture is a one billion dollar industry in San Joaquin County. However, productive farmland is being lost to urban development. The top five agricultural crops are milk, grapes, tomatoes, almond meats, and cherries. The top manufacturing employers are M & R Company - produce packers, Del Monte USA - food processors, Pacific Coast Producers - food processors, Safeway Stores - grocery distribution, and Diamond Walnut Growers - food processors. The top non-manufacturing employers include St. Joseph's Health Care and San Joaquin General Hospital. Major public employers are city and county government, education and the military. The unemployment rate in September 1994 was 10.3%. There is a variation in the unemployment rate, however, as it has varied from a low of 9.4% in 1989 to a high of 15.7% in 1992.

Health:

San Joaquin County has seven hospitals with 1,140 total beds. There are 750 physicians and surgeons, 3,068 nurses, 202 dentists, and 124 chiropractors. The corporate offices of the Agricultural Workers' Health Centers, a regional primary health care system serving four counties, are located in Stockton. The largest health care providers are St. Joseph's Health Care, San Joaquin General Hospital, and Kaiser Permanente.

STANISLAUS COUNTY

Population, Cities & Towns:

In January 1995, Stanislaus County had a population of 419,070 and 125,670 households according to the Department of Finance. Modesto is the county seat with an approximate population of 182,000 in 1995. Other large cites include Ceres, Turlock, Oakdale, Riverbank, Hughson, Patterson, and Newman. Small towns include Salida, Keyes, Denair, Waterford, Empire, Crows Landing, Westley, Grayson and Hickman.

Location:

Stanislaus County is located in the northern part of the San Joaquin Valley bordered by San Joaquin County to the north, Merced County to the South, Santa Clara County to the West and mainly Tuolumne County to the east. Modesto is within a two-hour drive to San Francisco, Fresno and Sacramento.

Employment:

Employment in Stanislaus County is primarily in the agriculture and food processing industries. Additionally, the county has growing commercial, industrial and service sectors. The top five agricultural commodities are milk, almonds, chickens, chicken eggs and cattle and calves. The two largest private employers are Tri Valley Growers and E & J Gallo Winery and Gallo Glass Company. The largest public employers are county and city government, education and health care. The unemployment figures for the period June to August 1995 were: June - 15.6%; July 14.7%; and August 11.3%.

Health:

A regional medical center in Modesto serves the area with four general hospitals. There are also several specialty clinics and diagnostic facilities located throughout the county. In 1993, Stanislaus County had approximately 510 physicians and surgeons, 200 dentists, 65 optometrists and 85 chiropractors.

TULARE COUNTY

Population, Cities & Communities:

In January 1995, Tulare County had a population of 355,185 and 114,660 households. The largest city in Tulare County is Visalia, the county seat, with a population of 92,000. Other cities in Tulare County are Dinuba, Woodlake, Exeter, Farmersville, Lindsay, Porterville, and Tulare. Communities include Cutler-Orosi, Ivanhoe, Seville, Yettem, Lemon Cove, Strathmore, Three Rivers, Woodville, Poplar, Terra Bella, Pixley, Earlimart, Alpaugh, Tipton, Traver, Ducor, Allensworth, Goshen, southern Kingsburg, and northern Delano.

Location:

Tulare County is located in the southern part of the San Joaquin Valley bordered by Fresno County to the north and Kern County to the south. Sequoia National Park is located in the eastern part of Tulare County. Visalia is centrally located 185 miles north of Los Angeles and 225 miles south of San Franciso.

Employment:

Tulare County is recognized as the second largest agricultural-producing county in the nation with over 250 crops. The top five agricultural crops are milk, oranges, grapes, cattle/calves, and cotton lint/seed. Tulare County in 1994 was the number one dairy producing county in the nation and also has an expanding food processing industry. Tulare County hosts the largest agricultural trade show in the world. The main employment sectors include agriculture, forestry, fisheries, city and county government, retail trade, services, and manufacturing. Education and health care also are major employers. The December 1993 unemployment rate was 15.3%, which varies due to seasonal employment.

Health:

Stanislaus County has nine major hospitals. Kaweah Delta District Hospital is the largest non-manufacturing employer in the county. Tulare County Department of Health Services provides various health services in the county. There are also several community health providers in the county such as the Porterville Family Health Centers. Tulare County has approximately 450 physicians and surgeons.

COMMUNITY MAP

APPENDIX E- SAMPLE COMMUNITY FACT SHEETS

San Joaquin Valley Health Access Project
Community Fact Sheet

Rural Health Advocacy Institute

Community of Avenal

including zips 95230, 95361, 95384

A profile of Avenal in Kings County

Demographics:

	Population (1990)[12]	Households (1990)[12]	MediCal population (1994)***	
			%	% <21
Avenal	9,914	1,472	23.9	65.0
Kings County	107,600	30,996	24.0	41.0
Region	2,706,925	885,241	27.9	46.0
State	29,760,021	10,399,700	18.1	32.8

Race/Ethnicity (1990)[12]

	% Hispanic (exclusive of race)	% White	% African-American	% American Indian	% Asian/ Pac.Isl	% Other
Avenal	49.4	48.8	18.7	1.6	0.7	30.3
Kings County	33.5	64.7	8.0	1.5	3.4	22.4
Region	30.2	69.4	4.4	1.2	6.8	18.1
State	25.4	69.1	7.4	0.8	9.6	13.1

Age.
Avenal has a younger population than Kings County. Over 20 percent (20.9%) of Avenal is under 18 compared with 28.8% in the County and 4.6 percent of the population is over 65 compared with 7.9% in the County.[12]

Income.
Almost a quarter (24.1%) of all households in Avenal have household incomes less than $15,000 - the lowest rate in Kings County.[10]

Language.
In Avenal, 13.6% of households are Spanish-speaking linguistically isolated compared to less than 7 percent (6.8%) of households in Kings County.[12]

Access to Primary Care:

	# of Primary Care providers to population[10]	Avoidable Hospitalization Diagnosis (ACS) Non-elderly adults rate/ 10,000[10]	Referral Sensitive Diagnoses (REF) All Ages rate/1,000[11]
Avenal	20.2	48.1	*
Kings County	37.6	48.6	4.4
Region	47.6	38.3	*
State average	58.4	34.3	*

Healthy People 2000 Benchmarks:

	# of Births (1993)[3]	Births to Teens <20 (1993)[3] #	%	Low Birth Weight <2500 grams (1993)[3] #	%	Late or No Prenatal Care >1st trimester (1993)[3] #	%
Avenal	178	42	23.6	17	9.6	75	42.1
Kings County	2,480	427	17.2	145	5.8	756	30.5
Region	59,559	10,069	16.9	3,812	6.4	15,739	26.4
State	584,483	70,091	12.0	35,116	6.4	134,130	24.6
Year 2000 National Objective[1]			*n/a*		*5.0*		*10.0*

Other Notable Facts:

➢ There are no clinics in Avenal or Kings County.[10]

➢ In FY 1993-94, 8,301 children received CHDP services in Kings County, about one quarter (26%) of the target population.[3,4]

	AIDS rate/ 100,000[7] (1994)	Syphilis rate/ 100,000[8] (1994)	Tuberculosis rate/ 100,000[9] (1994)	Breast cancer rate/100,000[2] (1988-90)	Colo-rectal cancer rate/100,000[2] (1988-90)	Cervical cancer rate/100,000[2] (1988-90)
Avenal	70.6	*	*	*	*	*
Kings County	56.7	*	16.7	45.9	39.2	*
Region	79.8	11.8	14.8	*	*	*
State	251.2	5.6	16.9	58.2	44.4	5.1
Year 2000 National Objective[1]	*39.2*	*10.0*	*3.5*	*20.6*	*13.2*	*1.3*

* not available

** Medi-Cal population percentages are calculated using 1994 Medi-Cal counts divided by the 1990 Census.

"Avoidable hospitalization" or "ambulatory care sensitive" (ACS) diagnoses are "medical conditions for which an admission may be avoidable with the timely access to effective primary care."

"Referral sensitive" (REF) surgeries are "high cost/high technology surgical procedures where impediments to access or referral to specialty care may reduce the chances of having the surgery." (Codman, 1991).

Notes: To ensure consistency, population counts and population as denominator are all based on the 1990 Census, unless otherwise noted. All counts with less than 5 cases are not reported.

Sources:

1. CA Dept. of Heath Services (DHS) and the CA Conference of Local Health Officers, Public Health Week, April 3-9, 1995. "County Health Status Profiles 1995." (1995).
2. DHS, Cancer Surveillance Section. "Cancer Incidence and Mortality by Race/Ethnicity in California, 1988-1990." (March 1993).
3. DHS, Center for Health Statistics, Vital Statistics Section, A. Oreglia. "Birth Profiles by County and Zip Code California 1993," Report Register No. 94-09003. (September 1994).
4. DHS, Child Health and Disability Prevention Branch, Data Management and Evaluation Unit. CHDP Preliminary Program Data for Fiscal Year 1993-94. (January 1995).
5. DHS, Children's Medical Services, CHDP Program. Estimated Target Population, FY 1993-94. (1994).
6. DHS, Medical Care Statistics Section. Medi-Cal Eligibles by Zip Code and Age Group. (September 1994).
7. DHS, Office of AIDS, HIV/AIDS Epidemiology Section. AIDS Cases and Cumulative Incidence. (January 1995).
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A Profile of Health Access in Avenal

Access to Care and Healthy People 2000 Goals

Rural Health Advocacy Institute

- The community of Avenal is located in southern Kings County, California. The community is defined by zip codes 95230, 95361, 95384.
- Avenal is characterized by poor birth outcomes, little prenatal care and a heavy reliance on Medi-Cal.
- Avenal has fewer children under 18 than Kings County. Over 20 percent (20.9%) of Avenal is under 18 compared with 28.8% in the County. The population over 65 is 4.6% in Avenal compared with 7.9% in the County.

- Almost a quarter (24%) of all households in Avenal have household incomes less than $15,000 - the lowest rate in Kings County. The San Joaquin Valley average of households with incomes less than $15,000 is 27%.

Access to Primary Care

- In FY 1993-94, 7,704 children received CHDP health assessments in Kings County, only about one quarter (24%) of the target population.
- Only 1% of children in Kings County received blood lead assessments in 1993 compared to a low 7% statewide.

Healthy People 2000 Benchmarks

		Avenal	Kings County	San Joaquin Valley	State	Year 2000 National Objective
# of Births		178	2,480	59,559	584,483	n/a
Births to Teens <20 years old	#	42	427	10,069	70,091	
	%	23.6%	17.2%	16.9%	12.0%	n/a
Low Birthweight <2500 grams	#	17	145	3,812	35,116	
	%	9.6%	5.8%	6.4%	6.4%	5.0%
Late or No Prenatal Care >1st trimester	#	75	756	15,739	134,130	
	%	42.1%	30.5%	26.4%	24.6%	10.0%

- Almost 10% of babies born in Avenal were of low birth weight, 50% higher than the State rate. Nearly half (42%) of women giving birth received late or no prenatal care - 40% higher than the State rate. The Year 2000 National Objectives for these indicators are 5% and 10% respectively.

Demographics

	Avenal	Kings County	San Joaquin Valley	State
Population	9,914	107,600	2,706,925	29,760,021
Households	1,472	30,996	885,241	10,399,700
Population on MediCal	23.9%	24.0%	27.9%	18.1%
Children (<21) on MediCal	65.0%	41.0%	46.0%	32.8%

Race/Ethnicity

	Avenal	Kings County	San Joaquin Valley	State
Hispanic (exclusive of race)	49.4%	33.5%	30.2%	25.4%
White	48.8%	64.7%	69.4%	69.1%
African-American	18.7%	8.0%	4.4%	7.4%
American Indian	1.6%	1.5%	1.2%	0.8%
Asian/Pacific Islander	0.7%	3.4%	6.8%	9.6%
Other	30.3%	22.4%	18.1%	13.1%

Notes: To ensure consistency, population counts and population as denominator are all based on the 1990 Census, unless otherwise noted. All counts with less than 5 cases are not reported.

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