A Plan to Monitor Healthcare Access For Medi-Cal Beneficiaries

Monitoring Access to Medi-Cal Covered Healthcare Services

DHCS

California Department of HealthCare Services

Executive Summary

The California Department of Health Care Services (DHCS) developed this paper in conjunction with the Department's proposed State Plan Amendment to reduce Medi-Cal provider payments. In this paper, DHCS presents the Department's systematic approach for measuring and monitoring access to Medi-Cal administered healthcare.

DHCS is directly responsible for ensuring access to health care providers for beneficiaries enrolled under the FFS delivery of care model, where the Medi-Cal program serves as the primary source of coverage (FFS, Medi-Cal Only).

DHCS' framework for monitoring access to the Medi-Cal healthcare system is adapted from a synthesis of several sources, including the Institute of Medicine, the Agency for Healthcare Quality and Research, the Medicaid and CHIP Payment and Access Commission MACPAC's report to congress, and the published works of health services researchers. The framework incorporates the idea that access is the act of linking a population to needed and appropriate healthcare services. DHCS' framework includes the following components:

1. Predisposing Characteristics of the Population
    - A population's demographic and health composition are important predisposing factors to accessing healthcare services, and often drive the need for such services.

2. Enabling or Impeding Factors
    - Many enabling or impeding factors, including national and state economic and political influences as well as health system factors, can impact the access to FFS Medi-Cal services

3. Realized Access
    - The appropriate and timely use of healthcare services is included in the model as outputs or evidence that healthcare access was realized.

4. Access Outcomes
    - The effectiveness of appropriate and timely use of healthcare services.

The Department selected 23 measures identified in one of three key areas of the MACPAC report to congress focusing on Medi-Cal beneficiaries, provider availability, and service utilization and outcomes. Combined, these access measures were selected to provide a comprehensive portrayal of healthcare access in the Medi-Cal program, while

taking into account the limitations of readily available data sources. The identified access indicator measures include:

Beneficiary Measures

1. Percent Change in Medi-Cal Enrollment
2. Percent Change in Dental Enrollment

Provider Availability

3. Primary Care Practitioner Supply Ratios
4. Provider Participation Rates
5. Concentration of Medi-Cal Beneficiaries among Providers
6. Dental Provider Ratios
7. Pharmacy Participation Rates
8. Long Term Care Provider Participation Rates
9. Ratio of Medi-Cal LTC Occupied Bed Days to State-wide LTC Occupied Bed Days
10. Medi-Cal LTC Bed Vacancy Rates
11. Medi-Cal Beneficiary with a Usual Source of Care
12. Medi-Cal Beneficiary and Provider Language Discordance

Service Use and Outcomes

13. Percent of Enrollees with at least one Physician Visit during the Past 12 Months
14. Mean Number of Physician Visits during the Past 12 Months
15. Percentage of Children with at least One Dental Visit During the Last 12 Months
16. Service Rates per 1,000 Member Months
17. Emergency Department Visits
18. Medi-Cal Beneficiary Perceived Timely Access to Care
19. Timely Prenatal Care
20. Preventable/Avoidable Hospitalization Rates
21. Rate of Low Birthweight for Full Term Births
22. % Preterm Births
23. Help Line Calls categorized by Reason for Call and Geographic Location

The Department lays out a process for monitoring healthcare access which includes the collection and analysis of data, and the interpretation of trends. Once variations are identified, an investigation into the healthcare access problem will involve an in-depth analysis of the hypothesis entailing one or several of the following: further observational or experimental studies, literature reviews, informant interviews, and/or implementation of surveys. From these results, researchers can convey the significance of the healthcare access problem to those on the leadership team whose role it is to find appropriate solutions to address the problem. Data presented for this purpose will help tailor solutions and shape healthcare policy in the state. Data collected and analyzed from the healthcare access monitoring process will further be shared with the public in the form of annual reports tailored to a general audience.

Table of Contents

I. INTRODUCTION 7
II. BACKGROUND 8
Medi-Cal Overview 8
General Characteristics of the Medi-Cal Population 9
Medi-Cal Subpopulation for Whom DHCS Ensures Access 12
III. HEALTH CARE ACCESS LITERATURE REVIEW 13
Insurance Status 13
Demand and Provider Supply 14
Primary Care and Usual Source of Care 17
Patient-Provider Level Barriers to Access 17
Access Utilization Outcomes 18
Monitoring Recommendations from the Literature 19
IV. DEVELOPING A MEDI-CAL ACCESS MONITORING FRAMEWORK 24
Methods and Sources 24
Predisposing Characteristics of the Population 25
Enabling or Impeding Factors 25
Beneficiary Access 26
Access Outcomes 27
V. IDENTIFIED ACCESS MEASURES 28
Criteria for Selection 28
Population Characteristics 28
Provider Availability 28
Service Use and Healthcare Outcomes 29
Beneficiary Feedback 29
Data Availability 30
Measure Comparability 32
Data Gaps 32
Beneficiary Measures 33
MEASURE #1: % Change in Medi-Cal Enrollment 34
MEASURE #2: % Change in Medi-Cal Dental Enrollment 35
Provider Availability Measures 36
MEASURE #3: Population to Primary Care Provider Ratios 36

MEASURE #4: Provider Participation Rates 38
MEASURE #5: Concentration of Medi-Cal Beneficiaries among Providers 39
MEASURE #6: Population to Dental Provider Ratios 41
MEASURE #7: Pharmacy Participation Rates 42
MEASURE #8: Long Term Care Provider Participation Rates 43
MEASURE #9: Ratio of Medi-Cal Occupied LTC Bed Days to State-wide Occupied LTC Bed Days 44
MEASURE #10: Medi-Cal Long Term Care Bed Vacancy Rates 45
MEASURE #11: Medi-Cal Beneficiary with a Usual Source of Care 46
MEASURE #12: Medi-Cal Beneficiary and Provider Language Discordance 47
Service Use Measures 48
MEASURE #13: % of Enrollees with at least one Physician Visit during the Past 12 Months 48
MEASURE #14: Mean Number of Physician Visits during the Past 12 Months 49
MEASURE #15: % of Children with at least One Dental Visit during the Past 12 Months 50
MEASURE #16: Service Rates per 1,000 Member Months 51
MEASURE #17: Emergency Department Visits 52
MEASURE #18: Medi-Cal Beneficiary Perceived Timely Access to Care 53
MEASURE #19: Timely Prenatal Care 54
Access Outcome Measures 55
MEASURE #20: Preventable/Avoidable Hospitalization Rates 55
MEASURE #21: Rate of Low Birthweight for Full Term Births 57
MEASURE #22: % Preterm Births 58
MEASURE #23: Help Line Calls categorized by Reason for Call and Geographic Location 59
VI. ACCESS MONITORING PROCESS 60
Process Overview 60
Monitoring 62
Early Warning Indicators and Monitoring System 62
Annual Reporting 64
Monitoring Plan Refinements 66
Appendix 2 – Medi-Cal Data Sources 67
Appendix 2 - Access-Related Questions from the 2011 CHIS Adult Questionnaire 71
BIBLIOGRAPHY 73

Table of Figures

CHART 1: TREND IN MEDI-CAL FEE-FOR-SERVICE AND MANAGED CARE ENROLLMENT 9
TABLE 1: PLANNED TRANSITIONS OF SELECTED COUNTIES AND GROUPS FROM THE FEE-FOR- 10
SERVICE TO THE MANAGED CARE MODEL 10
CHART 2: DISTRIBUTION OF MEDI-CAL BENEFICIARIES AND FFS EXPENDITURES BY DELIVERY OF CARE 11
CATEGORY AND COVERAGE SOURCE 11
TABLE 2: DISTRIBUTION BY COVERAGE AND CARE DELIVERY CATEGORY AND AGE GROUP; CY 2010 11
TABLE 3: SIZE OF FFS POPULATION COVERED BY MEDI-CAL ONLY; CY 2010 12
TABLE 4: FFS POPULATION COVERED BY MEDI-CAL ONLY BY AID CATEGORY: CY 2010 12
FIGURE 1: MACPAC FRAMEWORK: 22
FIGURE 2: MEDI-CAL ACCESS MONITORING MODEL 24
TABLE 5. MONITORING MEASURES, DATA SOURCES AND COMPARISONS 33
FIGURE 3: MEDI-CAL ACCESS MONITORING PROCESS 61
TABLE 6. TIME LAGS IDENTIFIED IN PHYSICIAN VISIT CLAIMS DATA. 63
FIGURE 4. DATA PROCESSING AND ANNUAL REPORT TIMEFRAME EXAMPLE 65

I. INTRODUCTION

California's Medicaid program, Medi-Cal, provides needed health care services for millions of the State's low-income and disabled individuals. Provisions in both Federal and State statute mandate that administrators ensure access to high quality healthcare for its Medi-Cal beneficiaries. Although there is no universally accepted standard definition for healthcare access, a review of relevant literature identified several common approaches to defining and evaluating access. For instance, the National Academy of Science's Institute of Medicine (IM) broadly defines healthcare access as "the timely use of personal health services to achieve the best possible health outcomes." In this paper, the California Department of Health Care Services (DHCS) defines a systematic approach for measuring access to Medi-Cal administered healthcare services, and proposes a plan for monitoring healthcare access for its Fee-for-Service (FFS) Medi-Cal beneficiaries.

A standard system for measuring and monitoring healthcare access provides administrators with a better understanding of whether "they are purchasing value in the form of efficient high quality care for" Medi-Cal beneficiaries enrolled in FFS Medi-Cal. For instance, Congress' Medicaid and Children's Health Insurance Program (CHIP) Payment and Access Commission (MACPAC) notes that access measurement and monitoring helps identify "whether providers are available to enrollees as well as whether or not enrollees appropriately use and receive high-quality and efficient care." Additionally, the evaluation of healthcare access assists DHCS in determining whether Medi-Cal FFS programs are positively affecting beneficiaries' health outcomes. An access measurement system also serves as an early-warning mechanism for alerting State administrators to potential deficiencies in accessing Medi-Cal services.

The proposed plan set forth in this document to measure and monitor access in the Medi-Cal program originates from an array of access measurement methods and processes identified in an analysis of relevant literature. Consistent with MACPAC's recommended criteria, the access monitoring system set forth in this document will take into account: (1) the unique characteristics and complex health needs of Medi-Cal enrollees; (2) the availability of Medi-Cal providers; and (3) the appropriate utilization of healthcare services.

Combined, access measures identified for each of these three key areas provide a comprehensive portrayal of healthcare access for Medi-Cal beneficiaries. The set of measures identified in this document will be used to track trends and identify any access deficiencies in the Medi-Cal program moving forward.

II. BACKGROUND

Medi-Cal Overview

Medi-Cal, California's Medicaid program, is a public health insurance program that provides comprehensive health care services at no cost or low cost for low-income individuals including families with children, seniors, persons with disabilities, foster care children, and pregnant women. The federal government dictates a mandatory set of basic services including, but not limited to: physician services, family nurse practitioner services, nursing facility services, hospital inpatient and outpatient services, laboratory and radiology services, family planning, and early and periodic screening, diagnosis, and treatment services for children. In addition to these mandatory services, the state provides optional benefits such as outpatient drugs, home and community based waiver services, and medical equipment.

The Medi-Cal program has served state residents since 1966, and has, as directed by federal and state legislation, evolved over time to provide health care coverage to a diverse set of sub-populations with unique demographic traits, clinical characteristics, benefit packages, and Medi-Cal administrative complexities.

Medi-Cal eligibility is often gained based on economic disadvantages, while, in other cases, eligibility is gained from having a specific disease or medical condition. Particular eligibility groups include families enrolled in Temporary Assistance for Needy Families (TANF), indigent seniors and people suffering from disabilities, families with incomes below 100 percent of poverty, pregnant women, children in foster care programs, undocumented immigrants, individuals suffering from severe mental disorders, individuals afflicted with HIV, and others. The Medi-Cal range of benefits offered is also different among groups. For example, some groups, such as undocumented immigrants, gain access to only a limited scope of health care services. Other subpopulations may gain access to Medi-Cal administered health care services only after experiencing an acute care hospital admission. In these cases, such individuals are not eligible for Medi-Cal at the time of admission, but gain Medi-Cal eligibility retroactively.

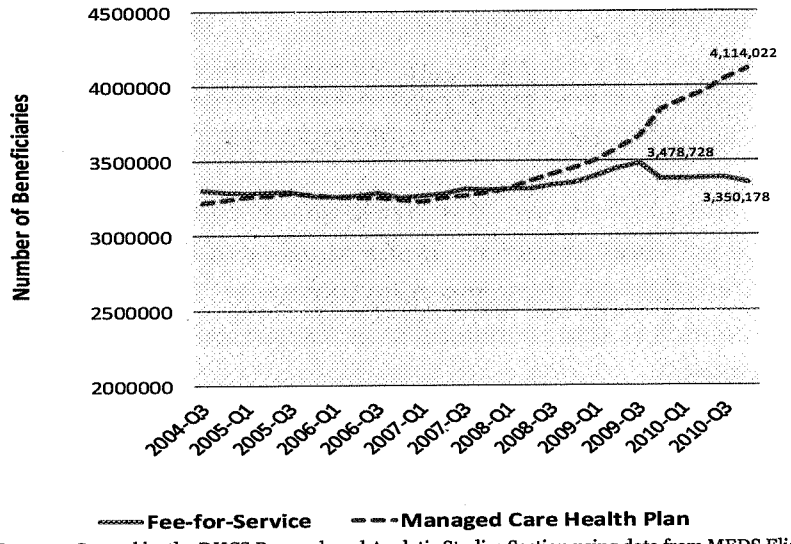
The unique and diverse traits of Medi-Cal enrollees pose particular challenges to policy makers seeking to ensure appropriate access to care. Knowledge of the Medi-Cal population's unique demographic and clinical characteristics provides administrators with a better understanding of how to shape polices and processes to ensure that all beneficiaries are able to successfully obtain the health care services they require and are guaranteed under Federal and State law.

General Characteristics of the Medi-Cal Population

Unlike the more homogenous populations covered by commercial and employer-based private insurance, Medi-Cal provides medical coverage to a variety of disadvantaged sub-populations. The Medi-Cal population is comprised of a diverse set of sub-populations with unique demographic traits, clinical characteristics, benefit packages, and Medi-Cal administrative complexities. As of January 1, 2010 the Medi-Cal program provided healthcare coverage to roughly 7.3 million Californians. Approximately, 8.9 million people were enrolled in Medi-Cal for at least one month during FY 2009-10. This enrollment total represented 23% of California's population over the same time period.

There are two primary Medi-Cal models for healthcare delivery: FFS and Managed Care. Each of these models includes beneficiaries who are eligible for Medi-Cal only or are dually eligible for Medi-Cal and Medicare. Over the past several years, the managed care delivery model has overtaken fee-for-service as the predominant healthcare delivery model for Medi-Cal beneficiaries. This enrollment growth into the managed care delivery model reflects two developments. First, the majority of new beneficiaries enrolled after 2007, due to the economic recession, qualified for coverage under Family aid categories. These aid categories required "mandatory" enrollment into managed care health plans in managed care model counties. Second, rising managed care enrollment also reflected the transition of additional counties from the FFS to the managed healthcare delivery model[1].

Chart 1: Trend in Medi-Cal Fee-For-Service and Managed Care Enrollment



Source: Created by the DHCS Research and Analytic Studies Section using data from MEDS Eligibility System, MMEF File. Data reflects a 12-month reporting lag

[1] Measuring Access to Medi-Cal Covered Healthcare Services: Physicians, Physician Groups, Clinics, and Hospital Emergency Departments. DHCS' Research and Analytic Studies Section. August 2011.

Table 1, below, provides the schedule for counties and/or groups that have shifted or will shift from the FFS to the Managed Care healthcare delivery model. In addition to transitioning specific counties from FFS delivery systems to managed care models, specific populations are also being transitioned from the FFS system to managed care health plans. For instance, the Section 1115 Demonstration Waiver that was approved by CMS in November 2010 will shift beneficiaries who are enrolled in one of 23 distinct aged, blind and disabled aid codes that reside in one of 16 "expansion" counties into managed care health plans beginning July 2011[2]. These beneficiaries are often referred to as Seniors & Persons with Disabilities (SPD). Enrollment into health plans for this group is expected to occur over a 12-month period.

Table 1: Planned Transitions of Selected Counties and Groups from the Fee-for-Service to the Managed Care Model

County or Group	Plan Model Type	Implementation Date	Estimated Total Annual Member Months	Average Monthly Eligibles
San Luis Obispo	COHS	Mar 1, 2008	206,224	25,778
Working Disabled	Mixed	July 1, 2009	136,583	11,382
Sonoma	COHS	Oct. 1 2009	529,872	44,156
Merced	COHS	Oct. 1 2009	767,364	63,947
Kings	Two-Plan	Oct. 1 2010	286,768	23,897
Madera	Two-Plan	Oct. 1 2010	333,975	27,831
Ventura	COHS	Jan. 1 2011	1,193,784	99,482
Seniors and Persons with Disabilities (Not Medicare Eligible)	Two-Plan, GMC	June 1, 2011	4,101,600	341,800
Mendocino	COHS	July 1, 2011	257,040	21,420
Marin	COHS	July 1 2011	195,984	16,332

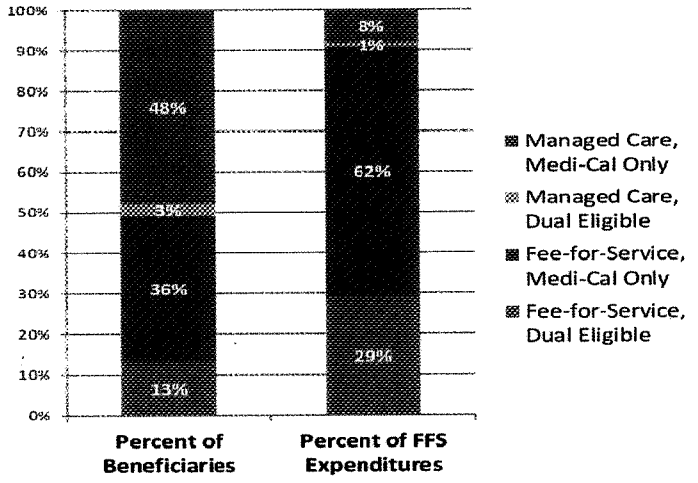
Source: Medi-Cal Budget Estimate, May Revise for 2008, 2009, 2010 and November Estimate for 2010

This shift in enrollment, from FFS Medi-Cal to managed care delivery models, positively impacts FFS Medi-Cal provider capacity. As the number of FFS beneficiaries declines due to the shift, the population-to-physician ratio improves. In addition, the number of Medi-Cal FFS physicians has also increased over the period 2008 through 2010, which results in additional capacity.

The following chart displays the distribution of Medi-Cal beneficiaries by delivery of care model and the corresponding percentage of Medi-Cal FFS expenditures. For example, while beneficiaries in the Managed Care, Medi-Cal only category accounted for 48% of all beneficiaries, they only accounted for 8% of FFS expenditures.

[2] Beneficiaries in the SPD Target Group are eligible for eligible for Medi-Cal only and have no other healthcare coverage.

Chart 2: Distribution of Medi-Cal Beneficiaries and FFS Expenditures by Delivery of Care Category and Coverage Source



Note: Only the costs for DHCS administered services are displayed.
Source: Created by the DHCS Research and Analytic Studies Section using data from MEDS Eligibility System, MMEF File. Data reflects a 12-month reporting lag.

The following table displays the distribution of beneficiaries between age groups among healthcare delivery models and eligibility coverage groups.

Table 2: Distribution by Coverage and Care Delivery Category and Age Group; CY 2010

Age Group	FFS, Medi-Cal Only	Managed Care, Medi-Cal Only	FFS, Dual Eligible	Managed Care, Dual Eligible
Months of Eligibility				
Age 00 to 18	11,892,361	30,515,595	700	901
Age 19 to 64	16,628,259	14,439,173	2,940,420	1,004,419
Age 65 or Older	1,142,350	333,824	7,887,371	1,795,581
Grand Total	29,662,970	45,288,592	10,828,491	2,800,901
Monthly Average				
Age 00 to 18	991,030	2,542,966	58	75
Age 19 to 64	1,385,688	1,203,264	245,035	83,702
Age 65 or Older	95,196	27,819	657,281	149,632
Grand Total	2,471,914	3,774,049	902,374	233,408
Percentage				
Age 00 to 18	40.09%	67.38%	0.01%	0.03%
Age 19 to 64	56.06%	31.88%	27.15%	35.86%
Age 65 or Older	3.85%	0.74%	72.84%	64.11%

Source: Created by the DHCS Research and Analytic Studies Section using data from MEDS Eligibility System MMEF File. Data reflects a 12-month reporting lag.

Medi-Cal Subpopulation for Whom DHCS Ensures Access

Although the monthly enrollment in the Medi-Cal program, currently, totals about 7.3 million beneficiaries, the actual population for whom DHCS assumes direct responsibility for ensuring access to care is much smaller. Fifty-one percent of the Medi-Cal population is enrolled in managed care health plans that have assumed responsibility for providing care. Additionally, another 13% of beneficiaries are enrolled in both Medicare and Medi-Cal, with Medicare generally serving as primary payer and assuming direct responsibility for ensuring access to physician, physician groups, clinics, and hospital emergency departments.

DHCS is directly responsible for ensuring access to health care providers for beneficiaries enrolled under the FFS delivery of care model, where the Medi-Cal program serves as the primary source of coverage. As noted previously, these beneficiaries represented 36% of the total Medi-Cal population and generated 62% of total FFS expenditures. DHCS is also responsible for ensuring healthcare access to individuals who are disenrolled from managed care health plans or for some reason remain outside the reach of Medi-Cal health plan enrollment. These beneficiaries are generally those who have been exempted from managed care enrollment or who are newly eligible for Medi-Cal and spend the first 60 days or so in the FFS system.

Table 3: Size of FFS Population Covered by Medi-Cal Only; CY 2010

Number of FFS Enrolled- Medi-Cal Only Beneficiaries enrolled in the Medi-Cal Program at least one month during CY 2010	4,828,718
Total Months of Medi-Cal Enrollment	29,662,970
Beneficiary Years (Average Monthly Enrollment)	2,471,914
Enrolled Medi-Cal Beneficiaries on July 1st,t 2010	2,484,880

Source: Created by the DHCS Research and Analytic Studies Section using data from MEDS Eligibility System, MMEF File. Data reflects a 12-month reporting lag.

Table 4: FFS Population Covered by Medi-Cal Only By Aid Category: CY 2010

Medi-Cal Beneficiary Population; Calendar Year 2010	Member Months	Average Monthly Enrollment
All FFS Enrolled- Medi-Cal Only Beneficiaries	29,662,970	2,471,914
Undocumented	(9,694,534)	(807,878)
Full Scope	19,968,436	1,664,036
Aged	717,857	59,821
Blind/Disabled	5,221,206	435,101
Families	9,410,902	784,242
Foster Care	1,328,398	110,700
Other	3,290,073	274,173
Total Full Scope	**19,968,436**	**1,664,036**

Source: Created by the DHCS Research and Analytic Studies Section using data from MEDS Eligibility System, MMEF File. Data reflects a 12-month reporting lag.

The degree of responsibility for ensuring access to care may vary depending on the sub-population and type of service. For instance, as displayed in the table above, roughly, 33%, or 807,878, of total FFS, Medi-Cal Only beneficiaries are undocumented aliens who are entitled to emergency and/or pregnancy-related services only. For these beneficiaries, DHCS is responsible for ensuring access to prenatal care, emergency department and obstetrical services only. After excluding the undocumented alien population, there are 1,664,036 FFS, Medi-Cal Only beneficiaries who are eligible for full-scope services[3]. Additionally, roughly 380,000 FFS, Medi-Cal Only beneficiaries in Blind/Disabled aid codes are expected to be mandatorily enrolled into Medi-Cal managed care plans under Medi-Cal's recently approved Section 1115 demonstration waiver. As a result, DHCS expects the FFS, Medi-Cal eligible only, full scope population to continue to decline as beneficiaries shift from FFS to managed care. When assessing the DHCS' level of responsibility for ensuring access, it is important to understand the sub-population and its unique status in the Medi-Cal program. Subpopulations may be transitioning from FFS to managed care, be entitled to a limited scope of services, or Medi-Cal may be the secondary payer and only provide access to a limited scope of services or have a limited role in ensuring access.

III. HEALTH CARE ACCESS LITERATURE REVIEW

The purpose of this section is to summarize the available literature on how healthcare access has been defined and operationalized in health services research. A meta-analysis of relevant literature provided recommendations for how to efficiently and effectively monitor health care access in Medicaid health systems.

Insurance Status

The most fundamental and frequently studied variable in healthcare access is health insurance. Many health services researchers have provided strong evidence that lack of health insurance is a major deterrent to health care access and utilization, which leads to poorer health outcomes. The Institute of Medicine Committee on the Consequences of Uninsurance (IOM-COU) summarizes the evidence to date on the effects of being uninsured in the United States (IOM 2002). The IOM-COU reports that health insurance is associated with better health outcomes and increases the likelihood of receiving appropriate preventive, chronic and acute care services. Additionally, individuals without health insurance coverage are more likely to experience greater declines in health status

[3] Prenatal care is funded under Title XXI. All other services associated with the undocumented population are funded through Title XIX.

and die sooner than those with continuous health insurance coverage. Although health insurance is an important enabler to health services utilization, it is only one of several important factors in healthcare access.

Demand and Provider Supply

The recent enactment of healthcare legislation, including the Patient Protection and Affordable Care Act (March 23, 2010) and the Children's Health Insurance Program Reauthorization (CHIPRA), will expand publically funded health insurance coverage to many who are uninsured, minimizing one of the fundamental barriers to accessing care. One of the tests facing these healthcare coverage expansion programs will be in accommodating the increased demand for healthcare services in the safety net system, the default system which cares for the uninsured and medically vulnerable. Demand has been defined as "the extent of need for safety net services...affected by a wide variety of factors, particularly the size of the population potentially using safety net providers and the intensity of their need" (AHRQ). Healthcare demand has been studied in various ways, focusing both on assessing community-wide healthcare resources available to serve the needy, as well as considering the unique characteristics of the population placing demand for serves in the safety net system. Population characteristics such as age distribution, the level of illness and disability, cultural diversity and geographic distribution of the population have been identified in the literature as important factors to consider in a healthcare access monitoring system, since each in some way relates to specific demands for services (MACPAC). For example, a population comprised predominantly of older adults or disabled places greater demand on specialty services such as cardiology or orthopedic surgery, while a population comprised mainly of children places greater demand for pediatric services. Other studies which focus on assessing healthcare capacity examine community-level factors of access such as availability of providers offering services within the community, the overall availability of hospital beds, the preponderance of poverty in the community, and market factors such as the extent to which managed care is the primary health delivery model.

Provider supply, which is probably the most commonly used community-level measure of healthcare access, is associated with many positive health outcomes. For example, studies have found a significant association between high primary care physician supply and lower mortality, longer life expectancy, and better birth outcomes (Shi 2001). These positive outcomes occur even in the presence of individual-level inequities such as income and racial/ethnic characteristics (Shi 2001). Studies assessing the impact of provider supply have examined several practice characteristics such as location (rural vs. urban), healthcare setting (large group, public or private hospital, academic medical centers or community health clinics), and provider specialty area. For example, healthcare

resources are scarcer in rural and poor inner-city areas, and public and teaching hospitals tend to serve a larger proportion of the uninsured or publically-insured patients. When the number of public hospitals shrinks, or when the proportion of low-income patients who reside in rural or inner-city areas grows, the supply and demand for services change in marked ways.

The availability of specific professional subgroups (primary care physicians, obstetricians, gynecologists, specialty care and surgical specialty practitioners) in the health care system can impact a patient's access to services. Studies have cited problems with access for California's uninsured and low income population to specialty providers such as neurologists, allergy/immunology specialists, orthopedists and other specialties (Felt-Lisk 2004). The main reasons cited for these access problems were finding a specialist willing to accept new patients, and the inability for patients to obtain timely appointments.

The accessibility of providers and specialists is even more poignant when examining the differences in provider supply within rural vs. urban areas. While 20% of Americans live in rural areas, only 9% of the nation's physicians practice there. Rural residents account for a large proportion of America's disabled population (Lishner). Rural areas have difficulties in attracting and retaining qualified health care professionals, and often lack the resources necessary to offer highly specialized services. In comparison to urban residents, patients living in rural areas have access to fewer hospital beds, physicians, nurses and specialty providers per capita and increased transportation barriers (Lishner). The limited supply of providers offering services in rural areas can lead to patients making fewer physician visits and seeking care later in the course of their illness (Lishner). Provider supply has been a long-standing issue affecting healthcare access for patients in rural parts of the US. Identifying areas of oversupply and shortages of safety net providers and specialists is critical in assessing access and meeting the demand for safety net health care services.

There were several methodologies identified in the literature that are used to evaluate the adequacy of provider supply. Three complementary methods, *relative benchmarking, normative benchmarking and economic analysis of the physician labor market*[i] (Coffman, Quinn, Brown, and Scheffler, 2004), are described below.

Relative Benchmarking uses population to physician ratios in a geographic area of interest, and compares this ratio to ratios of other geographic areas. A county or local population-to-provider ratio that is well below the mean for the state could be an indication of under-supply and a signal for Medicaid officials to investigate further.

Normative Benchmarking utilizes a pre-determined desired ratio of population-to-providers against the actual ratio. The HPSA's population to primary care physician ratio of 3,500:1 as a benchmark for "high need" is an example of a normative ratio. Of course, such ratios vary by provider type and demand for services by specific specialty. The number of visits to pediatricians or family practice physicians, per thousand members, is likely to be greater, for example than the number of visits to dermatologists or ophthalmologists.

Economic Analysis of the Physician Labor Market is the analysis of the provider "market," and the impact of reimbursement rates and compensation, as various health care organizations compete for the limited supply of physician services by offering higher payments. However, as illustrated in the previous discussion on participation by different types of providers, not all providers share the same sensitivity, or elasticity to price. Some physicians are able to accommodate a greater number of Medi-Cal beneficiaries as a percentage of their overall practice than others.

> "Although high fee levels increase the probability that individual physicians will accept Medicaid patients, high fee levels do not necessarily lead to high levels of physician Medicaid acceptance in an area. Numerous other physician practice, health system, and community characteristics also affect Medicaid acceptance. The effects of Medicaid fees on Medicaid acceptance are substantially lower in areas with high Medicaid managed care penetration and for physicians who practice in institutional settings. The results suggest that a broad range of factors need to be considered to increase access to physicians for Medicaid enrollees (Cunningham, Nichols, 2005)."[ii]

Many provider market analyses seek to build in estimates based on future events to determine whether provider shortages may occur in the years ahead. These analyses look at such variables as the number of medical school graduates choosing specialty medicine over primary care, the attractiveness of medicine as a profession, the number of future physicians overall, the aging of the population that will need to access services, and the growth of the economy[iii] (Blumenthal, 2004).

Another aspect of provider supply is physicians' willingness to participate in the Medicaid program. Surveys that assess a provider's willingness to participate in the Medicaid program have consistently reported inadequate and delayed reimbursement as the primary reasons for not participating in the Medicaid program (Center for Studying Health System Change). However, some states have successfully increased Medicaid physician supply by using non-fee related strategies to increase provider participation such as streamlining administrative processes and distributing recruitment videos to medical

schools (Adams 2001, Perloff 1987). Though there are many studies that demonstrate the association between higher reimbursement rates and higher physician participation in the Medicaid program, other studies recognize that fee levels are only one of many factors that affect the relative number of physicians who are willing to accept Medicaid patients. For example, general internists and family practitioners, physicians from ethnic minority groups, physicians who deliver services in institutional settings and those practicing in lower-income communities are more likely to participate in the Medicaid program, regardless of reimbursement policies.

Primary Care and Usual Source of Care

Patients are more likely to utilize health care services when continued relationships are established with the same provider over time. Long-term relationships with the same provider, commonly referred to as a "usual source of care," is consider an important measure of a patient's access to care. A usual source of care serves as a bridge between providing health care coverage and promoting access.

Researchers have taken the concept of a usual source of care further by confining the usual source to that specifically of a primary care physician. More recently, an expanded definition referred to as the "medical home," has been identified as a critical component in an effective, efficient and equitable health delivery system. The medical home has four key features: 1) a first-contact point for care for each new health problem; 2) a long-term and person-focused relationship with a primary care practitioner; 3) care provided for all needs except those too complex for a primary care practitioner; and 4) coordination of care in instances where referrals are necessary (Starfield 2004). Once a person secures a usual source of care, they are more likely to gain access to routine primary care and preventive services (DeVoe 2003). Receipt of primary care, in turn, is associated with improved health status, lower morbidity and mortality in adults, and reduced illness and disease complications in children (Stevens 2006). Primary care visits have also been attributed, in part, to reduced hospitalization rates and emergency department visits as a result of the ability to address and manage acute and chronic health problems (Bindman 1995). There are many additional factors, however, that play a role in whether those with health coverage and a usual source of care obtain access to appropriate or needed services. These factors are explored in studies examining cultural and linguistic barriers, provider proximity, wait times and transportation barriers.

Patient-Provider Level Barriers to Access

The barriers most often cited by low-income and publically insured patients for prompting them to seek health care are the doctor's lack of responsiveness, inability to pay

their portion of costs, and transportation difficulties. In addition, ethnic subgroups often cite language barriers and lack of cultural understanding as problems in accessing health care services. Furthermore, studies have shown that patients encounter a number of process obstacles in getting needed care, such as long telephone wait times, waiting several days for an appointment, and encountering providers who do not have weekend or evening hours (Hall 2008). Patients who live in remote areas of the country experience serious obstacles in accessing needed medical care due to geographic distances and transportation problems. Long transportation times (>30 minutes) and provider proximity have been associated with more frequent use of emergency room visits (Baker 1996), and affect treatment choices by cancer patients (Meden 2002). Low-income urban patients who walk or rely on public transportation are less likely to have a usual source of care, wait more than 2 days before seeking care, and are less likely to seek care when new problems and exacerbations of chronic problems arise (Rask 2011).

Language barriers have been extensively studied and found to impede access to care, lowering the quality of care and resulting in poorer health outcomes (Ponce 2006). Effective communication is core to the delivery of quality health care. Communication between patient and physician about sensitive issues in health care can be difficult to achieve without the added obstacle of bridging cultural and language differences. Yet many patients who need medical interpreters have no access to them (Flores 2006). Patients with language barriers are less likely to have a usual source of care, have lower compliance rates, and increased risk for non-adherence to medications (Flores 2006). In addition, patients whose primary language is a language other than English are more likely to have unmet health care needs, and are less likely to receive annual preventive medical and dental services (Flores 2011).

Access Utilization Outcomes

Appropriate health care utilization is the ultimate outcome of achieving effective health care access. Many of the studies cited previously have measured the significance of various barriers to accessing care in relation to recommended preventive health services. These utilization outcomes include whether patients receive a preventive medical and dental visit in the last 12 months, receipt of specific preventive services such as cancer screening, prenatal care, immunizations, and whether those with chronic conditions receive recommended disease management services. More recently, researchers have been studying and monitoring preventable hospitalizations. These studies examine a set of ambulatory sensitive conditions, which are conditions for which good outpatient care can potentially prevent the need for hospitalizations or for which early intervention can prevent complications or more severe disease (Bindman 1995). Studies have demonstrated that any one of several barriers to access may hinder the ability for patients to access appropriate primary care services and increases the likelihood for those with chronic

conditions to delay needed care or to seek care in emergency departments. Access to preventive services such as routine blood pressure and cholesterol screening, dental check-ups, vaccinations, and routine cancer screening, are hindered when patients face barriers such as lack of insurance, limited availability of providers, no usual source of care, and language and transportation difficulties. Eliminating these healthcare access barriers places patients on a pathway to appropriate healthcare utilization and, ultimately, better health outcomes.

Monitoring Recommendations from the Literature

In 2000, the Institute of Medicine released a report highlighting the vulnerability of the Nation's safety net healthcare system as pertains to its financial stability and ability to meet the growing needs of the uninsured and medically vulnerable population. One of the five key recommendations in the report is to capture vital information on the current status of local safety net healthcare systems. "The committee recommends that concerted efforts be directed to improving this Nation's capacity and ability to monitor the changing structure, capacity, and financial stability of the safety net to meet the healthcare needs of the uninsured and other vulnerable populations". In response to this report, the AHRQ and the Health Resources and Services Administration (HRSA) provided a broad range of recommendations for monitoring the status of state and local healthcare systems that delivery care to the poor and uninsured. The monitoring framework set forth by AHRQ and HRSA encompasses many facets of a healthcare delivery system. For example, healthcare capacity may be measured by identifying supply and demand for safety net services. In addition to identifying the number of providers in a community and the number of enrollees accessing health services, demand measures may include contextual factors such as the degree of poverty, disability, AIDS cases and uninsured in the local area.

Measures recommended by the AHRQ and HRSA report that pertain to facets of the health care delivery system are:

- Physician supply by professional subgroupings; and
- Inpatient and emergency room utilization rates.

Understanding the community context in which delivery systems operate is also recommended. Suggested measures along these lines include:

- Data pertaining to the total population in the community, as well as population growth, stratified by age, race and ethnicity, immigration status and primary language;
- Economic indicators of a community, including statistics on education, housing and crime.

Outcomes measures that reflect the degree to which access has been achieved are also suggested, and include measures such as:

- Number of preventable/avoidable hospitalizations;
- Percent of early prenatal care initiation among women who gave birth; and
- Percent of deliveries with adverse birth outcomes (low birth weight, preterm).

Lastly, outcome measures from survey resources are suggested, which include the following:

- Degree to which low-income populations have access to a usual source of care;
- Delayed or unmet health care needs; and
- Prevalence of annual and bi-annual doctor visits.

What becomes evident when reading through the AHRQ and HRSA recommendations is that safety net heath care access concerns are influenced at many levels (state-wide, health system-wide and person-level).

Beginning in 2007, the California HealthCare Foundation (CHCF) and DHCS undertook an investigation into the usefulness of a Medi-Cal quality performance monitoring system. This project resulted in the recommendation of two types of quality and performance measures. The first type pertains to population measures that focus on children, pregnant women, parents, seniors and people with disabilities. These population measures span four service domains: preventive care, acute and chronic care, behavioral health care, and long term care. Measures of this type include the following:

- Receipt of EPSDT services
- Cervical cancer screening
- Timeliness and frequency of prenatal care
- Rates of low birth weight
- Appropriate medication and treatment for asthma, diabetes, low back pain and depression

The second type of measure proposed by this collaboration addresses administrative performance and healthcare access. Measures in this category include the following:

- Timeliness of eligibility determination and timely redetermination;
- Average length of enrollment;
- Timely provider enrollment;
- Provider-patient ratios;
- Beneficiaries' receipt of primary care physician visits;
- Language difficulties and access to interpreters; and
- Difficulty finding Medi-Cal information.

Although many of these recommended performance measures address quality of care more so than access to care, some of the measures reflect access issues as defined in the literature, such as provider availability, timely receipt of preventive services, and enrollee difficulties stemming from language differences.

In 2009, CHIPRA became law, and put forth a set of core measurements aimed to monitor health care accessibility and quality. Some of these measures include the following:

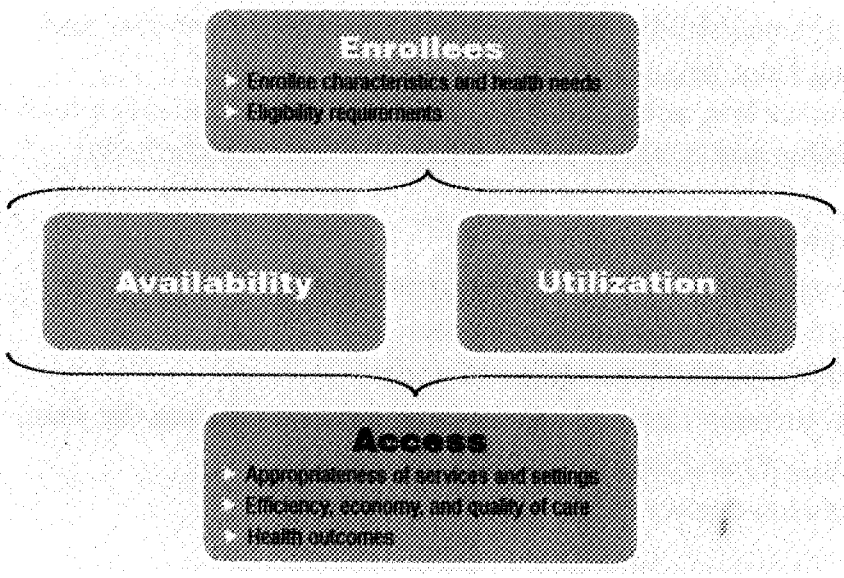
- Early receipt and frequency of prenatal care;
- Percent of live births weighting less than 2,500 grams (low birth weight);
- Rates of childhood and adolescent immunizations;
- Developmental screening for children age 3 and under;
- Receipt of at least one primary care and preventive dental visit during the year;
- Ambulatory care visits not resulting in a hospital stay; and
- Potentially preventable emergency room visits for asthma.

Proposed as voluntary quality reporting measurements, these CHIPRA indicators offer a suitable starting point for assembling a set of health care access measures for children.

The Medicaid and CHIP Payment and Access Commission (MACPAC) prepared a report to Congress in 2011, incorporating many of the previously mentioned features in a framework for measuring and monitoring access for Medicaid and CHIP populations. The Commission places emphasis in three main areas: the unique characteristics of Medicaid and CHIP enrollees; the availability of Medicaid and CHIP providers; and the appropriate utilization of healthcare services.

Figure 1: MACPAC Framework:

FIGURE 4-1. The Commission's Access Framework



Source: Medicaid and CHIP Payment and Access Commission, MACPAC March 2011 Report to the Congress on Medicaid and CHIP.

Population characteristics such as age distribution, the level of illness and disability, cultural diversity, and geographic distribution are recognized as important factors in an analysis of healthcare access, as each of these aspects, in some way, drives healthcare use. The Commission's framework recognizes that most Medicaid beneficiaries are lower income, making cost-sharing requirements for services particularly challenging. A large proportion of the Medicaid population is culturally and linguistically diverse, and many may have difficulties understanding and acting upon healthcare information. Additionally, the Medicaid beneficiary population is comprised of a large proportion of disabled and people with complex healthcare needs. The availability of services, specifically the adequacy of provider supply and specialty mix, is highly correlated with whether beneficiaries receive the services they need. Examining the adequacy of the Medi-Cal service delivery system requires an analysis of the number and types of providers available to the Medi-Cal population, their service location, and whether the Medi-Cal provider network reflects the needs of the beneficiaries. Provider supply may be driven by payment and other program policies, and may further influence whether providers are willing to accept new Medicaid patients. The final area of the framework focuses on the way beneficiaries use healthcare services, which often referred to as "realized access." This area places attention on what services are being used ("realized access"), the affordability of such services, how easily beneficiaries can navigate the health system, as well as beneficiary experiences and feedback. For example, evaluating healthcare utilization by

Medicaid beneficiaries may include identifying whether beneficiaries have a usual source of care, difficulties in fulfilling cost-sharing requirements, availability of medical appointments, transportation difficulties, language difficulties and the availability of translation services. The appropriate use of healthcare services, which is a fundamental goal in achieving adequate access, directly leads to better health outcomes. Combined, these three areas of access monitoring framework provide a comprehensive portrayal of healthcare access for Medicaid beneficiaries.

The Commission's report provides further guidance on how access may be evaluated, and has identified three areas of evaluation: 1) appropriateness of services and service setting, 2) efficiency, economy and quality of care, and 3) impact on healthcare outcomes. Appropriateness of services includes hospitalization rates for conditions viewed as avoidable with adequate access to primary care, emergency department visits for conditions that could have been handled in an ambulatory care setting, and adequacy of prenatal care. Quality evaluations, which may parallel those found in managed care organizations, include HEDIS measures for select conditions. Lastly, although no specific guidance on healthcare outcomes is given, the Commission notes the importance of healthcare outcome measures since they are the output of appropriate healthcare service utilization. MACPAC's report appreciates that substantial differences in state program policies exist, and places emphasis on tailored measures that reflect the local health system and the needs of the local populations. The framework recommended by MACPAC offers a realistic approach that considers data limitations and other resource constraints, with a focus on implementing measures more likely to reveal important barriers to healthcare access.

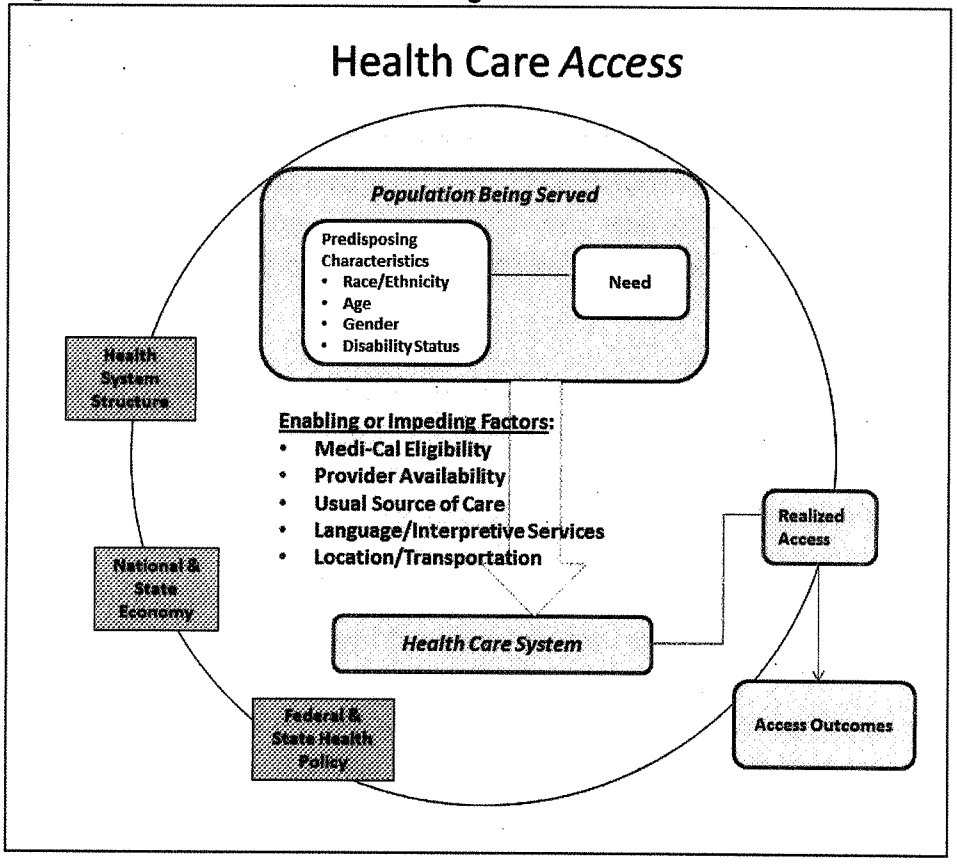
In a recent presentation delivered at the December 2010 MACPAC meeting, Dr. Andrew Bindman of the University of California, San Francisco, provided recommendations for developing an early warning system to detect healthcare access issues. These recommendations borrow directly from public health monitoring or surveillance activities, which encompasses the routine and continual analysis and interpretation of data for the purpose of identifying early signs of access problems so that appropriate action can be taken. These actions include undertaking a deeper examination of the problems (geographic location, impact on specific subgroups, and identification of specific barriers) so that appropriate solutions can be developed. The specific measures selected for an early warning system must be timely, well-tested, and tailored to the needs of the populations being served.

IV. DEVELOPING A MEDI-CAL ACCESS MONITORING FRAMEWORK

Methods and Sources

Upon review of the available literature, DHCS drafted a framework for monitoring access to the Medi-Cal healthcare system. The access framework was adapted from several sources, including the IM, the AHRQ, the MACPAC's report to congress, and the published works of health services researchers. The framework incorporates the idea that "access" is the act of linking a population to needed and appropriate healthcare services. The model recognizes that population characteristics are important predisposing factors to accessing healthcare services, and often drive the need for such services. In the process of obtaining services, there can be many enabling or impeding factors along the pathway to realized access, including national and state economic and political influences, as well as health system factors that operate outside the Medi-Cal program. Each component of the model is explained below.

Figure 2: Medi-Cal Access Monitoring Model



Source: Adapted from Anderson and Davidson, *Improving Access to Care in America*, in Changing the U.S. Health Care System: Key Issues in Health Services Policy and Management, 3rd edition, 2007 .

Predisposing Characteristics of the Population

The MACPAC framework considers the unique characteristics of the Medicaid and CHIP population, including their cultural and linguistic diversity, geographic location, and their complex healthcare needs. In our framework, predisposing characteristics are the basic demographic composition of the population. They include age, gender, race/ethnicity, primary language spoken, and disability status. Population characteristics often drive the need for healthcare services. For example, a population comprised of women of reproductive age places demand on obstetric and gynecological services, while a population of primarily older adults places demand on a different set of services such as those to manage chronic conditions. Additionally important is the geographic distribution of the population in relation to healthcare service locations. In the Medi-Cal FFS program roughly 78% of the population is located in urban areas, while 22% are located in areas classified as rural or frontier. A Frontier Medical Service Study Area is one with a population density equal to or less than 11 persons per square mile

Enabling or Impeding Factors

There are a myriad of factors that can potentially enable or impede access to healthcare services, some of which are listed in the access model. National and state economic environments, including unemployment rates, rates of uninsured in the general population, state budget crises and other economic influences have a substantial impact on a population's ability to access healthcare services. For example, when unemployment rates increase, many people lose employer-based health insurance and their ability to access healthcare. Increased unemployment in a population places greater demand on publicly funded healthcare programs, and may lead to impediments in healthcare access via the diminished availability of vital program services.

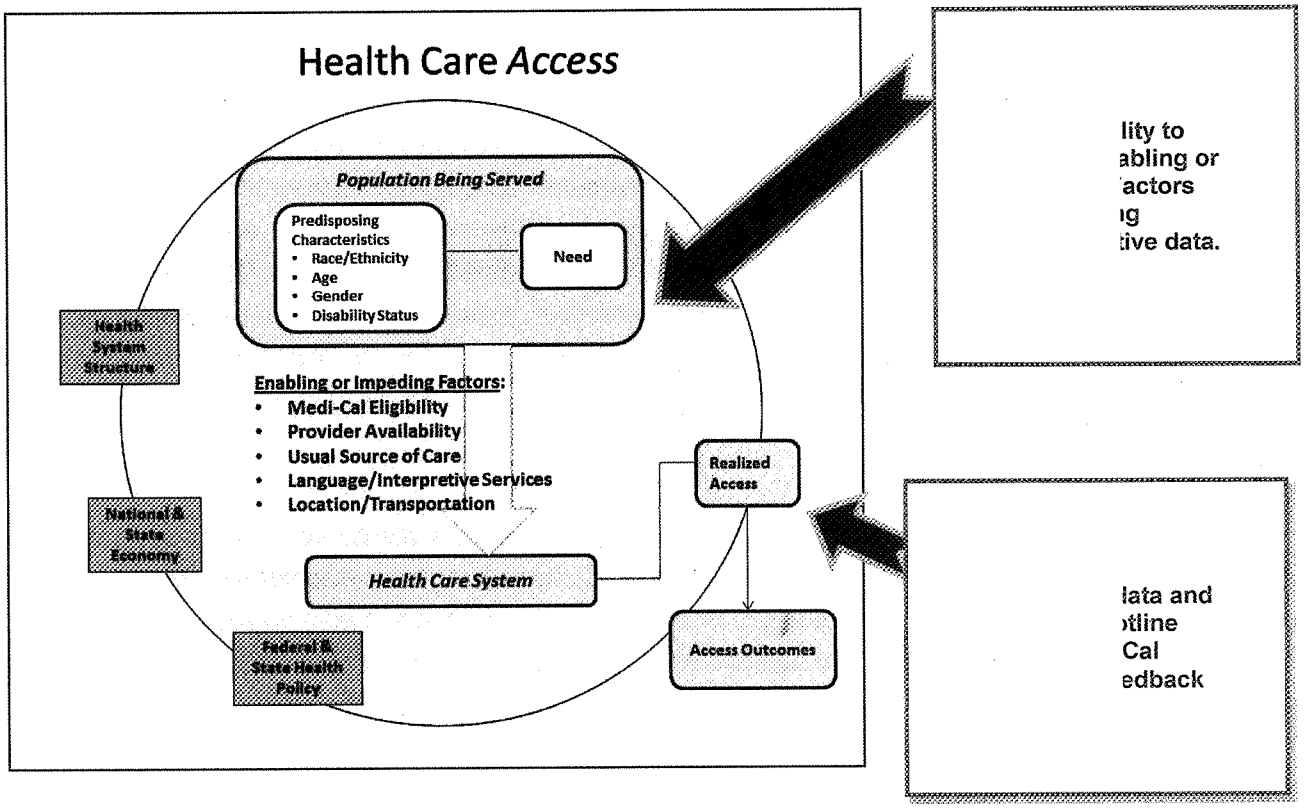
Characteristics of a community's healthcare delivery systems, including the penetration rates of managed care, healthcare workforce distribution and the availability of physicians and medical specialist, as well as willingness of providers to participate in publicly funded healthcare programs all contribute to healthcare access in one form or another. Provider availability, particularly in rural and low-income areas of the country, and the proximity of available healthcare services in relation to the populations they serve are all considered important factors in accessing healthcare, and have been incorporated into the access model. The model further recognizes that federal and state policies (i.e., provider reimbursement rates and other incentives) may influence, both positively and negatively, the supply of providers that deliver services in publicly funded programs, and ultimately enable or hinder access to healthcare for Medi-Cal and CHIP populations.

The contribution of a usual source of care, or primary care practitioner, is seen as essential in the pathway to realized healthcare access. The receipt of preventive services, management of chronic or complex health conditions, timely referrals to specialists, prescription drugs, and other services are best facilitated when beneficiaries have access to a primary care provider or a usual source of care. This factor has been integrated into the model, and is viewed as particularly importance to achieving healthcare access. Recognizing that a large proportion of Medi-Cal beneficiaries are low-income, disabled and from culturally diverse backgrounds, factors such as transportation and out-of-pocket expenses, beneficiary/provider language discordance, availability of interpretive services, geographic location of services and accommodations for physically disabled beneficiaries, have been integrated into the access framework as enabling/impeding factors. Many of the enabling/impeding factors described above have been recognized by the MACPAC commission as important elements to consider with regards access monitoring. The enabling/impeding factors we list have all been documented by health services researchers as long-standing and important influences to accessing healthcare, but are in no way intended to be an exhaustive list of factors affecting access.

Beneficiary Access

DHCS' access measurement model utilizes the appropriate and timely use of healthcare services as outputs or evidence that healthcare access was realized. In this model, evidence of realized access is obtained through numerous information sources.. For instance, Medi-Cal administrative claims submitted for services paid under a FFS arrangement enables California to analyze realized access for its Medicaid beneficiaries over time and for specific subgroups.. Examples of realized access identified through administrative data include claims reflecting doctor visits, dental visits, emergency room visits, hospital inpatient stays, and other healthcare services.

Administrative data alone doesn't provide information regarding beneficiaries who are unable to access services, and reasons for these access difficulties. The reasons for beneficiaries not accessing services can be identified through information sources such as population-based surveys that have the capability of assessing various access components among respondents with Medi-Cal coverage in relation to those of the general population Measurement of beneficiaries' experiences with the Medi-Cal healthcare system will primarily come from the California Health Interview Survey (CHIS) and include such items as delay in receiving care, reasons for those delays (cost or gaps in coverage), and ability to communicate with and understand healthcare providers. Additionally, DHCS intends to develop a hotline for beneficiaries to directly express their experiences with the Medi-Cal program.



Access Outcomes

The final element of the access framework speaks to the effectiveness of appropriate and timely use of healthcare services. When Medi-Cal beneficiaries successfully participated in the healthcare system and receive services that are most appropriate for their particular healthcare needs, the best possible health outcomes are achieved. Examples of outcomes that reflect appropriate healthcare utilization include positive birth outcomes (low proportions of preterm and low birth weight deliveries), lower mortality rates, and lower rates of preventable hospitalizations.

V. IDENTIFIED ACCESS MEASURES

Criteria for Selection

Several healthcare access measures were identified using the framework described above. A primary goal was to select a limited number of measures for each of three key areas recommended by MACPAC that are known to influence healthcare access, and that would provide useful data on access among Medi-Cal beneficiaries for state policymakers. We further considered the availability of data used to calculate measures, the ability to compare calculated measures geographically by county, and the comparability of measures to national surveys or nationally recognized clinical best practices.

Population Characteristics

Central to the selection process was the necessity to incorporate access measures that reflect the unique demographic traits, clinical characteristics, benefit complexities of the Medi-Cal population. For example, 41% of the FFS Medi-Cal Only population are children. Women of reproductive age make up another 35% of the FFS Medi-Cal Only population. Also unique to this subpopulation of women is that most of the undocumented aliens among this group receive limited scope benefits for pregnancy-related and emergency services only, and these services are received through the FFS program. The influence that full-scope vs. limited-scope benefits would have on access measures (particularly primary care access) were taken into account, and, where applicable, are addressed via exclusion criteria. In addition, Medi-Cal beneficiaries who are dually eligible for Medicare and Medi-Cal benefits are excluded from measurement since claims data for this subpopulation is lacking the information necessary to identify key access concerns. We further considered the substantial needs of Medi-Cal's disabled population and propose stratifying available data by aid category, where applicable, as an indication of disability status among the measured population.

Provider Availability

Provider availability, supply, and participation were also considered as principal influences of healthcare access in the Medi-Cal program. DHCS chose 10 measures in this key area that reflect, in one way or another, the availability of providers delivering services to the Medi-Cal population. Since it is known from the literature that rural and urban differences in the distribution of healthcare resources exit, we propose to stratify the data geographically by county, MSSA or by metropolitan designation, and map the results when geographic data is available. The geographic stratification done as a part of the monitoring analysis will be consistent with the geographic stratification DHCS used in the baseline

analyses for the various measures. It is also critical to identify whether the geographic distribution of provider services reflect the distribution of Medi-Cal enrollees. For this reason, we propose to calculate population-to-provider ratios by geographic strata to identify any geographic deficiencies in provider resources. Data will also be stratified by provider type (i.e., pediatrics, gynecology and other specialty) to better identify whether services accurately reflect the needs of the Medi-Cal population.

Service Use and Healthcare Outcomes

Several measures were identified that address healthcare utilization among the Medi-Cal population. Given that factors such as age, race/ethnicity, and health status are strong predictors of healthcare utilization, we propose stratifying the data for these factors, using aid categories as a proxy for health status. We further propose to identify geographic differences, if any, by stratifying the data by county or metropolitan designation. Healthcare setting is also an important consideration in identifying whether Medi-Cal beneficiaries appropriately utilize services. For example, are Medi-Cal beneficiaries utilizing ER services for non-emergency care? What is the prevalence of ambulatory care sensitive hospital admissions among Medi-Cal beneficiaries? We also include in this area of measurement items that address health outcomes stemming from the appropriate use of healthcare services, such as healthy deliveries.

Beneficiary Feedback

Currently, California does not have a mechanism in place to receive information from beneficiaries pertaining to healthcare access issues in the Medi-Cal FFS program. However, to address this gap in data resources the Department will establish a Medi-Cal toll free help line similar to that implemented for Medi-Cal Managed Care. Beneficiary calls to this newly established toll free help line will be documented to capture data that provides information on difficulties in accessing care, including the following:

- Finding a provider
- Referrals to Specialists
- Difficulties with Enrollment/Disenrollment
- Other Enrollment Issues such as Mandatory Enrollment
- Other Health Plan Issues such as medication coverage and MDE coverage
- Health care quality

A beneficiary help line will offer "real time" data pertaining to healthcare access issues in the Medi-Cal program, as opposed to survey data that generally takes at least one year to collect, and additional time to analyze. Additionally, as mentioned above, DHCS will gather information on beneficiary experiences from the data generated from the CHIS.

Data Availability

Attention was given to the availability of data reflecting key access areas. We focused heavily on administrative program data that were readily available and would help us monitor trends in enrollment by specific sub-populations, provider availability by geographic distribution and provider type, and healthcare utilization. These data sources include the Medi-Cal Eligibility System Monthly Extract File (MMEF), Medi-Cal claims data, and data from the Medi-Cal Provider Master File (See Appendix I).

Each of these administrative data sources offer valuable information for access monitoring on a timely (monthly) basis. For example, the MMEF provides detailed information on a beneficiaries' length of enrollment, aid category under which they are eligible for services, age, race/ethnicity, and primary language spoken. Most administrative data sources (i.e., the MMEF and Provider Master File) contain geographic variables such as county, and are geo-coded to allow further examination of data by MSSA and metropolitan designation. On the other hand, claims data reflecting details of healthcare utilization currently have the ability to identify county variation in healthcare utilization, but have not yet been geo-coded to identify detailed geographic patterns. Though offering timely resources for access monitoring, these administrative data sources are not without limitations. For example, although the MMEF data file contains information on the primary language spoken by a beneficiary, data on provider languages spoken and the availability of interpretive services are lacking. Such limitations hinder our ability to assess provider availability for non-English speaking beneficiaries. And, although we can identify whether a beneficiary had at least one physician visit during the year using claims data, we cannot address the reasons for those not receiving care when using these same administrative data sources.

There are many factors that influence healthcare access, only some of which are available in data collected through processes needed to administer the Medi-Cal program. Recommendations made by MACPAC in its report to congress include identifying whether enrollees have a usual source of care, whether they can afford services under the various state programs, and how easily enrollees are able to navigate the health system. In order to address these aspects of healthcare access, we propose measures from the CHIS). Conducted every two years on a wide range of health topics, CHIS data gives a detailed picture of the health and health care needs of California's large and diverse population. A

full description of the CHIS survey can be found in Appendix 1. In 2009, CHIS surveyed more than 47,000 adults, more than 12,000 teens and children and more than 49,000 households. CHIS data provides a vital source of information on healthcare access, as well as the ability to provide county-level estimates and comparisons between Medi-Cal covered populations and those covered by other sources of health insurance. Survey questions pertaining to healthcare access include whether the respondent has a usual source of care, whether respondent experienced delays in needed care, whether those delays stemmed from healthcare coverage or cost issue, and whether respondents are able to understand medical advice or whether language proved to be a barrier in communications with their doctors. Exact survey questions can be found in Appendix 2. However, this survey data will not be as timely as Medi-Cal administrative data, and is only collected every other year. We further recognize that questions on the CHIS survey may not always be asked routinely enough to provide ongoing trend data to monitor changes over time.

Section 1902(a)(30)(A) of the Social Security Act ensures that payments to Medicaid service providers are "sufficient to ensure that Medicaid beneficiaries have the same access to healthcare services as the general population." This provision, often referred to as the "equal access" provision, suggests that any analysis of healthcare access for Medicaid beneficiaries contain comparisons to healthcare access for persons enrolled in other types of health plans. Analyses of this nature will ultimately involve obtaining data beyond what is routinely available in administrative data sets. Data obtained through the CHIS survey can be stratified in various ways to address health care issues for specific subgroups such as persons covered by Medi-Cal compared to those covered with other health plans. CHIS data allows for geographic comparisons to be made at the state level, as well as for most larger counties. Many of the healthcare access questions included in the CHIS survey are the same as those in the National Health Interview Survey (NHIS), allowing for additional comparisons of CHIS results to nationally published results from the NHIS.

Other data sources such as the OSHPD Hospital Inpatient File and Vital Statistics Birth Master File contain valuable sources of data for assessing healthcare outcomes relating to access. When linked, these sources of data offer a wealth of analytical potential to pursue investigations into healthcare outcomes for Medi-Cal beneficiaries compared to that of the general California population. These sources of data are available annually and provide important demographic and regional information on avoidable hospitalizations and birth outcomes from Medi-Cal beneficiaries and other California residents. However, these sources require more labor-intensive manipulation prior to calculating any measures (i.e., linking to Medi-Cal claims data). (See Appendix 1 for full description of data sources.)

Measure Comparability

Where possible, we identify Medi-Cal healthcare access measures that can be compared to national survey results or to nationally recognized clinical best practices. For example, several national surveys such as the National Health Interview Survey (NHIS), the Medical Expenditure Panel Survey (MEPS), and the National Survey of Children's Health (NSCH) contain measures identifying the percent of the population with at least one physician visit during the year. Results of these surveys are widely published and offer comparison data to those examined in the Medi-Cal program. In addition, several medical and governmental agencies issue clinical guidelines for healthcare services provided to children and adults. Clinical guidelines set by the American Academy of Pediatrics, for example, recommend that children have eight healthcare visits in their first year of life, three in their second year, and one a year thereafter. Guidelines such as these were also considered when selecting access monitoring measures for specific Medi-Cal sub-populations. There are several ways to assess provider availability in Medi-Cal, and measures that were commonly used and for which widely accepted benchmarks exited were identified and proposed in this set of access monitoring measures. Additionally, measures calculated using Vital Statistics, OSHPD, and CHIS survey data can be subset into Medi-Cal vs. non- Medi-Cal populations, offering the ability to compare Medi-Cal beneficiaries to those with private or other insurance sources. Finally, most measures identified in this document can be compared to previous performance periods, making use of trends and the ability to monitor change over time.

Data Gaps

Though efforts were made to identify measures that could be compared to other populations who are demographically and geographically similar, absent from these measurement proposals are comparisons to the Medi-Cal Managed Care population. Data from the state's managed care plans are often incomplete or under-reported. Therefore, comparing FFS Medi-Cal Only beneficiaries to those in managed care plans is unfeasible. Additional data collected during the provider application process may further enrich the data sources available to DHCS. For example, collecting information on bilingualism among providers, availability of interpretive services, and provider office hours could aid in assessing healthcare access barriers for Medi-Cal beneficiaries. Implementing routine provider surveys that collect data on whether providers are accepting new Medi-Cal patients, difficulties in enrollment or other administrative difficulties they may have in delivering services to beneficiaries could further the Department's understanding of healthcare access issues.

Table 5. Monitoring Measures, Data Sources and Comparisons

Topic/Measure	*Frequency of Reporting*	*Administrative Data*	*Survey Data*	*Comparison*
Beneficiaries				
Percent Change in Medi-Cal Enrollment	Q	MMEF		Program Trends
Percent Change in Medi-Cal Dental Enrollment	Q	MMEF		Program Trends
Provider Availability				
Provider Supply Ratios	Y	MMEF, PMF		HRSA Ratios, Statewide Ratios
Provider Participation Rates	Q	PMF, Claims		Program Trends
Concentration of Medi-Cal Beneficiaries Among Providers	Q	PMF, Claims		Program Trends
Dental Provider Ratios	Y	MMEF, PMF		Program Trends
Pharmacy Participation Rates	Y	Claims, DCA Board of Pharmacy Licensing		Program Trends
LTC Provider Participation Rates	Y	CDPH Licensing And Certification Program data		Program Trends
Ratio of LTC Occupied Bed Days	Y	OSHPD and Audit Data		Program Trends
Medi-Cal LTC Bed Vacancy Rates	Y	OSHPD and Audit Data		Program Trends
Percent Beneficiaries with Usual Source of Care	Bi-Annually		CHIS	CHIS, NHIS, MEPS
Beneficiary/Provider Language Discordance	Bi-Annually		CHIS	CHIS Respondents with Other Insurance
Service Use				
Percent of Beneficiaries with at Least one Physician Visit	Y	MMEF, Claims		CHIS, NHIS, MEPS
Mean Physician Visits During the Year	Y	MMEF, Claims		NHIS
Percent Children with at Least one Dental Visit	Y	MMEF, Claims		CHIS, NHIS, MEPS
Service Utilization Rates per 1,000 Member Months	Q	MMEF, Claims		Program Trends
Emergency Department Rates per 1,000 Member Months	Y	MMEF, Claims		Program Trends
Beneficiary Perceived Timely Access to Needed Care	Bi-Annually		CHIS	CHIS Respondents with Other Insurance
Timely Prenatal Care	Y	Claims, Vital Stats		Births for Other Payer Sources and Statewide Births
Access Outcomes				
Preventable/Avoidable Hospitalization Rates	Y	Claims, OSHPD		Program Trends, Statewide Avoidable Hospital Rates
Percent of Low Birth Weight Babies	Y	Claims, Vital Stats		Births for Other Payer Sources and Statewide Births
Percent of Preterm Births	Y	Claims, Vital Stats		Births for Other Payer Sources and Statewide Births
Help Line Calls Categorized by Access Issues	Q	Call Center Data		Trends

NOTES: Q = Quarterly, Y = Yearly

Beneficiary Measures

MEASURE #1: % Change in Medi-Cal Enrollment

Description: Difference in the number of Medi-Cal beneficiaries from Q1 to Q2, as a percentage of total beneficiaries enrolled in Q1, stratified by gender, age, disability status, primary language, eligibility category and county.

Rationale: Increased rates of Medi-Cal program participation have a tremendous impact on demand for program services. This measure will allow DHCS to monitor the changing demand for program services by enrollee demographic characteristics, eligibility category and location. The CHCF has, as part of its recommendations for measuring Medicaid program performance, proposed population-specific measures that include pregnant women, children, seniors, and people with disabilities. Measures such as this have also been recommended by the AHRQ as one of many tools to monitor access in safety net healthcare systems. Data can be compared quarterly to identify trends in Medi-Cal enrollment to anticipate need for program services. Administrative data is readily available for this measure through the Medi-Cal program.

Data Source: Medi-Cal Eligibility System Monthly Extract File.

Frequency of Reporting: Quarterly

MEASURE #2: % Change in Medi-Cal Dental Enrollment

Description: Difference in the number of Medi-Cal beneficiaries <21 from Q1 to Q2, as a percentage of total beneficiaries enrolled in Q1, stratified by gender, age, disability status, primary language, eligibility category and county.

Rationale: Increased rates of Medi-Cal Dental program participation have a tremendous impact on demand for program services. This measure will allow DHCS to monitor the changing demand for program services by enrollee demographic characteristics, eligibility category and location. The CHCF has, as part of its recommendations for measuring Medicaid program performance, proposed population-specific measures that include pregnant women, children, seniors, and people with disabilities. Measures such as this have also been recommended by the AHRQ as one of many tools to monitor access in safety net healthcare systems. Since full scope dental services are only a benefit to <21 population, dental enrollment will concentrate on the enrollment percent changes in children. Data can be compared quarterly to identify trends in Medi-Cal Dental enrollment to anticipate need for program services. Administrative data is readily available for this measure through the Medi-Cal Dental program.

Data Source: Medi-Cal Eligibility System Monthly Extract File.

Frequency of Reporting: Quarterly

Provider Availability Measures

MEASURE #3: Population to Primary Care Provider Ratios

Description: Number of Medi-Cal beneficiaries, divided by the number of active primary care practitioners, stratified by age, gender, disability status, healthcare setting and county. Primary care practitioners include physicians, physician groups, nurse practitioners, FQHCs, RHCs, and other clinics that are actively participating in the Medi-Cal program. Excludes beneficiaries in the dual eligibility categories and those with limited scope benefits.

Rationale: Provider availability is an important first step in accessing health care, increasing the likelihood that patients receive preventive services and timely referrals to needed care. Studies have reported that a higher supply of primary care physicians is associated with lower mortality rates, longer life expectancy, and better birth outcomes. The population to provider ratio metric described above should not be confused with panel size. Panel size is simply defined as the number of individual patients under the care of a specific provider. While the maximum panel size is typically defined as 2,000-2,500 patients per provider, there are limitations to using panel size as a normative benchmark. One "provider" may have more than one physician or physician extender (Physician Assistants and Nurse Practitioners) available at their location, which gives providers the potential to manage a larger panel size. The Medi-Cal data set does not currently include information necessary to evaluate the additional capacity created by all physician extenders. Further, physicians at a specific location may not be full-time-equivalent (FTE) clinical providers and may devote a portion of their time on non-appointment or nonclinical duties such as hospital rounds, operating room duties, procedures, management duties and meeting time. Finally, because of data limitations, DHCS is unable to measure whether a specific provider's practice includes patients associated with more than one payer source. For example, a provider may treat patients covered by Medi-Cal, Blue Cross or those with other non-Medi-Cal coverage.

This measure will allow DHCS to monitor provider supply and supply proximity to important beneficiary sub-populations. Measures such as this have been recommended by the CHCF and the AHRQ as one of many tools to monitor access in safety net healthcare systems. Data can be compared quarterly to identify trends in provider supply using administrative data readily available through the Medi-Cal program.

Data Source: Medi-Cal Eligibility System Monthly Extract File, and Medi-Cal Provider Master File.

Frequency of Reporting: Annually

MEASURE #4: Provider Participation Rates

Description: Number of active providers who submitted a claim for services during the period of measurement, divided by the number of active Medi-Cal providers enrolled in the program, stratified by provider type, healthcare setting and county. Provider types will include physicians, physician groups, nurse practitioners, FQHCs, RHCs, and other clinics.

Rationale: Methodologies for evaluating the adequacy of providers available to Medicaid populations focus on two areas, (1) overall provider supply, and (2) provider participation rates in the Medicaid program. This measure will allow DHCS to monitor provider participation rates by provider subtype and healthcare setting. Decreases in provider participation rates will serve as a trigger for DHCS to further investigate whether the Medi-Cal provider network is sufficient to meet enrollees' needs. Measures such as this have been recommended by MACPAC one of many tools to consider for monitoring access to Medicaid beneficiaries. Data can be compared quarterly to identify trends in provider participation using administrative data readily available through the Medi-Cal program.

Data Source: Medi-Cal claims data, and Medi-Cal Provider Master File.

Frequency of Reporting: Quarterly

MEASURE #5: Concentration of Medi-Cal Beneficiaries among Providers

Description: This measure will report the number of active physicians who have treated Medi-Cal beneficiaries by specific provider category. The provider categories for this measure will be Active-Billing Physicians, Physician Groups, RHC/FQHC Clinics, Community Clinics, and Indirect-Rendering Physicians. The measure will provide not only a count of providers who actually treated Medi-Cal beneficiaries during the measurement period, but will also include statistics reporting the dispersion and concentration of beneficiaries among providers within each of the categories. The metrics to be reported for each category are as follows:

- Number of active providers with paid claims,
- Mean (for number of unduplicated Medi-Cal beneficiaries per provider),
- Standard deviation, (for number of unduplicated Medi-Cal beneficiaries per provider),
- Range, (for number of unduplicated Medi-Cal beneficiaries per provider),
- Lower Quartile, (for number of unduplicated Medi-Cal beneficiaries per provider),
- Median, (for number of unduplicated Medi-Cal beneficiaries per provider),
- Upper Quartile (for number of unduplicated Medi-Cal beneficiaries per provider)

A single physician with two distinct service locations will be counted twice. The universe of beneficiaries to be identified includes all beneficiaries who received a service from one of the provider categories listed above paid by the Medi-Cal fiscal intermediary on a fee-for-service basis.

Rationale: Nationwide, care of Medicaid patients is becoming increasingly concentrated among a smaller number of physicians who provide a relatively large amount of care to Medicaid patients. This concentration has been characterized by a shift away from small, office-based practices toward larger group practices and institution-based practices, including hospitals, academic medical centers and community health centers.

Methodologies for evaluating the adequacy of providers available to Medicaid populations focus on two areas, (1) overall provider supply, and (2) provider participation rates in the Medicaid program. Although many physicians and provider organizations are enrolled as approved Medi-Cal providers with an active or indirect status, and therefore counted as part of the provider supply, additional information beyond enrollment is required in order to determine their level of participation in the Medi-Cal program.

The concept of provider participation itself has several dimensions. The first is the number providers who had an encounter with a Medi-Cal beneficiary, and therefore can be said to be actually participating in the program at any level at all. The second is the number or volume of Medi-Cal beneficiaries treated per provider. If beneficiaries become increasingly concentrated among specific types of providers, this information will be of critical value to policy makers as they seek to modify and improve program design. More importantly, as the Medi-Cal program moves forward to implement rate changes, and later adds additional beneficiaries as mandated by the ACA, it will be crucial for the state to monitor physician participation in Medi-Cal as an indicator of access to care among low-income residents.

Data Source: Medi-Cal 35-file of paid claims by date of service, Medi-Cal Provider Master File.

Frequency of Reporting: Quarterly

MEASURE #6: Population to Dental Provider Ratios

Description: Number of Medi-Cal Dental beneficiaries <21, divided by the number of active dental providers, stratified by age, gender, healthcare setting and county. Excludes adult beneficiaries and those with limited scope benefits.

Rationale: Provider availability is an important first step in accessing health care, increasing the likelihood that patients receive preventive services and timely referrals to needed care. This measure will allow DHCS to monitor provider supply and supply proximity to important beneficiary sub-populations. Measures such as this have been recommended by the CHCF and the AHRQ as one of many tools to monitor access in safety net healthcare systems. Data can be compared quarterly to identify trends in provider supply using administrative data readily available through the Medi-Cal program.

Data Source: Medi-Cal Eligibility System Monthly Extract File, and Medi-Cal Provider Master File.

Frequency of Reporting: Annually

MEASURE #7: Pharmacy Participation Rates

Description: Number of pharmacy providers who submitted a claim for services during the period of measurement, divided by the number of pharmacy providers state-wide, stratified by county group.

Rationale: This measure will allow DHCS to monitor pharmacy participation rates by geographic distribution. Decreases in pharmacy participation rates will serve as a trigger for DHCS to further investigate whether the Medi-Cal pharmacy network is sufficient to meet enrollees' needs. Data can be compared quarterly to identify trends in pharmacy participation using administrative data readily available through the Medi-Cal program.

Data Source: Medi-Cal claims data, and Department of Consumer Affairs, Board of Pharmacy Licensing data.

Frequency of Reporting: Annually

MEASURE #8: Long Term Care Provider Participation Rates

Description: Number of Long Term Care facilities, by provider type, having at least one Medi-Cal licensed bed day in a calendar year, divided by the total number of Long Term Care facilities, by provider type, state-wide, and stratified by county-based geographic peer grouping.

Total number of available long term care facility bed days, by provider type, in facilities having at least one Medi-Cal licensed bed day in a calendar year, divided by the total number of available long term care facility bed days, by provider type, and stratified by provider type and county-based geographic peer groupings.

Provider types analyzed in this measure include: Skilled Nursing Facilities (NF-B); Adult Subacute; Pediatric Subacute; Intermediate Care Facilities (NF-A); and Intermediate Care Facilities for the Developmentally Disabled.

Rationale: This measure will allow DHCS to monitor LTC participation rates by geographic distribution. Decreases in LTC participation rates will serve as a trigger for DHCS to further investigate whether the Medi-Cal LTC network is sufficient to meet enrollees' needs. Data can be compared annually to identify trends in LTC participation using administrative data available through the OSHPD and California Department of Public Health (CDPH), Licensing and Certification Program.

Data Source: OSPHD & CDPH Licensing and Certification Program data.

Frequency of Reporting: Annually

MEASURE #9: Ratio of Medi-Cal Occupied LTC Bed Days to State-wide Occupied LTC Bed Days

Description: Number of Medi-Cal occupied Long Term Care bed days, divided by the total number of occupied LTC bed days in Medi-Cal participating providers state-wide, stratified by provider type and county-based geographic peer groupings.

Rationale: This measure will allow DHCS to monitor Long Term Care bed occupation rates by geographic distribution. Decreases in LTC bed occupation rates will serve as a trigger for DHCS to further investigate whether the Medi-Cal LTC network is sufficient to meet enrollees' needs. Data can be compared annually to identify trends in LTC bed occupation rates using facility-reported data sent to the Office of Statewide Planning and Development and audit information obtained by DHCS' Audits and Investigations program.

Data Source: Facility-reported data sent to the Office of Statewide Planning and Development and audit information obtained by DHCS' Audits and Investigations program.

Frequency of Reporting: Annually

MEASURE #10: Medi-Cal Long Term Care Bed Vacancy Rates

Description: Number of vacant Long Term Care bed days, by provider type, divided by the total number of available Long Term Care bed days, by provider type, in Medi-Cal participating providers, statewide, and stratified by provider type and county-based geographic peer groupings.

Rationale: This measure will allow DHCS to monitor vacancy rates for LTC beds by geographic distribution and provider type. Decreases in vacancy rates for LTC beds will serve as a trigger for DHCS to further investigate whether the Medi-Cal LTC network is sufficient to meet enrollees' needs. Data can be compared annually to identify trends in vacancy rates for LTC beds using facility-reported data sent to the Office of Statewide Planning and Development and audit information obtained by DHCS' Audits and Investigations program.

Data Source: Facility-reported data sent to the Office of Statewide Planning and Development and audit information obtained by DHCS' Audits and Investigations program.

Frequency of Reporting: Annually

MEASURE #11: Medi-Cal Beneficiary with a Usual Source of Care

Description: Number of survey respondents who answer affirmatively to the question "Is there a place that you usually go to when you are sick or need advice about your health?" divided by all survey respondents with non-missing answers to this question, stratified by insurance type (Medi-Cal vs. others), age, gender and county.

Rationale: Usual source of care is one aspect of a "medical home." Measures describing a patient's usual source of care have been widely used to evaluate health care access. Having a usual source of care has been linked to many positive outcomes such as increased likelihood of preventive care, and decreased use of emergency room care and hospitalizations.(ref) This measure will allow DHCS to monitor the proportion of Medi-Cal beneficiaries who have a usual source of care or medical home. Measures such as this have been recommended by the AHRQ as one of several local data collection items to monitor the safety net healthcare systems. Data can be compared bi-annually to identify trends in usual source of care using state-wide and county-specific data collected from the CHIS survey.

Data Source: CHIS

Frequency of Reporting: Bi- annually

MEASURE #12: Medi-Cal Beneficiary and Provider Language Discordance

Description: Number of survey respondents who answer affirmatively to the questions "The last time you saw a doctor, did you have a hard time understanding the doctor?" and "Was this because you and the doctor spoke different languages?" divided by all survey respondents with non-missing answers to this question, stratified by insurance type (Medi-Cal vs. others), age, gender and county.

Rationale: Culturally competent services are broadly defined as services that are respectful of and responsive to the cultural and linguistic needs of patients. The Institute of Medicine and others have recognized the impact that language discordance has on providing efficient and effective health care. Bridging the language gap in health care services may positively influence health care utilization among those who do not speak English, and improve health outcomes. In the Medi-Cal population, over 40% of beneficiaries speak a language other than English as their primary language. Data on Medi-Cal provider languages spoken and translation services offered are currently not available in the Medi-Cal program administrative databases. This measure will allow DHCS to monitor the degree of language discordance among Medi-Cal beneficiaries and their providers. Measures such as this have been recommended by the CHCF as one of many indicators needed to monitor access and quality in California's safety net healthcare system. Data can be compared bi-annually to identify trends in language discordance using state-wide and county-specific data collected from the CHIS survey.

Data Source: CHIS

Frequency of Reporting: Bi-annually

Service Use Measures

MEASURE #13: % of Enrollees with at least one Physician Visit during the Past 12 Months

Description: Number of Medi-Cal beneficiaries who had at least one physician visit within the past year, divided by the total number of Medi-Cal beneficiaries continuously enrolled during the measure period, stratified by age, gender, race/ethnicity, eligibility category, disability status, healthcare setting and county. Physician visits include physicians, physician groups, nurse practitioners, FQHCs, RHCs, and other clinics. Excludes beneficiaries in the dual eligibility categories and those with limited scope benefits.

Rationale: The benefits of seeing a doctor annually include an increased likelihood of receiving preventive health services and better management of chronic disease. This measure will allow DHCS to monitor annual contact with a physician among Medi-Cal beneficiaries. This measure is one of a set of core measures incorporated in the CHIPRA access and quality measures, is incorporated in HEDIS measures, and has been recommended by the AHRQ as one of many tools to monitor access in safety net healthcare systems. Data can be compared quarterly and annually to identify trends in physician visits using administrative data readily available through the Medi-Cal program.

Data Source: Medi-Cal claims/encounter data.

Frequency of Reporting: Annually

MEASURE #14: Mean Number of Physician Visits during the Past 12 Months

Description: Number of physician visits within the past year, divided by the total number of Medi-Cal beneficiaries with continuous enrollment during the measure period, stratified by age, gender, race/ethnicity, eligibility category, disability status, healthcare setting and county. Physician visits include physicians, physician groups, nurse practitioners, FQHCs, RHCs, and other clinics. Excludes beneficiaries in the dual eligibility categories and those with limited scope benefits.

Rationale: The benefits of seeing a doctor annually include an increased likelihood of receiving preventive health services and better management of chronic disease. This measure will allow DHCS to monitor annual contact with a physician among Medi-Cal beneficiaries. This measure is one of a set of core measures incorporated in the CHIPRA access and quality measures, and has been recommended by the AHRQ as one of many tools to monitor access in safety net healthcare systems. Data can be compared quarterly and annually to identify trends in physician visits using administrative data readily available through the Medi-Cal program.

Data Source: Medi-Cal claims/encounter data.

Frequency of Reporting: Annually

MEASURE #15: % of Children with at least One Dental Visit during the Past 12 Months

Description: Number of Medi-Cal beneficiaries age <21 who had at least one dental visit within the past year, divided by the total number of Medi-Cal beneficiaries age <21, stratified by age subgroups, race/ethnicity, eligibility category and county.

Rationale: The benefits of seeing a dentist annually include an increased likelihood of receiving preventive dental services, and early diagnosis and treatment of dental problems. This measure will allow DHCS to monitor annual contact with a dentist among Medi-Cal children. This measure is one of the CHIPRA set of core access and quality measures, included in HEDIS, and is routinely collected on several national health surveys including the National Health Interview Survey, the National Health and Nutrition Examination Survey, and the Medical Expenditure Panel Survey. Data can be compared quarterly and annually to identify trends in dental visits using administrative data readily available through the Medi-Cal program.

Data Source: Medi-Cal claims.

Frequency of Reporting: Annually

MEASURE #16: Service Rates per 1,000 Member Months

Description: The number of units of service utilized during the measurement period, divided by the number of Medi-Cal beneficiary member months (multiplied by 1,000), stratified by provider types, beneficiary age grouping and aid category. Broad service categories will be constructed for all Medi-Cal services being evaluated under this measure as follows:

- Physician/Clinic
- Non-emergency medical transportation
- Emergency medical transportation
- Home Health
- Hospital Inpatient
- Hospital Outpatient
- Nursing Facility
- Pharmacy
- Other

Rationale: Appropriate use of health care services is the end result of effective health care access. This measure will allow DHCS to monitor service utilization for all service types offered under the Medi-Cal program, by beneficiary age and aid categories. As noted in Measure #3, the Medi-Cal data set does not currently include information necessary to conduct an analysis specifically for physician extenders. Periodic review of these Medi-Cal service types can be achieved using administrative data readily available through the Medi-Cal program.

Data Source: Medi-Cal claims data and Medi-Cal Eligibility System Monthly Extract File.

Frequency of Reporting: Quarterly

MEASURE #17: Emergency Department Visits

Description: Number of visits to emergency departments by Medi-Cal beneficiaries, divided by the total Medi-Cal population, multiplied by 1,000, stratified by age, gender, race/ethnicity, eligibility category and reason for visit (emergency vs. urgent care). Excludes beneficiaries in the dual eligibility categories and those with limited scope benefits.

Rationale: Monitoring trends in emergency department services is an important aspect of managing healthcare resources. A large segment of California's Medi-Cal population is chronically ill or has complex medical needs. Though high rates of emergency room visits may reflect the poor health status of many Medi-Cal beneficiaries and/or lack of access, high ER rates may also signal poorly managed acute or chronic illness. This measure will allow DHCS to monitor emergency room visits among its Medi-Cal population. Measures such as this have been recommended by the AHRQ as one of many tools to monitor access in safety net healthcare systems. Data can be compared from year to year to identify trends in emergency room visits using administrative data readily available through the Medi-Cal program, and data linkages made to the annually released OSHPD Emergency Room file.

Data Source: Medi-Cal claims/encounter data linked to OSHPD Emergency Department data.

Frequency of Reporting: Annually

MEASURE #18: Medi-Cal Beneficiary Perceived Timely Access to Care

Description: Number of survey respondents who answer affirmatively to the questions "During the past 12 months, did you delay or not get a medicine that a doctor prescribed for you?" and "Did you delay or not get any other medical care you felt you needed—such as seeing a doctor, a specialist, or other health professional?" divided by all survey respondents with non-missing answers to these questions, stratified by insurance type (Medi-Cal vs. other), age, gender and county.

Rationale: Delay in receiving needed medical services leads to delay in diagnosing and treating acute and chronic conditions, increasing disease severity and the likelihood of high cost health care utilization such as emergency room and inpatient services. Though there may be many explanations for untimely access to services, a delay in needed health care may signal a problem with health care access. This measure will allow DHCS to monitor perceived timely access to services among Medi-Cal beneficiaries. Measures such as this have been recommended by the AHRQ as one of several local data collection items to monitor the safety net healthcare systems. Data can be compared bi-annually to identify trends in timely access using state-wide and county-specific data collected from the CHIS survey.

Data Source: CHIS

Frequency of Reporting: Bi-annually

MEASURE #19: Timely Prenatal Care

Description: Number of Medi-Cal women who had a prenatal visit in the first trimester or within 42 days of enrollment, divided by the number of all Medi-Cal deliveries in a given year, stratified by race/ethnicity, eligibility category and county.

Rationale: Recommendations for monitoring prenatal care, low birthweight and preterm deliveries offer a glimpse into potential barriers to access and safety net healthcare quality. Prenatal care has demonstrated to improve birth outcomes, including preterm or low birthweight. Though there may be many explanations for untimely access to services, delay in timely prenatal care may signal a problem with health care access. This measure will allow DHCS to monitor timely prenatal care among Medi-Cal pregnant women. Measures such as this have been incorporated into the CHIPRA set of core quality measures, are in HEDIS, and are recommended by the AHRQ as one of many tools to monitor access in safety net healthcare systems. Data can be compared from year-to-year to identify trends in receipt of early prenatal care among Medi-Cal beneficiaries using administrative program and vital statistics data that are readily available.

Data Source: Medi-Cal claims/encounter data linked to vital statistics birth records.

Frequency of Reporting: Annually

Access Outcome Measures

MEASURE #20: Preventable/Avoidable Hospitalization Rates

Description: Number of preventable/avoidable discharges per 1,000 among Medi-Cal beneficiaries, stratified by age, gender, county and conditions. Excludes beneficiaries in the dual eligibility categories and those with limited scope benefits.

Rationale: Preventable/avoidable hospitalizations are those for which good outpatient care can potentially prevent complications or more severe disease and the need for hospitalization. Preventable/avoidable hospitalizations are based on the Prevention Quality Indicators (PQIs), a set of measures developed by the Agency for Health Care Quality and Research (AHRQ). Though these indicators are based on hospital inpatient data, they provide insight into the quality of the health care system outside the hospital setting. For example, individuals with diabetes may be hospitalized for diabetic complications if their conditions are not adequately monitored or if they do not receive the patient education needed for appropriate self-management. The PQIs consist of the 16 ambulatory care sensitive conditions: **Diabetes** (Uncontrolled diabetes without complications, Short-term diabetes complications, Long-term diabetes complications, Lower-extremity amputation among patients with diabetes), **Circulatory Diseases** (Congestive heart failure, Hypertension, Angina without a procedure), **Respiratory Diseases** (Adult asthma, Pediatric asthma, chronic obstructive pulmonary disease) **Acute Conditions** (Bacterial pneumonia, Dehydration, Urinary tract infection, Perforated appendix, Pediatric gastroenteritis), and **Birth Outcomes** (Low-weight birth). An increase in rates of preventable/avoidable hospitalizations may indicate problems in accessing quality ambulatory care, including preventive and disease management services. This measure will allow DHCS to monitor preventable/avoidable hospitalizations among Medi-Cal beneficiaries. Measures such as this have been recommended by the AHRQ as one of many tools to monitor access in safety net healthcare systems. Data can be compared from year to year to identify trends in preventable/avoidable hospitalizations

using administrative data readily available through the Medi-Cal program, and data linkages made to the annually released OSHPD hospital discharge file.

Data Source: Medi-Cal claims and encounter data linked to OSHPD hospital discharge files.

Frequency of Reporting: Annually

MEASURE #21: Rate of Low Birthweight for Full Term Births

Description: Number of Medi-Cal births less than 2500 grams, divided by the number of all Medi-Cal births in a given year, stratified by race/ethnicity, eligibility category and county.

Rationale: Recommendations for monitoring prenatal care, low birthweight and preterm deliveries offer a glimpse into potential barriers to access and safety net healthcare quality. This measure is one of a set of core measures incorporated in the CHIPRA, and is recommended by the AHRQ as one of many tools to monitor access in safety net healthcare systems. Data can be compared from year-to-year to identify trends in low birthweight among Medi-Cal deliveries using administrative program and vital statistics data that are readily available.

Data Source: Medi-Cal claims/encounter data linked to vital statistics birth records.

Frequency of Reporting: Annually

MEASURE #22: % Preterm Births

Description: Number of Medi-Cal births with a gestational age of less than 37 weeks, divided by the number of all Medi-Cal births in a given year, stratified by race/ethnicity, eligibility category and county.

Rationale: Recommendations for monitoring prenatal care, low birthweight and preterm deliveries offer a glimpse into potential barriers to access and safety net healthcare quality. Measures such as this have been recommended by the AHRQ as one of many tools to monitor access in safety net healthcare systems. Data can be compared from year-to-year to identify trends in low birthweight among Medi-Cal deliveries using administrative program and vital statistics data that are readily available.

Data Source: Medi-Cal claims/encounter data linked to vital statistics birth records.

Frequency of Reporting: Annually

MEASURE #23: Help Line Calls categorized by Reason for Call and Geographic Location

Description: Number of Help Line calls received during the reporting period, stratified by county and reason for call. Excludes calls pertaining to issues other than healthcare access.

Rationale: DHCS proposes to implement a Medi-Cal Help Line to address gaps in data pertaining to beneficiary feedback. The Medi-Cal help line will be similar to that implemented for Medi-Cal Managed Care. Beneficiary calls to this proposed help line will capture data pertaining to difficulties in accessing care, and will provide data pertaining to healthcare access issues in the Medi-Cal program. The rate with which Medi-Cal beneficiaries contact the help line for information and the type of complaints can offer one measure of how well the program is meeting the needs of its beneficiaries and solving problems when they arise. Data can be compared from year to year to identify trends in Medi-Cal healthcare access issues, and may offer data on the geographic areas within the state where access issues are most prevalent.

Data Source: Newly established Medi-Cal Help Line call center data.

Frequency of Reporting: Quarterly

VI. ACCESS MONITORING PROCESS

Process Overview

The process of monitoring healthcare access includes the collection and analysis of data, and the interpretation of trends. Once in place, data collected from the access measures may reveal problem areas or concerns affecting the appropriate use or underuse of healthcare services. What is needed is a systematic and solution-oriented process to investigate such data variations, as well as a process to evaluate actions taken in response to problem-solving initiatives. Summarized below are steps commonly employed in epidemiological outbreak investigations that prove useful in the healthcare access application. These steps include defining the problem area, undertaking investigations to identify the root cause of data variations, implementing solutions, and evaluating the effectiveness of these solutions.

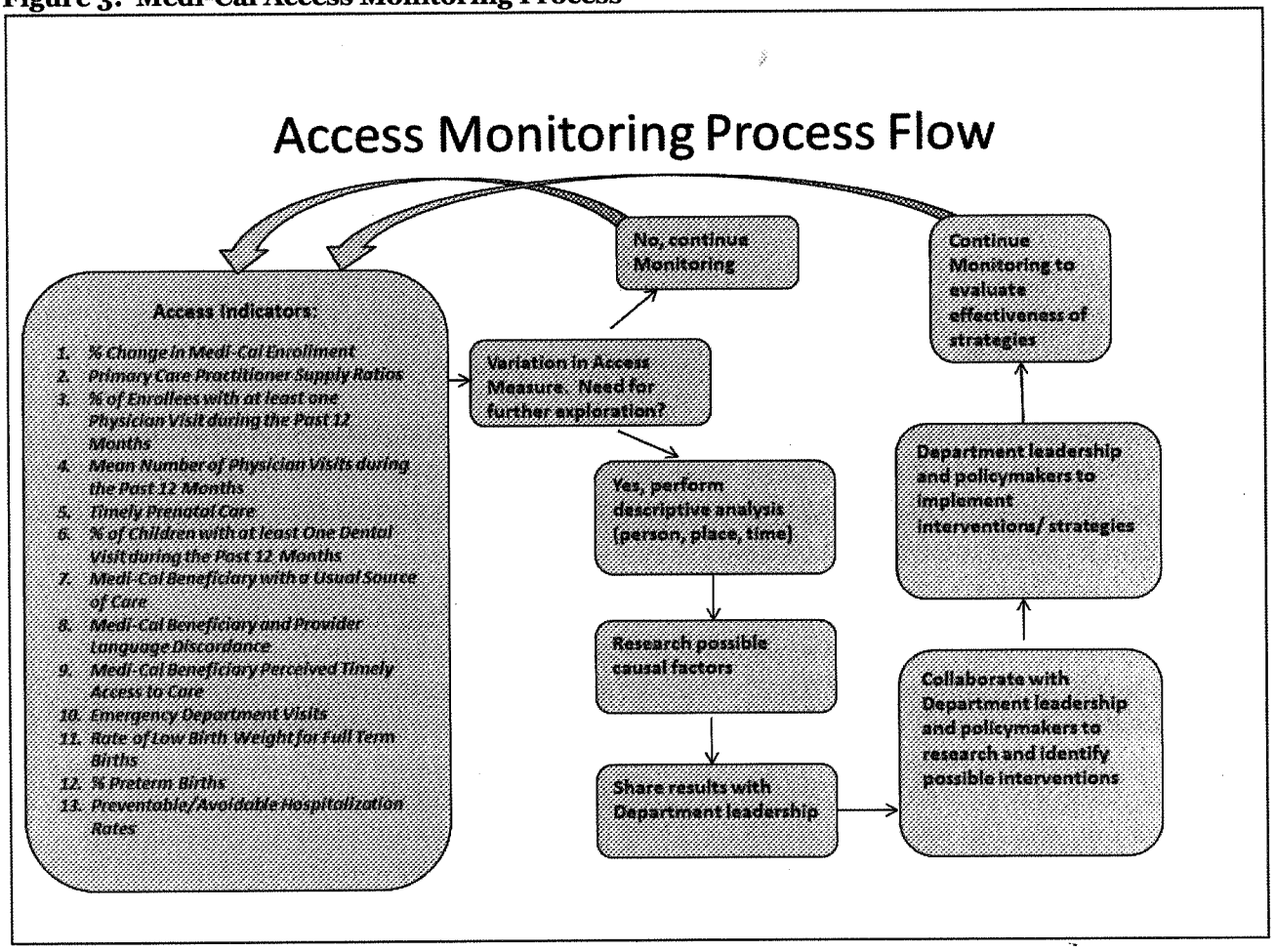
The first step in the investigation process is to describe the data variations and any possible explanatory factors, and assess whether a problem exists. Can the changes observed in the data be a systematic error or bias? For example, can a sudden change in patient/provider ratios be explained by changes in the data collection system, or a change in how "primary care provider" has been defined? Are the changes in data of a magnitude to warrant further investigation? Once it is decided that a true problems exists, further data is needed to describe the problem in terms of person, place and time. Which subgroups (age, ethnicity, aid groups) of the population are affects? Does the problem exist only in certain counties, rural/urban communities, or healthcare settings? When did the problem first surface? Were there any significant events that occurred at the same time? Any unusual patterns identified in this step will help define the problem and help formulate a hypothesis of the causes or determinants of the problem.

The second step in investigating healthcare access problems is an in-depth analysis of the hypothesis entailing one or several of the following: further observational or experimental studies, literature reviews, informant interviews, and/or implementation of surveys. The aim of hypothesis testing is to identify factors associated with the problem. The definition of the problem will determine the approaches employed in hypothesis testing and the areas of focus (specific subgroups, locations, etc.). Selecting an approach and specific study design will further be influenced by the strengths and weaknesses of the available methods and the availability of resources.

When factors associated with the access problem are identified, information evaluating a variety of programmatic solutions and their likely success is needed. The

strategies employed to improve healthcare access may include the development of new regulations, modification or development of new direct service programs, or alteration of program policies. Though epidemiology and health services research may not contribution largely to the identification and implementation of programmatic solutions, these disciplines do play an important role in communicating their findings to health program and health policy leaders. Using results from steps 1 and 2, researchers can convey the significance of the healthcare access problem to those on the leadership team whose role it is to find appropriate solutions to address the problem. Data presented for this purpose should help tailor the solutions to the specific communities and populations affected. Once the programmatic solutions are implemented, monitoring healthcare access must continue and, where appropriate, focused evaluation studies that measure the success or failure of these solutions must be employed.

Figure 3: Medi-Cal Access Monitoring Process



Monitoring

Development of the Medi-Cal healthcare access monitoring plan should be viewed as a long-term iterative process that will evolve over time as new measures are developed, monitoring priorities shift, and techniques necessary for calculating these measures are refined. Interpreting measures of utilization from the prospective of access is a challenging endeavor as use is affected by many factors, only some of which policymakers and program administrators can control. Throughout the year, DHCS will review the literature and look for new and innovative ways of monitoring and measuring access to health care. As a part of the preparation of the annual access monitoring paper, DHCS will evaluate any new and promising methods for monitoring access. This monitoring refinement process will include assessing changes in available data as well as changes in national benchmarks for access. If as a result of this refinement process DHCS determines that measures need to be changed, added or removed, DHCS will document the changes in the annual report.

The Department's monitoring activities consist of two components: (1) continues monitoring and evaluation throughout the year to identify early indications of changes in health care access, and (2) annual reporting.

Early Warning Indicators and Monitoring System

The access early warning system should be thought of similar to the nation's public health surveillance system. In this case, the "trigger" point results in a call to action. The Centers for Disease Control defines public health surveillance as,

> *...the ongoing, systematic collection, analysis, and interpretation of health data essential to the planning, implementation, and evaluation of public health practice, closely integrated with the timely dissemination of these data to those who need to know.*

Some important points are worth considering regarding the CDC definition above. First, the surveillance system or early warning system represents an "ongoing" process. Like the public health process, DHCS will continuously evaluate information received, through whatever source, regarding healthcare access. For example, if DHCS receives a number of calls from beneficiaries of a specific geographic region in the state indicating an access problem has arisen, DHCS staff will initiate an investigation. Second, these investigations and the information that is generated will be disseminated as quickly as possible to DHCS administrators so that prompt action occurs.

The Department's systematic process for continuously monitoring healthcare access throughout the year relies primarily on administrative paid claims data. The Department evaluated a number of data sources for continuously monitoring health care access and

found a limited number of data sources that could be used as access indicators or "signals" for an early warning system. Evaluating administrative data does provide some early information regarding realized access and may potentially be used to signal an access problem when allowing for sufficient data lag times. This data is particularly useful for evaluating policy proposals such as rate changes. As example, identifying physician visits from administrative data for beneficiaries in the Blind/Disabled aid categories yields a complete data set 12 months after the services are rendered. The table below illustrates that claims data for physician visits for this group of beneficiaries is somewhat complete (87% to 89%) at 4 months post-visit.

Table 6. Time Lags Identified in Physician Visit Claims Data.

Regular Visit Lag - Used for Jul 2010 to Jun 2011 -Blind/Disabled												
Service Category	Same Month	+1 Mo	+2 Mos	+3 Mos	+4 Mos	+5 Mos	+6 Mos	+7 Mos	+8 Mos	+9 Mos	+10 Mos	+11 Mos
Physician Solo	0.0554	0.4890	0.7239	0.8196	0.8725	0.9064	0.9318	0.9498	0.9625	0.9737	0.9826	1.0000
Physician Group	0.0552	0.5576	0.7758	0.8509	0.8941	0.9228	0.9429	0.9575	0.9693	0.9789	0.9871	1.0000

DHCS proposes to use a subset of the healthcare access monitoring measures identified in this document as an "early warning" mechanism to alert the Department of potential problems. These early warning measures will be continuously monitored and include:

- Change in Medi-Cal Enrollment
- Provider Participation Rates
- Service Rates per 1,000 Member Months
- Help Line Calls

These early warning measures span across the three key monitoring areas and provide the basis of continuous monitoring for California's Medi-Cal program.

Because enrollment and call center data will become available more quickly, we will have the opportunity to monitor and evaluate these measures throughout the year. As previously stated, call center data that indicate possible access problems will be investigated promptly and may elicit a response from DHCS at any time during the year. If the Department concludes, based on this investigation that an access problem exists due to payment reductions it will immediately take action to change the payment levels.

Monitoring of provider participation and service utilization rates will occur quarterly, and will be initiated after accounting for lag times needed to achieve a relatively complete

set of data (4 months). Additional time will be required to calculate and analyze each measure (2 months).

It is important to note that not any one of the early warning measures can definitively identify an access problem. However, if both these measures deviate from the expected range of values, DHCS will immediately explore possible causes of these access issues to better address them. Part of this exploration process will be to solicit input from the Department's stakeholders on the possible causes of healthcare access problems, and work with stakeholders to identify innovative solutions. DHCS also proposes to notify CMS of any access issues uncovered in its monitoring process. As a part of this process, DHCS will involve a variety of stakeholders including beneficiaries, health advocacy organizations, physicians, clinics, hospitals, other affected provider types and other interested parties.

The Department's investigation will conclude forty-five days after uncovering potential access problems. If the investigation concludes that an access problem is due to a provider payment reduction, DHCS will immediately change the payment levels to address the problem. If the Department cannot definitively conclude that an access problem exists, we will develop a specific plan of action that will be provided to CMS and stakeholders that will include how we plan to continue to monitor and assess the specific situation including the specific analyses and other steps to be taken. The plan of action will include reports to CMS and stakeholders every 45 days until a final determination of whether an access problem exists has been made.

As an example, in September 2012, the Department will review provider participation and service utilization rates from January to March 2012. In addition, it will review real time enrollment and call center data. If the Department identifies that two or more of these measures deviate from the expected values, the Department will conduct an investigation over the following 45 days. By the middle of October 2012, the Department will conclude its investigation and immediately take action if an access problem has been uncovered. If the Department cannot definitively conclude that an access problem exists, it will continue to monitor, provide a plan of action to CMS and stakeholders and report on progress again in early December 2012, and every 45 days thereafter until a final determination has been made.

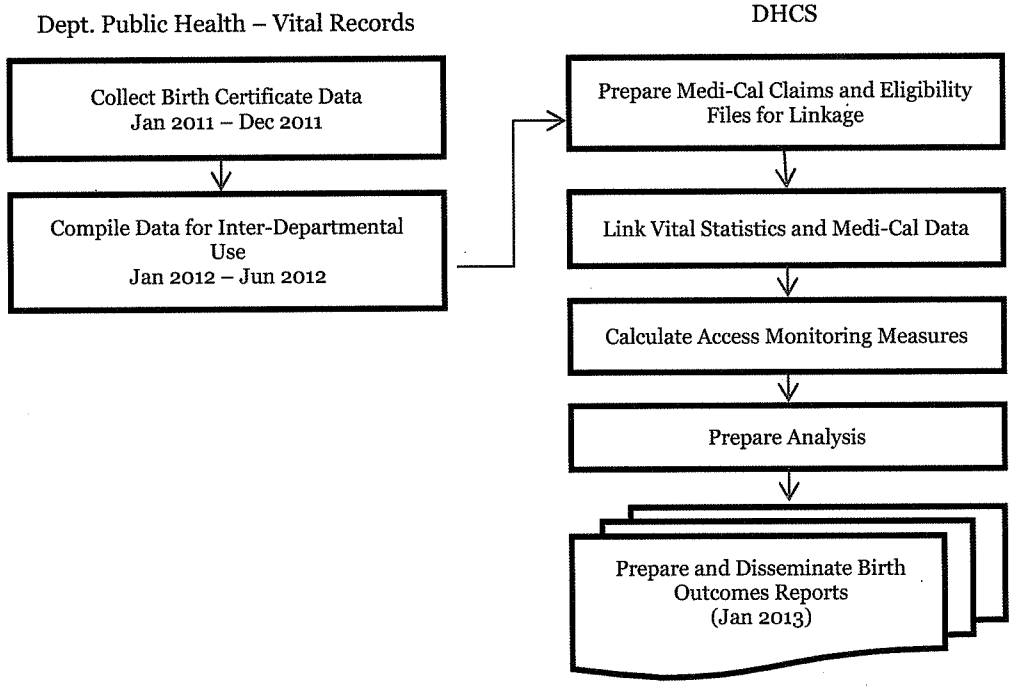
Annual Reporting

DHCS proposes to develop annual reports of healthcare access which concentrate on the Medi-Cal FFS program beneficiaries, and make these reports available to the public.

Data disseminated in these annual reports will focus on the quarterly early warning measures listed above, as well as the remaining 18 access measures. The report will be organized and presented in a thoughtful way, highlighting key findings and tailoring technical information to a general audience.

As discussed above, the administrative data sources identified for use in calculating some of the proposed healthcare access measures are not considered complete for 12-months following the end of the reporting period. Reporting of these measures is only feasible when complete data sets can be compiled. In addition, several external data sources such as the Vital Statistics Birth Master File and the OSHPD Patient Discharge Data are available six months after the data is collected (these data sets are collected each calendar year). Additional data manipulation is necessary prior to undertaking any analysis. In the case of birth outcomes analysis, for example, Medi-Cal claims and eligibility data must be linked to the Vital Statistics Birth Master File using probabilistic matching techniques. These steps take up to three months to complete. An additional three months is needed to calculate the proposed measures and prepare an analysis. An example of this process is illustrated below.

Figure 4. Data Processing and Annual Report Timeframe Example.



Monitoring Plan Refinements

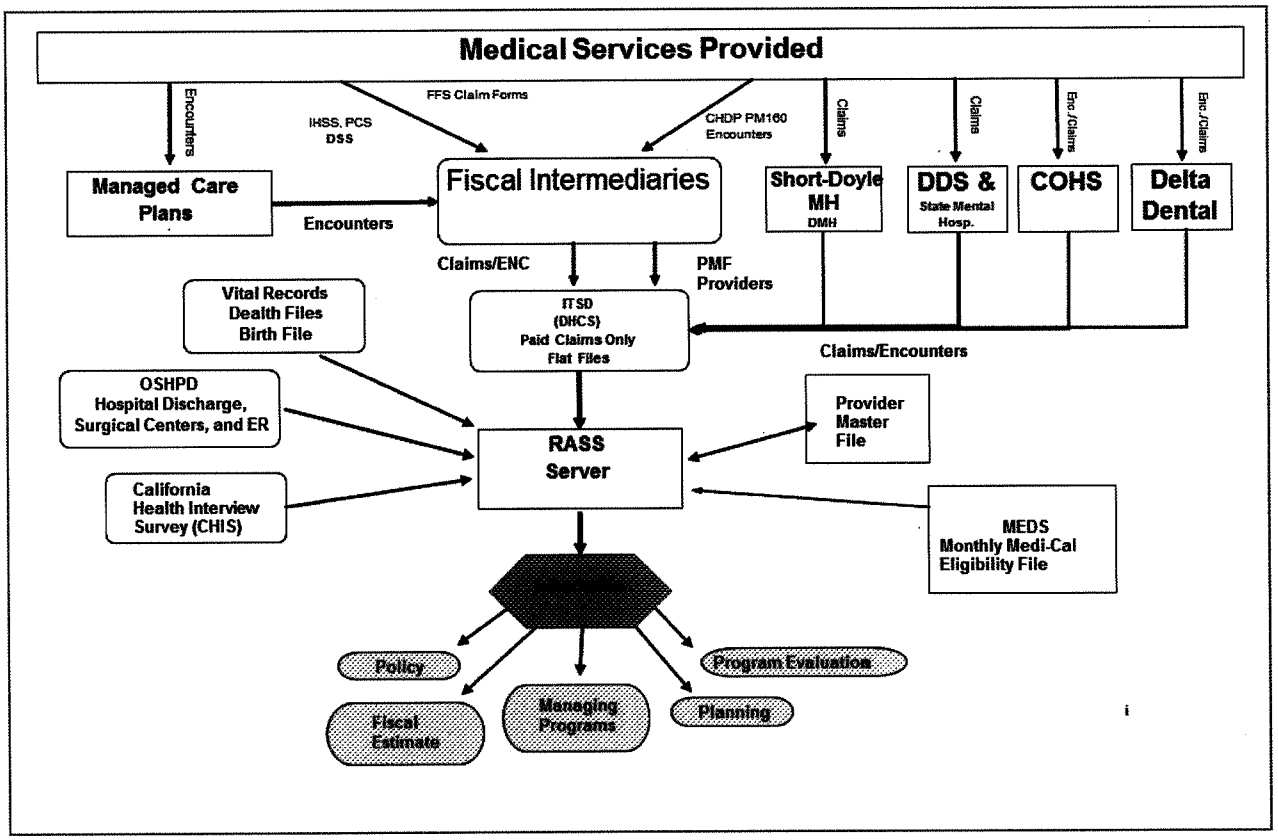
The healthcare access monitoring plan presented in this document proposes an initial set of measures based on data readily available to the Department. The bulk of the proposed access measures can be analyzed using administrative data sources that currently offer the best information pertaining to program expenditures, beneficiary characteristics, and service utilization. DHCS proposes supplementing administrative data sources with state-wide survey data currently available from the California Health Interview Survey (CHIS), and by data which will be collected in the future from a beneficiary call-in telephone line. Both CHIS survey and data from the beneficiary call-in line will provide an opportunity to Medi-Cal beneficiaries for program feedback. Together, these data sources offer a broad picture of healthcare access for Medi-Cal FFS beneficiaries.

As the healthcare access monitoring program evolves in California, it is envisioned that refinements to the initial set of measures will occur. For example, new healthcare access issues may emerge in the state that are not currently reflected in the initial set of measures, and innovative methods for assessing healthcare access may be identified in the literature. DHCS may look to improve this initial set of measures to reflect current understanding of the issues and methods involved in healthcare access monitoring. Shifts in the Department's policies or areas of focus may also lead to refinements of the initial set of healthcare monitoring measures. In addition, if a national set of healthcare access measures are proposed, DHCS may look to expanding its initial set of measures, where needed, to accommodate these national recommendations. As previously noted, DHCS will include a review of newly available data and benchmarks as part of its annual reporting process and any refinements to the monitoring plan will be described in the annual monitoring report.

Appendix 2 – Medi-Cal Data Sources

Medi-Cal Claims and Encounters

The Medi-Cal claim files consist of detailed records reflecting payments and services rendered to beneficiaries. These claim records are processed by one of several state departments or fiscal intermediary, and compiled and managed by the Information Technology Services Division of the DHCS. Medi-Cal encounter data capturing information on services provided under managed care plans are also processes through the fiscal intermediary. The Research and Analytical Studies Section downloads monthly claims and encounter files consisting of over 30 million observations. Medi-Cal claims data reflect payments to providers, and encounter data reflect healthcare services to managed care beneficiaries, for services rendered in previous months. Because of lags in data reporting and claims processing, claim and encounter files are considered "incomplete" until the end of a 12-month period. Medi-Cal claims and encounter data are a vital source of information for fiscal estimates, program management and evaluation, planning and policy development.



Medi-Cal Provider Master File

The Medi-Cal Provider Master File (PMF) contains records for providers who bill services through the fiscal intermediary. The PMF contains information including service addresses, provider type and the categories of service billed by that provider. Providers may have more than one record on the PMF if they have multiple Medi-Cal provider IDs. Information on the PMF is updated frequently as the providers must report changes within 35 days. Providers billing for services authorized through other departments may be included on this file, but may be reported with a program-specific provider number. These files are downloaded monthly and are used to supplement information obtained from the claims and encounter data files.

Medi-Cal Eligibility File

Since 1981, the Medi-Cal Eligibility Data System (MEDS) has collected data for every individual reported as a recipient of Medi-Cal or other state program benefits. A program beneficiary need only be eligible for services once during the year to be included in this system. A Monthly Medi-Cal Eligibility File (MMEF) is created from this MEDS data system, which contains observations reflecting the benefit history for anyone who received Medi-Cal or other state program benefits in the current and previous twelve months. Since Medi-Cal eligibility can be reported retroactively, final beneficiary counts are not considered "complete" until the end of a twelve month period. Data contained in the MMEF files are used to supplement information obtained from the claims and encounter data files.

CHIS

CHIS is the nation's largest state health survey. Conducted every two years on a wide range of health topics, CHIS data gives a detailed picture of the health and health care needs of California's large and diverse population. CHIS is conducted by the UCLA Center for Health Policy Research in collaboration with the California Department of Public Health, and the DHCS. CHIS is funded by a network of public and private agencies such as the National Institutes for Health, Robert Wood Johnson Foundation, Kaiser Permanente, Blue Shield of California and several local health departments. For each survey year, DHCS has the opportunity to shape the content of the survey questionnaire to reflect the needs of the Department and to address emerging health care policy issues. In 2009, CHIS surveyed more than 47,000 adults, more than 12,000 teens and children and more than 49,000 households. CHIS data provides a vital source of information on healthcare access, as well as the ability to provide county-level estimates and comparisons between Medi-Cal covered populations and those covered by other sources of health insurance. The 2009 CHIS survey contained several questions pertaining to healthcare access. These questions included whether a respondent had a usual source of care, the place most frequented for health care (i.e., a doctor's office, clinic or hospital), and the number of times the respondent visited a medical provider during the year. Additional questions pertaining to care coordination and physician/patient communication are also included on the survey, as are questions regarding whether the respondent delayed needed medical care, and whether costs or lack of insurance coverage were the main reasons for such delay. DHCS

continues to support healthcare access questions in the 2011 questionnaire, and has added questions pertaining to patient-centered care such as whether respondent feels their doctor listens carefully to them, and whether they are able to obtain timely appointments. A list of access-related survey questions contained on the 2011 CHIS survey appears in Appendix 2.

Data from the CHIS are available for use approximately 12-16 months after the data has been collected. For example, data collected from the 2009 CHIS survey was made available in March 2011.

OSHPD Hospital Discharge

OSHPD is the state agency that produces annual datasets for patient discharges. An inpatient discharge record is submitted each time a patient is treated in a licensed general acute care hospital in California. Each year, roughly 4 million discharges for California residents, as well as non-resident persons treated in a California acute hospital, are captured in the OSHPD hospital discharge dataset. Data collected by OSHPD includes patient demographic information, such as age, sex, county of residence, and race/ethnicity, diagnostic information, treatment information, disposition, total charges and expected source of payment. Data from the OSHPD hospital discharge dataset can be linked with Medi-Cal claims to produce a rich source of information on inpatient stays among Medi-Cal beneficiaries.

OSHPD Emergency Department

The OSHPD is the state agency that produces annual datasets for emergency department encounters. An ED encounter record is submitted each time a patient is treated in a licensed emergency department in California. Each year, more than 9 million emergency department encounters for California residents, as well as non-resident persons treated in a California emergency department, are captured in the OSHPD ED dataset. Data collected by OSHPD includes patient demographic information, such as age, sex, county of residence, and race/ethnicity, diagnostic information, treatment information, disposition, and expected source of payment. Data from the OSHPD ED dataset can be linked with Medi-Cal claims to offer a rich source of information on emergency department encounters among Medi-Cal beneficiaries.

OSHPD Long Term Care Facility Audited Annual Financial Data

The OSHPD is the state agency that produces annual data sets for long term care facilities. Long-Term Care Facilities are required to submit an Integrated Disclosure and Medi-Cal Cost Report within four months of the facility's fiscal year end. The report contains detailed financial and utilization information about the facility such as: Type of ownership and inventory of provided services; Number of beds and utilization statistics by payer; Balance sheet and income statement; Revenue by payer and by revenue center; Expenses by natural classification and by cost center and Productive hours and hourly

rates by employee classification and by cost center. The data are audited by DHCS' Audits & Investigations for use in rate setting.

Vital Records Birth Master File

Data pertaining to births registered in California are reported to the California Department of Public Health, Center for Health Statistics. Each year, more than 500,000 births to resident California women, as well as births to non-resident women delivered in the state, are captured in the state's Birth Master File. The Birth Master File is made available to researchers and to requesting state departments. The DHCS receives a copy of this file, including confidential data items such as birth mother's name and address, allowing for data linkage to Medi-Cal delivery claims. This linked data offers a rich source of information on birth outcomes for the Medi-Cal population.

Appendix 2 - Access-Related Questions from the 2011 CHIS Adult Questionnaire

Health Insurance/Medical Home

- Is there a place that you usually go to when you are sick or need advice about your health?
- What kind of place do you go to most often – a doctor's office, a clinic or hospital clinic, an emergency room, or some other place?
- During the past 12 months, did you visit a hospital emergency room for your own health?
- How many times did you visit a hospital emergency room for your own health?
- What is the name of your main health plan?
- What is the one main reason why you did not have any health insurance during the past 12 months?

Preventive Screenings

- During the past 12 months, did you get a flu shot or the nasal flu vaccine, called Flumist?
- Have you ever done a stool or fecal blood test?
- How long ago did you have your most recent mammogram?
- How long ago did you have your most recent Pap test?

Mental Health Access

- In the past 12 months, have you seen any other professional, such as a counselor, psychiatrist, or social worker for problems with your mental health, nerves, or your use of alcohol or drugs?
- Here are some reasons people have for not seeking help even when they think they might need it. Please tell me "yes" or 'no" for whether each statement applies to why you did not see a professional.
    - You were concerned about the cost of treatment
    - You did not feel comfortable talking with a professional about your personal problems
    - You were concerned about what would happen if someone found out you had a problem
    - You had a hard time getting an appointment

Health Care Access

- During the past 12 months, how many times have you seen a medical doctor?
- About how long has it been since you last saw a doctor about your own health?
- Do you have a personal doctor or medical provider who is your main provider?
- How often does your doctor or medical provider listen carefully to you?
- How often does your doctor or medical provider explain clearly what you need to do to take care of your health?
- In the past 12 months, have you tried to get an appointment to see your doctor or medical provider within two days because you were sick or injured?
- How often were you able to get an appointment within two days?
- Could you get an appointment to see your doctor or medical provider within two days if you needed to?
- Is there anyone at your doctor's office or clinic who helps coordinate your care with other doctors or services such as tests or treatments?
- The last time you saw a doctor, did you have a hard time understanding the doctor?
- Was this because you and the doctor spoke different languages?
- In what language did the doctor speak to you?
- Did you need someone to help you understand the doctor?
- Who was this person who helped you understand the doctor?
- In California, you have the right to get help from an interpreter for free during your medical visits. Did you know this before today?
- During the past 12 months, did you delay or not get medicine that a doctor prescribed for you?
- Was cost or lack of insurance a reason why you delayed or did not get the prescription?
- During the past 12 months, did you delay or not get any other medical care you felt you needed --- such as seeing a doctor, a specialist, or other health professional?
- Was cost or lack of insurance a reason why you delayed or did not get the care you felt you needed?

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