



# **HEALTH PLAN ACCESS PROJECT**

**Investigating the Intersection Between  
Health Literacy and Health Plan Efficiency**

**Year One Report**

**Presented to  
California's Office of the Patient Advocate**

**Submitted by  
Health Research for Action  
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## Executive Summary

### Introduction

The purpose of the first year of the Health Care Access Project was to investigate the intersection between health literacy and health plan efficiency and then to work with an advisory group to develop recommendations for interventions to simultaneously address these issues. To accomplish this, Health Research for Action -- a center in the UC Berkeley School of Public Health -- conducted a literature review, analyzed health literacy data from the California Health Information Survey (CHIS), conducted 31 key informant interviews with health plan professionals and advocates, conducted 12 focus groups and 20 usability tests with health plan members, and convened and met with an advisory group.

The *literature review* was used to explore previous research on both health plan efficiency and health literacy, to solidify lines of inquiry about areas where system efficiency and health literacy intersect, and to inform the research questions for the key informant interviews and focus groups. Analysis of *CHIS data* was used to learn about the relationship between type of health insurance and health literacy. The *key informant interviews* were used to solicit professional opinions about the most problematic inefficiencies that health plans face and how the limited health literacy of health plan members may exacerbate these inefficiencies. In the *focus groups*, health plan members were asked to discuss the areas where key informants had indicated that system efficiencies and health literacy intersect. Focus group participants were also asked to give recommendations about how health plans could make it easier for members to navigate their plan in these areas. For the *one-on-one usability tests*, we selected written communication materials currently used by health plans and tested those materials with health plan members to determine if they were understandable and useable. The materials that were tested were selected because they represented topic areas that focus group participants said were difficult to understand or navigate. The results of the usability tests informed recommendations about the materials' effectiveness and possible revisions to make the materials more understandable. Finally, we convened an *advisory group*, made up of health literacy experts, health plan representatives, and consumer advocates, and asked them to review the research and make recommendations about interventions that the California Office of the Patient Advocate (OPA) could implement to help health plans improve efficiency by addressing the health literacy of members. The advisory group recommended several topics and formats that could be used to create communication interventions to help health plan members navigate their plan more easily and thereby reduce health plan inefficiencies.

### Literature Review

Health Research for Action (HRA) conducted a literature review that examined the links between health literacy and system efficiency. Through this literature review we found that health care system efficiency has various definitions. The Institute of Medicine defined it as avoiding waste, including waste of equipment, supplies, ideas, and energy. Health care providers typically define it as limiting waste within individual clinicians and hospitals. Inefficiencies in the health care system can result in increased costs, unnecessary use of human hours and labor, and poor treatments.

Very few studies show a direct statistical link between health literacy and specific system inefficiencies; additionally, very few intervention studies have been conducted to examine how changes might impact quality and efficiency of care. This is a gap that is important to address.

The literature review pointed to six main areas where more investigation about the relationship between health literacy and system inefficiencies is needed, including:

1. Navigating health plans and hospitals;
2. Completing forms to receive medical care;
3. Interpreting and following dosing instructions for medications;
4. Communicating between members and providers (including linguistic accessibility);
5. Understanding appointment slips; and,
6. Using and understanding preventive health services.

### **Analysis of CHIS data**

The objective of this sub-study was to explore relationships among health literacy and communication variables, socio-demographic factors, health insurance access, and health plan membership from California health survey data. HRA analyzed data from the 2003, 2005, and 2007 California Health Interview Survey (CHIS) to examine relationships between communication and health literacy variables and insurance and/or HMO status and type (e.g., commercial versus public HMOs).

Data from CHIS demonstrated significant relationships between communication and health literacy variables, even after controlling for self-reported English proficiency, education, and income. In addition, there were significant differences in both communication variables and health literacy variables by type of insurance (HMO, non-HMO, and uninsured) as well as by type of HMO (commercial versus public HMO). While limited English proficiency influences communication and health literacy across all types of insurance, there remains a strong relationship between one's type of insurance and health literacy (uninsured have lower health literacy than all others) and between one's HMO "type" (commercial versus public) and health literacy, with public HMO beneficiaries having lower literacy than commercial, but still better than uninsured individuals. In some cases, the relationships of other system inefficiencies such as delays in seeking care and not having a usual source of care vary by type of HMO (commercial versus public), suggesting that managed care does not fully remove the barriers to access that public HMO beneficiaries face, a finding supported by other studies. We believe the measurement of communication difficulty and health literacy is a useful way of examining differences in access to and efficient use of healthcare.

### **Key Informant Interviews**

HRA completed 31 key informant (KI) interviews with professionals. The primary focus of the research was to identify areas where the limited health literacy of health plan members exacerbates inefficiencies in health plans. KIs were asked to identify the main system inefficiencies in health plans, the main problems in accessing care for health plan members with limited health literacy, and areas where inefficiencies and limited health literacy intersect. Key informants were also asked to suggest interventions to reduce inefficiencies in health plans by addressing the limited health literacy of their members.

Key informant interviews revealed many areas where experts believe that addressing health literacy issues could improve health plan efficiency. Interventions that key informants felt had the most potential to reduce health plan inefficiencies include reducing the literacy level of health plan written communication materials, providing in-person and telephone support for members, educating members about using the HMO system more efficiently and effectively, and making care more accessible. KIs also

recommended ways to simplify the system, including giving more power to physicians and pharmacists to bypass authorization processes or at least streamlining the process.

### **Focus Groups with Health Plan Members**

HRA conducted 12 focus groups with 114 commercial and Medi-Cal HMO members. The purpose of the focus groups was to elicit HMO members' feedback regarding experiences navigating their HMO and their recommendations for making their HMO easier to use. HRA also tested participants to determine their literacy, numeracy and health literacy level.

Data from the focus groups revealed areas in which the health literacy of members and the complexity of the system impacted members' ability to navigate the system. The main areas that focus group participants identified as particularly difficult to navigate and understand included understanding benefits, Evidence of Coverage, customer service telephone line, website/internet, written communication from the health plan, choosing a primary care provider/using the provider directory, authorizations, referrals and denials, and filing a grievance. Participants made suggestions for how health plans could simplify the process to make these areas easier for them to navigate or understand.

### **Usability Testing with Health Plan Members**

HRA completed 20 usability tests with commercial and Medi-Cal HMO members. The primary focus of the usability tests was to gather in-depth information regarding various themes that emerged from the previous focus groups and key informant interviews. To accomplish this, we asked participants to review health plan written communication materials and answer questions that determined their knowledge of appropriate use of emergency room, health plan websites, nurse advice lines and their understanding of medical groups vs. health plans and of member rights and responsibilities.

Usability test interviews revealed that Medi-Cal and commercial participants have a keen interest in learning more about their health plan and how to use it most efficiently. However, there is also a disconnect between what health plans would like members to do in certain situations, what members know their health plans want them to do in these situations, and what actually happens when the situation occurs. Members did reveal that they are receptive to receiving information from their plan about a variety of topics and would like to get this via postal mail.

### **Advisory Group Meeting**

After hearing the summary of the research, the advisory group recommended topics and formats for interventions that would simultaneously address the health literacy of members and improve the efficiency of health plans. The topics that the advisory group members recommended as areas where members with limited health literacy could use help navigating their plans included emergency department use, medication coverage/prescription drug formularies, how to use benefits, authorizations/denials/grievances, and using the provider directory. Based on the research presented at the meeting, they recommended addressing these topics via flowcharts, checklists, television, DVDs, automated voice system, and fact sheets.

### **HRA Recommended Intervention**

As a result of the extensive research and feedback from the expert advisory group, HRA's top recommendation is to create 4-6 health plan newsletter inserts, each covering one of the topics listed above, using flowcharts and checklists. These easy-to-read and –use inserts could be

adapted and personalized by individual health plans; members would receive these inserts with their quarterly newsletters as assistance for navigating their health plan more efficiently.

## Literature Review

### LITERATURE REVIEW ABSTRACT

*One of the most prominent outcomes of health inefficiency is increased cost. It is estimated that 30–40 cents of every dollar spent on health care (more than a half-trillion dollars per year) is spent on costs associated with overuse, underuse, misuse, duplication, system failures, unnecessary repetition, poor communication, and inefficiency.*

Health care system efficiency has various definitions. The Institute of Medicine defined it as avoiding waste, including waste of equipment, supplies, ideas, and energy. Health care providers typically define it as limiting waste within individual clinicians and hospitals.

There are three main sources of health care inefficiencies. They are:

1. Misuse: Care that causes harm to patients or involves preventable complications;
2. Overuse: Care in which the potential for harm exceeds the possible benefit; and,
3. Underuse: Failure to provide care that would have produced a favorable outcome.

**Inefficiencies in the health care system can result in increased costs, unnecessary use of human hours and labor, and poor treatments. The three main types of inefficiencies that are relevant to this project fall into the categories of clinical care, health plans, and patients:**

1. Clinical Care:
  - a. Variation in the level of care without corresponding improved outcomes;
  - b. Failure to comply with established and accepted clinical practices;
  - c. Limited adoption of clinical information technologies;
  - d. Challenge to primary care in providing timely access to clinicians; and
  - e. Underuse of cost-effective diagnostic tests not widely adopted in clinical practice.
2. Health plans:
  - a. Variation in costs of medical care among different insurance carriers;
  - b. High administrative costs; and
  - c. Contract decisions based on cost rather than quality of care.
3. Patients:
  - a. Demands of additional tests/procedures due to “more is better” mentality;
  - b. Lack of engagement in preventive care and effective self-management; and
  - c. Overuse of the emergency department for non-urgent problems.

One component of health inefficiencies that is difficult to know is whether limited health literacy causes inefficiencies or if the existing inefficient practices make interacting with the health care system more difficult for those with limited health literacy. There has been little work on how overall health, quality of care, and access and utilization of care is affected by system inefficiencies for those with limited health literacy. In light of this, main areas to examine surround the issue of the intersection of health literacy and system inefficiencies include:

1. Navigation:
  - a. Finding the hospital and locating departments within the hospital, and
  - b. Understanding how to use health plans, including both coverage and costs;
2. Completion of forms or registration to receive medical care;
3. Interpretation and application of dosing instructions for medications;

4. Communication between members and providers (including linguistic accessibility);
5. Interpretation of appointment slips; and
6. Understanding and using preventive health services.

Very few studies have shown a direct statistical link between health literacy and specific system inefficiencies, nor have many intervention studies been conducted to examine how changes might impact quality and efficiency of care. This is a gap that is important to address.

The published scientific journals cited in this literature review were extracted from the PubMed database. Other unpublished and gray literature was found using other databases.

## **Part I: Inefficiencies in the Health Care System**

### **Defining Inefficiencies**

The United States health care system is characterized by vast inefficiencies that stem from most points of care. Health care spending represents over 16 percent of the country's total Gross Domestic Product (Poissal et al., 2007), yet the health outcomes of Americans do not reflect the amount of money that has been poured into the system. Despite spending twice as much per capita on health care compared to other industrialized nations, the United States ranks last out of 19 countries in mortality related to medical care (K. Davis, 2008). The percentage of total health care spending that analysts label "waste" hovers around 30 percent (Mechanic, 2008). The growing level of inefficiency in the system has created a crisis where quality health care is unaffordable and unavailable to a growing number of Americans (Sennett & Wolfson, 2006).

Health care system efficiency (and likewise, inefficiency) lacks a unified definition, and its meaning changes based on the context of the analysis and unit of interest. The Institute of Medicine defines efficiency as "avoiding waste, including waste of equipment, supplies, ideas, and energy" (Institute of Medicine, 2001). Among economists and other quantitative analysts who publish in the peer-reviewed academic literature, the definition of efficiency is heavily influenced by economic theory, which views the concept as the optimal intersection between maximum output and minimal cost. It is typically expressed as a ratio of the expected improvement in care (output) to the cost of care (Donabedian, 1990). This is in contrast to the definitions adopted by practitioners and providers who view efficiency as limiting waste and occurring within individual clinicians and hospitals.

In an effort to assemble the varied working definitions of efficiency into one that is comprehensive and amenable to direct measurement, the Agency for Healthcare Research and Quality (AHRQ) identified efficiency as an "attribute of performance that is measured by examining the relationship between a specific product of the health care system (also called an output) and the resources used to create that product (also called inputs)" (McGlynn, 2008). Inefficiencies occur when the input does not give rise to the output in a manner that is most resource-effective. Determining resource-effectiveness depends on who is measuring efficiency: patients, physicians, hospitals/health systems, or purchasers.

## **Types of efficiencies and inefficiencies**

Three broad types of efficiencies have been defined in the literature: technical, productive, and social. *Technical efficiencies* exist when no greater output at a given level of quality can be achieved with a given set of resource inputs. They are achieved when an organization is producing its maximum output given the set of inputs. *Productive efficiencies* exist when the various inputs are used together in an optimal combination. They are achieved when an organization cannot produce the same level of output at a lower cost. *Social efficiencies* exist when resources are allocated so as to maximize the benefit to a population. They are achieved when no member of society can be made better off without making another member worse off (Shekelle, 2006).

To understand how technical efficiency operates in health plans, consider the following example. (Health Plan A has a good electronic medical records system and staff are able to use it well. Health Plan B has an electronic medical records system, but it is difficult to use; staff follow old order entry processes, but now add the extra step of computer entry. Health Plan A has higher technical efficiency than Health Plan B. Productive efficiencies operate slightly differently. Health Plan A bought a new electronic medical records system, while Health Plan B did not. As a result, Health Plan A has a faster payment schedule. Health Plan A and another health plan, Health Plan C, both bought an electronic medical records system, but Health Plan A received a better deal. Health Plan A has higher productive efficiency than both Health Plans B and C.

## **Sources of Inefficiencies**

Each of the three types of inefficiencies (technical, productive, social) arises because inputs are not put to good use. Although the standard of “good use” changes depending on the desired output, the inefficiencies can be collectively understood as suboptimal utilization of resources that results in waste.

Some observers point to the bloated spending on health care and mediocre health outcomes as evidence of wasteful spending at various points along the continuum of care. Sources of waste have been broadly categorized into three types: misuse, underuse, and overuse (New England Healthcare Institute, 2008). Although these terms were initially defined in light of health care quality concerns, they have been applied to sources of inefficiencies as well. *Misuse* refers to care that causes harm to patients or involves preventable complications of any treatment. Misuse results from the failure to accurately communicate the risks and benefits of alternative treatment, and a disregard of the patient’s values and preferences in the choice of treatment. Hospital-acquired infections are considered “preventable” in this definition. Between five and ten percent of all patients admitted to acute care hospitals acquire one or more infections, resulting in an estimated 90,000 deaths and costs \$4.5 to \$5.7 billion annually (New England Healthcare Institute, 2008), resources that could have been used in another way within the health system.

*Overuse* occurs when a health care service is provided in which the potential for harm exceeds the possible benefit of the care. The cause is an overdependence on the acute care sector and a lack of the infrastructure necessary to support the management of chronically ill patients in other settings. An example of overuse is admitting patients with chronic conditions to the hospital

(with attendant higher costs), rather than more effectively treating them as outpatients (Hostetter, 2007).

*Underuse* is the failure to provide a health care service when it would have produced a favorable outcome for a patient. The causes of underuse include discontinuity of care (which tends to grow worse when more physicians are involved in the patient's care) and the lack of systems that would facilitate the appropriate use of services, including preventive services (Sennett & Starkey, 2006). An example of underuse is failure to screen diabetics for early signs of retinal disease.

### **Examples of Inefficiencies in the Health Care System**

Inefficiencies arise from every level of the health care system and result in increased costs, increased human hours and labor, and poor treatment. Although the following examples are categorized according to different levels of the system, they are not truly differentiated from one another; the inefficiency may have been identified at one level, but has its roots and/or consequences in another.

#### *The U.S. Health Care System*

Some argue that inefficiencies arise from the operating practices of the U.S. health care system. The third-party payer system that dominates the payment structure insulates consumers from the cost of care. As a result, consumers may demand far more costly care than would otherwise be efficient (McGlynn, 2008). Additionally, the fragmented structure of health care financing in the United States has raised concerns about the system's administrative burden (Woolhandler, Campbell, & Himmelstein, 2003). Costs related to billing and insurance procedures are incurred at every point along the care continuum and contribute to a substantial portion of total health care costs. The multitude of payers and payment policies has bred administrative complexity and operational redundancy. Recent estimates are that administrative costs consume 31 percent of all U.S. spending on health care (Sennett & Wolfson, 2006). Fee-for-service payment systems encourage a clinical culture wherein physicians may have an incentive to offer an extra test or referral (MCO, 2008). However, managed care systems have also not proven to be able to hold down cost increases using capitated physician payment (in which the payment does not depend on offering additional tests or procedures). Additionally, under capitation (in which the physician receives a set amount per member per month), the physician may have a disincentive to provide additional care.

Managed care penetration continues to increase across the country. National managed care penetration is nearly 50 percent, while penetration in California is nearly 65 percent as of 2007 (Poisal et al., 2007). Inflation in health care costs continues to outstrip the general rate of inflation as of 2006 and is expected to start rising again in 2008 (New England Healthcare Institute, 2008). It is suggested that in order to reduce health care spending and perhaps reduce inefficiencies, managed care organizations can help replace expensive inpatient care with less expensive outpatient care and can pressure hospitals and providers to function in a more efficient manner (Rosko, 2001).

### *Clinical Care Inefficiency*

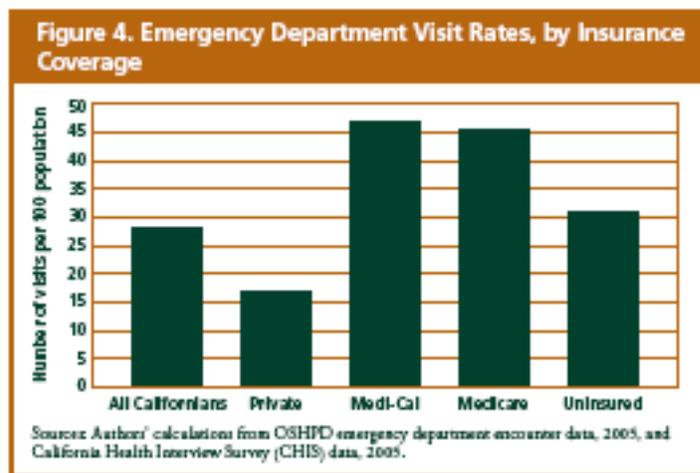
There are also problems at the actual point of care, both with physicians and with hospitals. The inefficiency of health care providers is speculated to be a major source of health care costs (Rosko, 2001). The New England Health Institute identified five broad root causes for the sources of waste in clinical care (Pitts, Niska, Xu, & Burt, 2008). One of the largest sources of wasteful spending is found in the extreme variation in the intensity of clinical care without corresponding improvements in clinical outcomes. In other words, a single health issue may be addressed in multiple ways, but the variation of care across sites does not correlate with better health outcomes. A second source is somewhat related to the first: waste can result from physicians' and hospitals' failure to comply with established "evidence-based guidelines," developed through research-based tests of efficacy and effectiveness.

Another cause of waste stems from the limited adoption of clinical information technologies. Technologies that streamline record keeping and help with physicians' decision making have been developed for use in hospitals and physician practices, but have not been widely adopted (particularly in small physician practices). A fourth cause is the failure of primary care systems to provide patients with timely access to a clinician. As a result, patients may resort to using the Emergency Department (ED) to seek treatment for health problems that could more efficiently be seen in a primary care setting. A final cause of waste results from the underuse of cost-effective diagnostic tests, which have not been widely adopted in clinical practice. For many conditions, these tests could improve diagnostic accuracy at lower costs than less appropriate lab tests, decrease use of inappropriate radiologic tests, and direct more appropriate use of antibiotics or other prescriptions.

Site of care is also debated as a source of inefficiency. For many Americans, including the nearly 16 percent of Americans who lack insurance or are underinsured, the Emergency Department (ED) may be their primary access point for medical care. This access is guaranteed by the federal EMTALA law, which created an "open door" policy guaranteeing that assessment of any emergency medical condition must be offered in the ED without regard to ability to pay ("The Emergency Medical Treatment and Labor Act [EMTALA]," 1986). The reliance on ED services over office visits with a regular care provider contributes to an ED system in which a substantial portion of visits are for non-urgent conditions; in 2006, over 12 percent of visits to EDs were for non-urgent conditions (McConville & Lee, 2008).

Nationally, overall ED visits are highest for Medicaid patients (82 visits per 100). While rates are lower in California than nationally, Medi-Cal beneficiaries have the highest ED visit rates and are more likely to have non-urgent ED visits than all other payers, even after adjusting for other demographic differences (Pitts et al., 2008). The table below shows that in 2005, the highest ED visit rates were for patients with Medi-Cal or Medicare insurance, higher than ED visit rates among the uninsured, which were almost double the rate for ED visits by the privately insured in California (McConville & Lee, 2008). These visits may be for issues that ideally could be treated at a physician office visit during business hours. In fact, over 60 percent of ED visits occur after regular business hours or on weekends (California HealthCare Foundation, 2006), and extended primary care hours could therefore potentially offer alternatives to ED care for non-urgent conditions. As is demonstrated in one study, Medicaid patients were much more likely to report

trouble accessing care without going to the ED; thus, poor access for Medicaid beneficiaries is a likely explanation for some avoidable ED visits (Pitts et al., 2008).



Adapted from:  
(McConville & Lee, 2008)

ED visits are often more expensive than office visits and can result in more extensive testing and potentially avoidable hospital admissions. In addition, use of the ED for non-urgent care can contribute to crowding, which can then impact appropriate care for true emergencies (15.9 percent of ED visits) and urgent conditions (36.6 percent of ED visits) (Florence, 2005; Showstack, 2005; Williams, 1996). There are mixed findings on the actual contribution of non-urgent visits to crowding (Hoot & Aronsky, 2008), with bed shortages, ED closures, and delay in ancillary services noted as large contributors. Some research notes that expanding capacity for EDs is much more expensive than expanding primary care capacity, and that the cost of maintaining staffing in hospitals drives higher costs for ED care. However, an alternative view exists that the marginal cost of any given non-urgent visit in an already open and staffed ED is small (Bamezai, Melnick, & Nawathe, 2005), though this has been debated by other health economists (K. Davis, 2005).

### *Health Plan Inefficiencies*

The sources of inefficiency that are of most interest to this project arise from health plans. Private and public payment organizations contribute to systemwide inefficiencies through their administrative costs and variable fee schedules. The pricing of private health insurance policies is driven by actuarial principles over matters of health care quality. As a result, there is tremendous variation in the costs of medical care among the different insurance carriers, as well as extremely high administrative costs; combined, these drive up the costs of care. Among private health insurance plans, administrative costs create overhead that comprises 12 to 15 percent of total health plan revenues (Woolhandler & Himmelstein, 2004). The public systems of Medicare and Medicaid have traditionally been seen as having lower administrative costs, notably in the areas of marketing and actuarial costs, which account for a larger portion of the administrative costs in private/commercial plans. The administrative costs for Medicare are somewhere between 2 and 6 percent, depending on the data source (Matthews, 2006; Potetz, 2008).

An econometric analysis of causes of cost inefficiencies in health maintenance organizations (HMOs) found that for-profit status, greater enrollment, lower levels of debt, and ownership by insurers, hospitals, or jointly by physicians and hospitals are predictive of greater cost efficiency. However, administrative costs have been noted to be higher in for-profit HMOs and for-profit hospitals (California Healthline, 2008), including within California, where a for-profit HMO has the highest administrative costs (Siddharthan, Ahem, & Rosenman, 2000). Factors impeding efficiency include homogeneity of membership (in regard to type of payer; groups with a higher percentage of a particular type of payer had lower efficiency) and geographic location (Midwest Business Group on Health, 2003).

Purchasers exacerbate inefficiencies within health plans by making contracting decisions based on price without also examining performance, using transaction-based (rather than outcome-based) payment structures that discourage quality improvement and promote waste, and failing to engage the consumer (employees and beneficiaries) on quality issues (McGlynn, 2007). Some purchasers have started to consider efficiency when contracting with providers. Purchasers can use efficiency measures for 1) public reporting—disseminating information to members to help them make more cost-conscious decisions; 2) pay for performance—a financial rewards programs for providers with better performance; 3) tiering—differential co-payments to encourage patients to choose higher-performing providers; and 4) selective contracting—contracts limited to providers who perform at a certain level (Sennett & Wolfson, 2006).

### *Inefficiencies Arising from the Patient*

Patients also contribute to inefficiencies in health care. The current health care climate continues to shift responsibility for health care from the physician to the individual. As a result, a self-management culture has proliferated within the U.S. health care system whereby patients are largely accountable for their own health management. Many patients operate under the assumption that “more care is better,” leading them to demand additional tests and procedures which are costly and frequently unnecessary (Marks, Allegrante, & Lorig, 2005). Others lack self-efficacy to effectively manage their own chronic diseases, potentially leading to lower adherence and worse health outcomes (Fries et al., 1993). Researchers hypothesize that inadequate management of chronic conditions can contribute to overuse of services and rising medical costs, as patients enter the health system with more severe symptoms that are further along in disease progression (McConville & Lee, 2008; Michelen, Martinez, Lee, & Wheeler, 2006). Similarly, a culture of convenience leads the consumer to demand quicker access to care, possibly increasing the use of EDs and urgent care clinics, and leading to growth among some practices in the use of same-day visits and open-access scheduling. One could argue that there are solutions that would guide the patient toward more appropriate use of the health system if they were made more widely available (McConville & Lee, 2008; McGlynn, 2008).

### **Measuring Inefficiencies**

The AHRQ developed a measurement typology of efficiency to accompany its definition that is applicable across a variety of situations and objectives. There are three levels within the typology: perspective, outputs, and inputs. *Perspective* refers to identifying the entity that is evaluating efficiency, the entity that is being evaluated, and the objective or rationale for the

assessment. Efficiency is a relative term, and purchasers, payers, plans, consumers, and providers each have a different perspective on what constitutes quality and appropriate cost.

*Outputs* specify what type of product is being evaluated. There are two types of outputs. The first is health services, such as doctors' visits, drugs, and admissions. The second is health outcomes, such as preventable deaths, functional status, or clinical outcomes. Finally, *inputs* refer to what resources are consumed in order to produce the output. They can be categorized by physical inputs (e.g., nursing hours, bed days, drug supplies) or cost (McGlynn, 2008).

From the perspective of the purchaser, potential outputs by which to measure the efficiency of a health plan include covered lives (number of patients served), quality-adjusted life years, episodes of care, and utilization counts (i.e., physician visits and hospital days). Inputs may include the premium price charged by the health plan, utilization counts, cost per covered life, and cost per episodes of care for a specific medical condition (McGlynn, 2008).

Calculating efficiency is highly mathematical and primarily depends on two methods, stochastic frontier analysis (SFA) and data envelopment analysis (DEA). Both contain input and output criteria that are applied to different mathematical models (Institute of Medicine, 2005). This type of analysis is widespread in economics and policy analysis literature. The AHRQ measurement typology is a useful bridge between the academic and practice worlds, as it identifies relevant inputs and outputs, depending on the entity being evaluated.

A review of efficiency measures identified eight measures that are commonly used by payers and purchasers to profile the efficiency of provider organizations (e.g., hospitals, medical groups) and individual physicians. These measures rely on some of the analytical methods that were developed in the economics literature, but employ user-friendly software that conducts the complex analysis after receiving the appropriate inputs and outputs. The measures can be divided into two categories: episode-based and population-based. An episode-based approach uses diagnosis and procedure codes from insurance claims data to construct discrete episodes of care (e.g., hospital visits, lab tests, surgery, etc.). Efficiency is measured by comparing the physical and/or financial resources used to produce each episode of care. A population-based approach assigns a mortality burden to patient population within a given time period (e.g., one year). Efficiency is measured by comparing the costs or resources used to care for that population over a given time period. This approach is used when a single entity, such as a designated primary care physician or an insurance plan, can be assumed to be responsible for the efficiency of a defined population's care for a given period (Donabedian, 1990).

### **Outcomes of Inefficiencies**

One of the most prominent outcomes of inefficiencies is increased cost. According to the Institute of Medicine report on systems engineering within health systems, an estimated 30 to 40 cents of every dollar spent on health care, or more than a half-trillion dollars per year, is spent on costs associated with overuse, underuse, misuse, duplication, system failures, unnecessary repetition, poor communication, and inefficiency (Sequist, Adams, Zhang, Ross-Degnan, & Ayanian, 2006).

Inefficiencies are primarily conceptualized in terms of cost or human resources. As a result, the impact of inefficiencies on factors such as health outcomes, patient satisfaction, or quality of care is less examined. However, outcomes have been examined in light of health care quality. Quality comprises many different components, one of which is efficiency. Other aspects of quality include efficacy, effectiveness, optimality, acceptability, legitimacy, and equity (Institute of Medicine, 2001). Health care quality is associated with aspects of chronic care treatment (Cleary & McNeil, 1988), medical errors (Chassin, Park, Lohr, Keeseey, & Brook, 1989), patient satisfaction (Paasche-Orlow & Wolf, 2007), and patient mortality (Baker et al., 1996). Although quality and efficiency are separate concepts, they may share similar consequences.

## **Part II: Intersection with Health Literacy**

### **Defining Health Literacy**

Health literacy is often conceptualized as an individual resource that is possessed by a single person. It is important to note that while literacy and health literacy are separate entities, they are very much related. The majority of individuals with limited literacy skills frequently has limited health literacy skills and therefore is hindered when attempting to navigate the health care system. However, individuals with strong literacy skills may also have limited health literacy skills; this is due to lack of knowledge of medical jargon, emotions running strong during times of health care need, and multiple pieces of information simultaneously needing to be digested. According to findings from the National Assessment of Adult Literacy, approximately 81 million adults living in the U.S. either has limited health literacy skills or is unable to be measured because of language barriers preventing participation in the assessment (White, 2008).

Examining the intersection between health plan inefficiencies and health literacy expands the definition to consider contextual factors in the health care environment that can enable or disable patients on account of their literacy. In this way, health literacy encompasses both a person's ability and the complexity of the tasks at hand (Howard, Gazmararian, & Parker, 2005). We think of this as the gap between an individual capacity and the health system's information/health literacy requirements.

There is very little in the peer-reviewed or gray literature that examines the direct relationship between health literacy and system inefficiencies; this review was only able to identify one recently published article that examined literacy and health literacy, targeted individuals with a literacy intervention, and showed outcomes in terms of improved efficiencies (lower ED use and lower rates of hospitalization) (Robinson, Calmes, & Bazargan, 2008). None examined the two concepts in tandem in terms of connecting health literacy directly to specific inefficiencies. There is some work to suggest that the barriers faced by patients with low literacy may be indirectly related to system inefficiencies, however. A qualitative study of 60 patients with low literacy identified five common barriers that patients with low literacy face when interacting with the health care system: navigation, or finding the hospital and locating departments within the hospital; completion of forms or registration to received medical care; interpretation and application of dosing instructions; communication between patients and providers; and interpretation of appointment slips (Friedland, 1998).

The overlap between the health literacy and the overall health system inefficiency literatures can lead us to infer indirect effects of health literacy on system inefficiencies. This relationship does not have a clear direction, as there are many dimensions to both concepts. It is difficult to know whether limited health literacy causes inefficiencies or the existing inefficient practices make interacting with the health care system more difficult for those with limited health literacy. It is likely a dynamic relationship where patients with limited health literacy are both a source of inefficiencies and disadvantaged due to existing inefficient practices.

### **Health Literacy and System Inefficiencies**

Low health literacy appears to result in lower efficiency in health care systems and results in a higher consumption of resources. Some researchers have analyzed the potential increased costs due to limited health literacy and concluded that it may be associated with increased consumer, health provider, and health care system costs. Estimates of increased inpatient spending for patients with inadequate health literacy range from \$450 to \$993 per patient (Howard et al., 2005). Another analysis estimated the additional health care resource spending related to low health literacy to be \$29 billion (Barron, 1980).

Evidence on outcomes of the effects of limited health literacy besides cost is limited. There has been little work to date on how overall health, quality of care or access, and utilization of care may be affected by system inefficiencies for those with limited health literacy. Some potential factors that have been identified as pertinent issues in health literacy and may be associated with inefficiency are listed below.

#### Navigating the Health Care System

Patients with low health literacy are less likely to be able to effectively navigate the health system to obtain necessary services. Patients must use literacy skills when they interact with all points of the health care system: the initial scheduling, getting to the hospital, finding the clinic, meeting with a physician, getting to pharmacy, understanding the prescription, visiting the lab, and comprehending lab results.

In regard to health plans, Paasche-Orlow and Wolf (2007) hypothesized that the convoluted financial structure of medical insurance is a mediator between low literacy and health outcomes. Specifically, there are varying rules and regulations for health plans and it is difficult to ensure which services are covered and how to use different programs. Similarly, health programs do not manage the flow of information between various physicians, specialists, laboratories, and pharmacists, resulting in non-continuous care and redundant tests and treatment plans (Beecham, 1999). This area is understudied, however, and there is no evidence directly linking complexities in the health system to health and care-related outcomes for those with low literacy.

Patients' difficulties with navigating the health care system can present health systems with decreased efficiency. The complexity of health plans may delay patients from obtaining health services, resulting in more severe presentations of disease conditions when they do seek care, including seeking care through the ED, that may have been avoided by earlier care. Additionally, difficulty navigating the health system may result in a longer time period between provider visits, which is a predictive factor for missing a scheduled appointment (Baker, 1999). Studies in

other countries also cite missed appointments as a source of inefficiency and cost concerns. The United States has not conducted a comparable national-level analysis, but individual counties have evaluated the financial cost of missing appointments and found them to be a drain on county resources.

### Drug Adherence

It may be the providers' responsibility to give the proper information to patients about their medication; however, patients' understanding of that information maybe an overlooked aspect of the information exchange process (Gazmararian et al., 2006). Patients with limited literacy skills are thought to have more problems adhering to prescribed medication. Limited health literacy can affect adherence through several factors. First, low health literacy may affect adherence directly by decreasing the patient's comprehension of dosing instructions. Second, patients with limited literacy skills may not utilize written reminders or other systems dependent on reading to enhance adherence. Finally, patients with limited literacy skills may intentionally stop taking a medication or take less medication than prescribed if they do not trust a physician's treatment plan, do not understand the important of adherence, or have concerns about side effects (Sokol, McGuigan, Verbrugge, & Epstein, 2005). Evidence on actual medication adherence is mixed, however. One study found that HIV patients with limited literacy skills had 3.3 times the likelihood of non-adherence to antiretroviral drugs compared to those with normal literacy skills. Another study found the opposite effect; HIV patients with limited literacy skills had 1.9 times the likelihood of adherence to drugs (T. C. Davis et al., 1996). Also, three studies have found inconsistent results in the relationship between health literacy and medication adherence. One study found an association between health literacy and medication adherence, and another found no associations. The third study found a trend toward a reduction in adherence among patients with low health literacy (Gazmararian et al., 2006). Despite the varied results, it appears that patients with limited literacy skills potentially face more barriers to medical adherence.

This can result in inefficiencies in health plans because better medication adherence can translate to lower hospitalization rates and lower medical costs. Among a sample of patients who were enrolled in private medical and prescription care plans, patients who had high levels of medical adherence to drugs treating diabetes, hypertension, hypercholesterolemia, or congestive heart failure had lower medical costs related to outpatient services, ED services, and hospitalization. Although the drug costs for diabetes and hypercholesterolemia were greater for patients with high adherence, their overall costs were offset by their lower medical costs, resulting in a net decrease in total costs (Scott, Gazmararian, Williams, & Baker, 2002).

### Underuse of Preventive Care

The lack of knowledge associated with low levels of literacy often translates to low usage and understanding of preventive health services. Among a sample of women, for example, who had not received a mammogram in the past year, low health literacy was found to be associated with an inaccurate understanding of the purpose of a mammogram (Institute of Medicine, 2004). Among a sample of Medicare managed care enrollees, inadequate health literacy was found to be independently associated with lower use of preventive health services, such as vaccines, Pap smears, or mammograms (New England Healthcare Institute, 2008).

The low levels of preventive care among those with low health literacy can be connected with inefficiencies when we consider the overuse and underuse typologies. Patients with limited literacy may overutilize services designed to treat complications of disease and underutilize services designed to prevent complications (Institute of Medicine, 2004). Patients with lower literacy may have more trouble navigating the system, and their primary interactions with the health system may be at the level of acute care services, such as the Emergency Department. ED visits are generally more expensive than office visits and can be associated with more costly laboratory tests and unnecessary hospitalization (Pignone, DeWalt, Sheridan, Berkman, & Lohr, 2005). Two analyses showed that patients with limited literacy skills have higher rates of hospitalization that may be associated with greater resource use (Gauthier & Serber, 2005).

## **Possible Interventions and Tools**

A review of health literacy interventions located only one intervention study with a goal to improve health care utilization among asthmatic children using a literacy intervention (Robinson et al., 2008). We are in the early stages of researching interventions that target navigation of the health care system, such as use of a health coach or navigator (Draper, 2007). However, many potential solutions have been proposed to increase efficiency. The Commonwealth Fund's Commission on a High Performance Health System classified the broad recommendations into four groups: disease management, care coordination, use of health information technology, and pay for performance (Andrus & Roth, 2002). Each recommendation is presented below and discussed in light of its implications for those with limited health literacy.

### Disease Management

Disease management refers to the heightened emphasis on patients' personal responsibility for their own health, improved monitoring of disease indicators, and use of known effective procedures to manage chronic diseases. Health plans have begun to target enrollees with chronic conditions with educational materials and information through mail and telephone contact. This information encourages their adherence to standardized treatment guidelines and self-care. By escalating their disease management activities, health plans are attempting to curtail their enrollees' dependence on acute care and avoid higher medical costs from more severely developed chronic illnesses. Similarly, practitioners may receive information on more appropriate management of a chronic condition (for instance, HMOs monitoring patient prescriptions may send medication reminders to the managing physician) (National Quality Forum, 2005).

Disease management programs may not provide as much of a benefit to those with limited health literacy skills. Those with limited health literacy are already at a disadvantage in self-care; they have lower levels of knowledge of chronic diseases such as hypertension and diabetes, are less likely to understand their disease state, and have inaccurate or incomplete understandings of health-promoting behaviors, such as exercise and diet (Draper, 2007). If health plans increase disease self-management programs in an effort to supplant other care connections with providers, chronic disease patients with low literacy may delay seeking care, face more severe health problems, and have potentially dangerous health outcomes.

Another way that increased disease management has been incorporated into health plans is through consumer-directed health care. These programs have been introduced into the health care system through such products as flexible spending accounts, medical savings accounts, and defined contribution plans. These plans require consumers to determine their health care budget, including how much coinsurance and out-of-pocket expenses to pay, which providers to see, and what services to undergo. Consumer-driven health plans are believed to help contain costs by encouraging patients to avoid unnecessary expenses and offering incentives to preventive care (Gauthier & Serber, 2005). This new form of coverage has not considered the potential disadvantage for those with limited health literacy. Given the current administrative complexity of existing health plans, putting more responsibility on patients whose understanding of health-related issues is already limited may increase the differential burden they face in the efficient use of the health system.

Health plans have also increased their emphasis on health promotion and wellness by offering programs such as health risk assessments, gym memberships, weight management support, and smoking cessation programs (Institute of Medicine, 2004). It is unknown if better participation in such programs is differential for those with lower versus higher literacy.

### Care Coordination

Both disease management and care coordination are part of a larger movement within health plans toward care management, which comprises activities that aim to reduce costs and improve health outcomes by intervening with enrollees who have been identified as having chronic conditions. Care management aims to delay or prevent further deterioration of health by delaying or preventing the onset of chronic illness and eliminating preventable unnecessary and duplicative services (Hostetter, 2007).

Care coordination refers to the streamlining of information among a patient's various sources of treatment. Lack of care coordination can lead to the unavailability of test results or records at the time of the patient's appointment, duplication of testing, or provision of conflicting information by the patient's various physicians (Draper, 2007). A 2005 Commonwealth Fund survey of patients with health problems across six countries found that at least one-third of them did not receive explicit instructions about what symptoms to watch for when discharged, did not know whom to contact with questions, or were left without arrangements for follow-up. This uncertainty among patients may explain why nearly one in five patients experience adverse events (many of which are preventable) within three weeks of being discharged (Postl, 2006).

One way that care coordination may be facilitated is through case management. These activities target enrollees with health conditions that put them at risk for incurring large medical expenditures. These activities are individually customized to the needs of the enrollee and may include care planning, coordination of follow-up care, and telephone-based support and assistance (Postl, 2006). The "Canadian Commission on Wait Times" formally recommended that two types of care coordinators be involved in the coordination process: a wait time coordinator and a patient navigator (Coleman, Parry, Chalmers, & Min, 2006). The wait time coordinator is assigned to a patient upon booking of a treatment and communicates with that patient until the commencement of the service. The Commission found that when delays for health services are long, the number of patients who do not attend their appointments rises. Wait

time coordinators are meant to decrease administrative bottlenecks through better organizing, scheduling, and planning patient flow. A patient navigator provides assistance to patients once they have already entered the system, guiding them through various departments and serving as an advocate (Coleman et al., 2002).

One model of care coordination that has been developed by researchers is the Care Transitions Program. In this program, patients work with “transition coaches” for 30 days after discharge to build their self-management skills. The goals of the program are: 1) Medication self-management: Patients become knowledgeable about medications and have a medication management system; 2) Use of a dynamic patient-centered record: Patients understand and utilize the Personal Health Record (PHR) to facilitate communication and ensure continuity of care plan across providers and settings; 3) Primary care and specialist follow-up: Patients schedule and complete follow-up visits with the primary care physician or specialist physician and are active participants in these interactions; and 4) Knowledge of red flags: Patients are knowledgeable about indications that their conditions are worsening and how to respond (Paasche-Orlow, Schillinger, Greene, & Wagner, 2006).

The program includes a Care Transitions Measure, which is a 15-item measure to assess the quality of care transitions. The measure demonstrated the power to discriminate between: 1) patients discharged from the hospital who did/did not experience a subsequent emergency visit or rehospitalization for their index condition, and 2) health care facilities with differing levels of commitment to care coordination (Kaushal, Shojania, & Bates, 2003).

These types of interventions may be extremely beneficial to those with limited health literacy. Paasche-Orlow et al. (2006) recommend that health systems adopt patient-centered care as a system priority in order to effectively treat patients with limited literacy skills (Chaudhry et al., 2006). Not only will care coordinators assist with navigating the complex health systems, they can also promote self-care for chronic conditions and provide education that is tailored to the patient’s literacy level. The JCAHO also stress patient-centered care, increasing the likelihood that accreditation standards for hospitals and other health care organizations will soon embrace this model of care (The Joint Commission on the Accreditation of Healthcare Organizations, 2008).

### Use of Health Information Technology

Health information technology has developed largely apart from health care practice. Although technologies meant to facilitate more efficient care practices, such as electronic medical records, decision support systems, and computerized patient education tools, have achieved impressive levels of functioning, they have not been widely applied in health care practice.

The fragmented nature of health care has resulted in an extremely inefficient information and records system where patient information is splintered off into various channels. Health information technology is hypothesized to increase efficiency within health systems by offering providers more timely and complete information about their patients, reducing potential treatment errors, eliminating duplication of services, facilitating information sharing across different clinics, improving care coordination, and streamlining administrative tasks.

A review of 257 studies on the impact of health information technology found that it improves efficiencies in health care settings by decreasing physicians' utilization of certain health care services, such as costly radiology and laboratory tests. Most of the studies accomplished this by installing decision support systems for physicians at the point of care. Decision support systems provide computerized advice for physicians regarding drug doses, routes, and frequencies, drug allergy checks, drug-laboratory value checks, and drug-drug interaction checks. They can provide reminders about corollary orders (e.g., prompting the user to order glucose checks after ordering insulin) or drug guidelines (Chaudhry et al., 2006). The decision support systems examined in the review included automated calculation of pretest probability for diagnostic tests, display of previous test results, display of laboratory test costs, and computerized reminders (Kaushal et al., 2003).

Another efficiency-related outcome, provider time spent, had mixed results. Some studies found that health information technologies increased physicians' time related to computer use, but another study on outpatient use of electronic health records from Partners Health Care showed a very slight increase in clinic visit time. Two studies showed slight decreases in nurses' time spent in record keeping that were attributable to the streamlining of workflow. One study examined overall time to delivery of care and found an 11 percent decrease in time to deliver treatment through the use of computerized order entry with alerts to physician pagers (Chaudhry et al., 2006).

Most of the health information technologies examined in Chaudhry's review were implemented at the primary points of care. The authors could find only nine published manuscripts that examined the effect of technologies in health plans. Most of the articles analyzed the effect of implemented electronic record-keeping programs on various utilization outcomes, quality of care measures, and physician productivity. It appears that health information technologies are effective at reducing errors and streamlining procedures, although the evidence is far from definitive. In Kaiser Permanente's Pacific Northwest region, the system was effective in decreasing physicians' utilization of radiology tests in one analysis, but not in another. There was a significant decrease in total office visits per enrollee, and telephone-based care increased at the same time. In another health system that implemented an electronic medical records system, there was no improvement in adherence to established guidelines for depression treatment. Another health system implemented a computerized provider order entry (CPOE) system, which automates the medication ordering process and ensures standardized, legible, and complete orders (Overhage, Evans, & Marchibroda, 2004). The system saw a dramatic decrease in medication errors; transcription errors were entirely eliminated. The average length of stay was decreased by 5 percent, but there was not a corresponding drop in hospitalization costs (Parker, Ratzan, & Lurie, 2003).

Another technology-related intervention that is growing in popularity is Health Information Exchanges (HIEs). These programs are meant to facilitate health care information sharing across hospitals, pharmacists, payers, and other entities within a state, region, or community. The goals of HIEs are to facilitate access to and retrieval of clinical data to provide safer, more timely, efficient, effective, equitable, patient-centered care. HIEs are often organized through Regional Health Information Organizations (RHIOs), which protect patient confidentiality, maintain legality of terms, arrange for the means of electronic exchange of information, and develop and maintain HIE standards (Paasche-Orlow et al., 2006).

It is unclear how these advances will affect those with health literacy. Recent work on understanding health disparities across education groups suggests that technological progress in health care will exacerbate disparities over time and that disparities will be larger for sicker and older patients and more vulnerable groups (Bickmore, Pfeifer, & Paasche-Orlow, 2007). Unless the interface systems are simplified and proven to be useful for both patients with limited literacy skills and their providers, and useful in the care setting, such advances will only benefit patients who possess technological know-how (Rosenthal, Landon, Normand, Frank, & Epstein, 2006). There is some evidence to suggest that technologies that are used for patient education may increase satisfaction and understanding. These “virtual agents” can reduce the stigma for patients with limited literacy skills to ask clarifying questions and receive information at a comfortable pace (Rosenthal, Frank, Li, & Epstein, 2005). They can also produce tailored health information messages for patients, based on reported demographics, level of education, and health concerns.

### Pay for Performance

The current health system operates according to a pay-for-service policy, where hospitals and providers are reimbursed for their service without regard for quality or patient outcomes. Within this system, there are no structural incentives to deliver high-quality health care, and providers may be inclined to order many procedures that may be costly and unnecessary. Many have called for an increase in pay-for-performance programs, whereby providers are reimbursed for their services based on quality and patient outcomes. Although the benefits to quality improvement from this system have been widely discussed, there is also potential for efficiency improvement if cost and resource-saving measures are incorporated into performance outcome.

It appears that pay-for-performance measures are being widely adopted in HMOs; a review of 252 HMOs nationwide revealed that more than half, representing more than 80 percent of persons enrolled, use pay for performance in their provider contracts. Of those plans with pay-for-performance programs, 90 percent had programs for physicians and 38 percent had programs for hospitals. Predictors of pay for performance were geographic region, use of primary care providers (PCPs) as gatekeepers, use of capitation to pay PCPs, and whether the plans themselves received bonuses or penalties according to performance (Paasche-Orlow et al., 2006).

PacifiCare Health Systems, one of the nation’s largest health plans, adopted a pay-for-performance reimbursement schedule in 2003. It offered financial bonuses to 172 California medical groups if they met or exceeded 10 targets for clinical and service quality. An evaluation of the program examined three of these targets: cervical cancer screening, mammography, and hemoglobin A1c testing. The only difference between PacifiCare and a control group was in cervical cancer screening; screening increased by 5.3 percent within five quarters in PacifiCare compared to a 1.7 percent increase in the control health plan. The evaluators speculated that high-performing provider groups did not have to alter their practices dramatically to meet the bonus requirements; nearly 75 percent of the bonuses went to groups whose performance was already at or exceeded baseline. Historically, low-performing groups improved dramatically as well. Although the bonuses did not represent a substantial increase in their reimbursements, their improvement may indicate a response to perceived external pressure to improve.

This system has potential to improve the quality of care for those with low health literacy, but only if performance measures include those that are relevant to health literacy barriers.

Currently, financial and time pressures act as disincentives to some of the basic activities and structures needed to adequately treat patients with limited literacy skills. If pay-for-performance measures incorporate health literacy–related processes, such as reducing rates of discrepancies in medication regimes, promoting patient activation, or establishing collaborative behavioral action plans, they can be valuable tools for addressing the needs of individuals with limited literacy skills.

## **CONCLUSION**

Although inefficiencies are a prominent aspect of contemporary health care, they are not inevitable. Interventions that seek to change the structure and workflow of health plans offer some promising solutions to wasteful resource consumption. Cost control cannot be the only factor when health plans consider how efficiency might be improved; interventions that focus solely on cost reduction can actually harm vulnerable patients, such as those with limited literacy skills. Interventions that incorporate outcomes related to health measures and patient satisfaction need to be considered alongside those that seek to contain costs. Issues that health care patients and HMO members with limited literacy skills face, such as understanding the navigation of HMO systems and physically navigating hospitals and clinics, appropriate use of emergency departments and preventive care, and drug adherence, must be taken into consideration and addressed. Since health literacy is common across multiple groups and we cannot expect to bring every patient to a higher level of health literacy, it is important to consider how health plans can modify their processes to reduce the gap between the patients' health literacy level and the health plans' expectations. One way to do this is to make health processes more transparent and accessible.

Low health literacy appears to lower efficiency within health care systems and can result in duplication of tests, increased use of resources, and increased inpatient costs. (Howard et al., 2005; Barron, 1980).

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## Analysis of Health Literacy data from the California Health Interview Survey

### CHIS ANALYSIS ABSTRACT

**Objective:** *The purpose of the Health Plan Access Project was to investigate the links between health literacy and system efficiency in health plans. The objective of this sub-study was to explore relationships among health literacy and communication variables, socio-demographic factors, health insurance access and health plan membership from California health survey data.*

**Methods:** *As one step in accomplishing this goal, Health Research for Action (HRA) analyzed data from the 2003, 2005, and 2007 California Health Interview Survey (CHIS) to examine relationships between communication and health literacy variables and insurance and/or HMO status and type (e.g., commercial versus public HMOs). We first examined the communication variables "had a hard time understanding the doctor at last visit" and "required assistance from someone to understand the doctor" for 2003 and 2005 in relationship to HMO variables. We then explored access issues as a marker for barriers to care ("usual source of care" and "delays in care or needed treatment" variables). When 2007 CHIS data became available (in 2009), we analyzed new health literacy variables only available in the 2007 data. These included self-reported level of difficulty reading the instructions on prescription labels and difficulty understanding written information received at the doctor's office. We also reanalyzed communication variables in a combined 2003-2005-2007 data set.*

**Findings/Conclusions:** *Data from CHIS demonstrated significant relationships between communication and health literacy variables even after controlling for self-reported English proficiency, education, and income. In addition, there were significant differences in both communication variables and health literacy variables by type of insurance (HMO, non-HMO, and uninsured) as well as by type of HMO (commercial versus public HMO). These differences also persisted after controlling for self-reported English-proficiency, education, and income. While limited English proficiency influences communication and health literacy across all types of insurance, there remains a strong relationship between one's type of insurance and health literacy (uninsured have lower health literacy than all others) and between one's HMO "type" (commercial versus public plan) and health literacy, with public HMO beneficiaries having lower literacy than commercial, but still better than uninsured individuals. This analysis of 2007 CHIS items on health literacy and 2003-2005-2007 variables on communication with physicians provides further evidence that such problems are found in many demographic groups in CA and across persons having diverse insurance products or no insurance. In some cases, the relationships of other system inefficiencies such as delays in seeking care and not having a usual source of care vary by type of HMO (public versus commercial), suggesting that managed care does not fully remove the barriers to access that public HMO beneficiaries face, a finding supported by other studies. We believe the measurement of communication difficulty and health literacy is a useful way of examining differences in access to and efficient use of healthcare.*

### INTRODUCTION

During this part of the OPA Health Plan Access project, we analyzed data from the 2003, 2005, and 2007 California Health Interview Survey (CHIS) to explore health communication and health literacy questions, as outlined below. In Phase One of the analysis, we used a CHIS 2003-2005 merged dataset to explore available items on communication with physicians in relationship to hypothetical health plan inefficiencies (e.g., delay in seeking medical care, lack of usual source of care). There were no health literacy items available in the 2003 or 2005 CHIS

datasets. In February, 2009, we analyzed the 2007 CHIS data health literacy items as they became available and created a merged dataset for years 2003, 2005, and 2007. In Phase Two of the analysis we focused on analyzing the same items used in Phase One (with the additional data added from 2007) and added new analysis of specific health literacy items that were first used in 2007. The results of Phases One and Two are reported here.

#### **OBJECTIVE #1**

*Evaluate provider communication barriers and patients' abilities to understand their providers, by an analysis of CHIS 2003, 2005, and 2007 data. The 2001 CHIS did not have doctor communication questions. This analysis compares findings for HMO enrollees to those with other types of insurance (including public programs), or to those who were uninsured for at least 12 months at time of interview.*

#### **Research Questions**

Are problems communicating with physicians related to insurance type (HMO, non-HMO, or uninsured)? What is the separate contribution of limited English proficiency to communication problems, after controlling for other variables (e.g., demographics, insurance type)?

#### **Primary Outcomes of Interest**

##### **1. Communicating with provider**

We ran this only for people who did the survey in English or who self-reported speaking English "very well."

- Had problems communicating with their providers (due to language or other barriers)
  - Had a hard time understanding doctor at last visit
- Required assistance from someone to understand their doctor
  - Needed someone to help them understand their doctor

##### **2. Access to care**

- Do you have a usual place to go to when you are sick or needing advice? (2003 and 2005 CHIS data)
- Did you delay or not get a prescription in the last 12 months? (2003 and 2007 CHIS data)
- Did you delay or not get needed treatment in the last 12 months? (2003 and 2007 CHIS data)

#### **Comparison Groups**

We compared across groups as follows:

- By insurance type: we compared HMO versus non-HMO versus uninsured
  - Excluded military HMO-type insurance like Veterans and CHAMPUS
- For HMO members: we compared commercial versus public HMO
  - "Public HMO" includes Medi-Cal HMO, Medicare HMO, and Healthy Families HMO.
- English versus non-English speakers (AH37: How well do you speak English?)
  - English speakers were defined as anyone who did the survey in English OR those who reported speaking English "very well."

## Control Variables

After running frequencies and basic tests to examine associations between two variables at a time (bivariate analysis), we then analyzed for relationships while controlling for the following variables:

- Demographics: age, sex, race, ethnicity, and household income
- Educational attainment:
  - Aggregated “no formal education” with completion of grades 1-8 = low education
  - Aggregated “some college,” “vocational school,” “Associate’s degree” = some college
  - Aggregated categories 8, 9, 10 = some graduate school

## ANALYSIS

1. We produced frequencies for each variable of interest (univariate distributions)
  - We assessed for normal distribution (to determine skew and type of test to be used)
2. We created a grid evaluating all possible associations between two variables (bivariate associations) to assess correlations between two variables and determine any potential collinearity between variables (which indicates variables that are so similar that one might only want to use one or the other of the two variables in an analysis).
  - Specifically evaluated the bivariate associations between the outcomes of interest (i.e., communication problems and access to care) with the following variables:
    - (a) Type of insurance (HMO versus non-HMO versus uninsured)
    - (b) Commercial versus public HMOs
    - (c) Language variables (“Speak English only/very well” versus “Speak English less than very well”)
    - (control variables) Other key demographic variables often associated with health literacy (see "control variables" section, above)

## RESULTS

### Demographics

We first examined frequencies (Appendix: Tables 1-3) to describe the data set. In the unweighted sample, about 60% of interviewees were female and 40% male. 67% described themselves as white, about 5% as African American, 9% as Asian and 12% as Latino. About 11% had less than a high school education, while 23% said they had a 12<sup>th</sup> grade education or high school diploma. About 77% were US-born citizens, while 12.7% were naturalized citizens and 10.3% were not citizens of the US. Over 83% of the sample described themselves as speaking English only or “very well,” while nearly 17% noted they spoke English less than very well (includes well, not well, and not at all).

The top languages spoken other than English were Spanish, Korean, Vietnamese, Mandarin and Cantonese. Some caution must be used in interpreting this, as CHIS does not interview in all languages, but this set of languages is similar to the top languages in the state from other surveys of language use (e.g., Department of Education). Of the overall sample, 10.5% reported income

lower than 100% of the federal poverty line (FPL), and an additional 16.3% were in the 100-199% FPL category. In terms of insurance status, 11% in the overall data set said they were currently uninsured. We then broke down the insured as having public or private insurance, based on the type of program they were in, and examined those persons who noted they had an HMO. The HMO plans most often named were Blue Cross (17.2%), Kaiser (14.5%), Blue Shield (6.7%) and Health Net (4.5%).

### **Weighted frequencies for insurance status**

After weighting the data to look like the overall California population (using Census data), frequencies for insurance status were as follows: 16.5% of the population were not insured, 50% were insured through an HMO and 33.5% were covered by a plan that was not an HMO. This demonstrates how high penetration is for HMOs in our state. Within the group that described themselves as having HMO coverage, nearly 71% had commercial coverage, while about 23% had public coverage. A small percent had both (See Appendix: Tables 1-3).

### **Communication with doctor and type of insurance coverage - bivariate associations**

After examining the frequencies of key variables to describe the combined data set, we looked at associations across key variables, first comparing the communication outcomes with different insurance variables. For **communication with the doctor by HMO coverage** we noted that, overall, 4.2% of people said they had a “hard time understanding the doctor” (Table 4). There was a key difference across groups: The uninsured reported more difficulty (6.5%) than either those with HMO coverage (4%) or those with non-HMO coverage (3.4%). This difference was statistically significant ( $p < 0.001$ ). We also examined **communication difficulty by public versus commercial HMO**; 5.9% of those insured by a public HMO reported a hard time understanding their doctor, while only 3.4% of those insured by a commercial HMO reported this ( $p < 0.001$ ). We then looked at this variable in **association with language** (Table 5) and found that communication difficulty was significantly associated with being uninsured, even for those who speak only English ( $p < 0.001$ ). Communication difficulty also varied with type of HMO coverage (public versus commercial), with those insured by public HMO being more likely to report difficulty communicating with their physicians, whether they described themselves as “English only” ( $p < 0.001$ ), “English spoken well” ( $p < 0.04$ ), or “English spoken less than well” ( $p < 0.004$ ). This indicates that English language capacity does not fully explain the communication problems with physicians (See Tables 4-5).

### **Communication with doctor and type of insurance coverage – multivariate model**

We next tested the **association of HMO status with communication with physician while controlling for additional variables** (see control variables above). In this model, we found that communication with physicians was significantly less problematic for people in commercial HMOs, other HMOs and those not in an HMO than for persons in public HMOs or who reported being uninsured (Odds Ratio - .57, .51, and .57 respectively). After controlling for education and household income, those in other HMOs and those not in an HMO were still significantly less likely to have communication problems than those with public HMO coverage. In addition, language use (spoke English less than very well) remained predictive in a final model after controlling for education, income and language status. This tells us that while communication is problematic in many populations, it is associated significantly with people’s educational level, income and language proficiency in English (See Table 6-7).

### **Delays in medical care and insurance coverage**

We also looked at **delays in seeking medical care by HMO coverage** (these items appear only in CHIS 2003 and 2007, and not in CHIS 2005). We noted that 11% of those persons with no insurance, 11.8% of those covered by HMOs, and 13% of those covered by non-HMOs *delayed or did not get a prescribed medication* ( $p < 0.001$ ). On the other hand, 21% of the uninsured, 14.2% of those covered by HMOs, and 14.7% of those covered by non-HMOs *delayed or did not get needed medical care (other than a prescription)* ( $p < 0.001$ ). The fact that these two types of delays in care-seeking were different across groups warrants additional investigation (Table 8).

### **Usual source of care and insurance coverage**

We examined the **usual source of medical care by HMO coverage and HMO type** (these items appear in CHIS 2003 and 2005). Nearly 78% of the sample covered by HMOs reported a *usual source of medical care that was an office or HMO*, while only 70% of those covered by non-HMO insurance reported a usual source of care that was an office, and only 23.4% of the uninsured reported a usual source of care that was an office ( $p < 0.001$ ). Similarly, persons reporting that they were covered by an HMO were the least likely to report *using the emergency department (ED) as their usual source of care* (0.9%). Of those with non-HMO coverage, 1.2% reported using the ED as usual source of care, while 2.2% of the uninsured reported using the ED as a usual source of care ( $p < 0.001$ ). We also examined **usual source of care by public versus commercial HMO types** and found that while 79.7% of those in commercial HMOs reported a *usual source of care that was an office or HMO*, only 68.2% of public HMO users reported a usual source of care that was an office or HMO. Conversely, 1.8% of those in a public HMO reported the *ED was their usual source of care*, while only 0.7% of those in commercial HMOs used the ED as their usual source of care ( $p < 0.001$ ) (Table 9).

There were also significant associations, not unexpectedly, between HMO type (commercial versus public) and education, income, English proficiency and self-reported health status ( $p < 0.001$ ) (see Table 3).

### ***OBJECTIVE #2***

***Explore health literacy of HMO enrollees by an analysis of CHIS 2007 data (no other CHIS year has health literacy questions).***

### **Research Questions**

What is the relationship of the health literacy variables in the 2007 data to the communication problems noted above? Does the relationship differ for HMO versus non-HMO patients?

### **Primary Outcomes of Interest**

Understandability of written materials and prescription labels:

- Prescription Labels: When you read the instructions on a prescription bottle, would you say that it is very easy, somewhat easy, somewhat difficult, or very difficult to understand?
- Written Material: When you get written information at a doctor's office, would you say that it is very easy, somewhat easy, somewhat difficult, or very difficult to understand?

## Comparison Groups

We compared across groups as follows:

- By insurance type: HMO beneficiaries versus non-HMO versus uninsured
- For those who report they are HMO beneficiaries: compare commercial versus public HMO
- English (those surveyed in English or say they speak “very well”) versus non-English speakers (speak English less than very well includes “well,” “not well,” and “not at all”)

## Control Variables

- Demographics: age, sex, race, ethnicity, education, and income

## Analysis

- We first conducted bivariate associations of difficulty with “prescription labels” and “written materials” with different descriptive variables, for each of the comparison groups.
- Multivariate tests were then done for the associations found in the bivariate comparisons, controlling for potential confounding effects of demographics commonly associated with low literacy.

## RESULTS

### Health literacy and insurance status

For the **2007 health literacy variables** we looked at both items that were reported: it is “easy to read instructions on a prescription bottle” and it is “easy to understand written information received from the doctor” **by insurance status**. Of those with *HMO coverage*, 7.1% reported it was somewhat or very difficult to read their **prescription instructions**, while of those with *non-HMO coverage*, only 6.2% reported similar difficulty. However, the number was much larger for the *uninsured* (13.9%,  $p < 0.001$ ). Similarly, those in *public HMOs* were much more likely to report that instructions were somewhat (6.4%) or very difficult (4%) to read, compared with those with *commercial insurance* (4.4% said somewhat difficult and 1.4% said very difficult to read) –  $p < 0.001$ ). Of those interviewed who rated the **written information they got from the doctor**, 7.7% of *uninsured* individuals reported materials were very difficult to understand, while only 3.8% of those with *HMO or non-HMO coverage* reported written materials were very difficult to understand ( $p < 0.001$ ). Similarly those in *commercial HMOs* were less likely to report that materials were very difficult to understand (3.3%) compared with those in *public HMOs* (5.4%) –  $p < 0.001$ .

### Difficulty with Instructions or Information in relationship to Communication variables

In bivariate analyses, those who rated themselves as having a **very difficult time reading their instructions on a prescription bottle** or **understanding the written information from the physician** were also most likely to report having a *hard time understanding the physician* (17.5%, 14.6% respectively) or *needing help understanding the physician* (17.1%, 15.2% respectively). This denotes a strong association between the health literacy items and the communication variables ( $p < .001$  in all cases) (Tables 10-13).

### **Multivariate Models comparing health literacy items to insurance status, HMO type**

We next looked at multivariate models, first for the health literacy variable **“very easy to read instructions on the prescription bottle.”** In Table 14-16, page 34-36, we created models that compare *ease of reading prescription bottle* for those with public HMO, commercial HMO, non-HMO or uninsured. Compared to those with public *HMO coverage*, those with commercial HMO, both or non-HMO coverage were more likely to report that it's “very easy” to read instructions on prescription bottles. Those persons who are *uninsured* were significantly less likely to say it's "very easy.” In model 2, we *controlled for education* and found the significant association between HMO type and insurance type remain. After also *controlling for income* (model 3), the HMO/ease of reading prescription bottle association went away; the only significant association in literacy by insurance in this model is among the uninsured, who are still significantly less likely to say it is “very easy” to read instructions on prescription bottles. After *controlling for English proficiency*, all insurance/ease of reading prescription bottle associations go away. In the final model (model 5), we added *self-reported health status*. In this final model, those persons with more education and higher household income were significantly more like to report it was “very easy” to read instructions on prescription bottles. Those who speak English less than “very well” or who report they are in “fair or poor health” were significantly less likely to say it’s “very easy” to read instructions on prescription bottles.

We also created a multivariate model for **“very easy to read written information from the doctor.”** In Model 1, comparing those with public *HMO insurance*, commercial HMO, both, non-HMO coverage and uninsured, those persons with commercial HMO, non-HMO or both were more likely to report that it’s “very easy” to read the materials than those with public HMO insurance, while the *uninsured* were the least likely to report materials were easy to read. In the next model (Model 2), we *controlled for education* and the association between commercial HMO and non-HMO goes away, while the relationship of uninsured status with saying it is “very easy to read materials” remains significantly lower (OR = 0.61) . In model 3, we *control for both education and income* and an association between non-HMO coverage and understanding written information “very well” reappears in the model, while the relationship of uninsured status with saying it is “very easy to read materials” remains significantly lower. In model 4, we *control for education, income and English proficiency* with similar results to model 3. Finally in Model 5, we control for self-reported health in addition to previous variables. While *uninsured status* remains significantly associated with lower ability to read materials at the doctor’s office (thus it is significant in ALL models), inexplicably commercial HMO insurance now has a significantly lower odds ratio than in other models (OR= 0.88). It is possible that a protective effect of being in a commercial HMO plan ceases any protective effect for people who describe themselves as being in poor or fair health. This association also warrants additional exploration in future research.

### **CONCLUSION**

Whether using communication variables or health literacy variables, there are significant differences in perceptions of provider communication, and reported health literacy, by insurance status. The sets of variables are also highly associated with each other. Controlling for education, income, and English proficiency alters relationships across insurance and HMO type. However, uninsured status remains associated with trouble communicating with physicians and difficulty reading prescription labels or written materials from the physician’s office after controlling for

other socioeconomic variables. While there are differences between public HMO and commercial HMO beneficiaries, these seem to be less than for uninsured status. In some cases, the relationships of other system inefficiencies such as delays in seeking care and not having a usual source of care vary by type of HMO (public versus commercial), suggesting that managed care does not fully remove the barriers to access that public HMO beneficiaries face, a finding supported by other studies. We believe the measurement of communication difficulty and health literacy is a useful way of examining differences in access to healthcare.

## Key Informant Interviews: Summary of Findings

### KEY INFORMANT INTERVIEWS ABSTRACT

**Objective:** Health Research for Action (HRA) completed 31 key informant (KI) interviews with professionals between October 9, 2008 and November 24, 2008. The primary focus of the research was to identify areas where the limited health literacy of health plan members exacerbates inefficiencies in health plans. To accomplish this, KIs were asked to identify: 1) the main system inefficiencies in health plans; 2) the main problems in accessing care for health plan members with limited health literacy; and 3) areas where inefficiencies and limited health literacy intersect. Key informants were also asked to suggest possible interventions to reduce inefficiencies in health plans by addressing the limited health literacy of health plan members.

**Findings:** Key informant interviews with a wide range of experts revealed strong evidence that there is a link between health plan efficiency and consumer health literacy. The interviews revealed many areas where experts believe that addressing health literacy issues can improve the efficiency of health plans. Interventions that have the most potential to reduce health plan inefficiencies include reducing the literacy level of health plan materials, such as written materials sent to members, forms to be filled out, and instructions for self-care and use of equipment and prescriptions. Key informants also recommended providing in-person and telephone support for consumers filling out forms and a variety of interventions to educate patients about how to use the system, including the importance of not missing appointments, alternatives to using the emergency department for non-urgent problems, and getting authorizations for specialist care and prescriptions. Other recommendations were to make care more accessible, by extending clinic hours to nights and weekends, and making urgent care more accessible. Finally, KIs recommended areas where the system could be simplified, such as streamlining authorization processes and giving more power to physicians and pharmacists to bypass authorization processes when necessary.

### INTRODUCTION

Health Research for Action (HRA) completed 31 key informant (KI) interviews with professionals between October 9, 2008 and November 24, 2008. The primary focus of the interviews was to identify areas where the limited health literacy of health plan members exacerbates inefficiencies in health plans. To accomplish this, KIs were asked to identify:

- 1) The main system inefficiencies in health plans;
- 2) The main problems for health plan members with limited health literacy; and
- 3) Areas where inefficiencies and health literacy intersect.

Key informants were also asked to suggest possible interventions to reduce inefficiencies in health plans by addressing the limited health literacy of health plan members.

### METHODS/SAMPLE

HRA conducted key informant interviews with a wide variety of health professionals and providers who are experts in health literacy or system efficiency, representatives of HMO health plans in California, or providers for HMO health plan members in California. Potential KIs were identified through existing literature, advisory group members, and the California Office of the Patient Advocate. HRA created a list of potential KIs and then prioritized them with the goal of interviewing KIs with a wide range of expertise. Seventy-three potential KIs were identified and 52 of those were contacted and invited to participate. Of those 52 KIs, thirteen declined to

participate or did not follow up on the interview, eight did not respond to the invitation, and 31 completed the interview. Trained researchers at HRA conducted the KI interviews over the telephone. The average length of the interviews was 43 minutes. (The minimum time was 20 minutes and the maximum time was 75 minutes.)

In an effort to gather various points of view about health plan system inefficiencies related to health literacy, HRA interviewed 31 KIs who represent the following ten types of organizations:

- Local Initiative Health Plan (LIHP) (8)
- Provider/Medical Center/Federally Qualified Health Center (FQHC) (6)
- State/Government Agency (5)
- Commercial Health Plan (CHP) (4)
- University/Academic (3)
- Adult/Health Literacy Organization (1)
- Health Education Organization (1)
- Health Foundation (1)
- Non-Profit Pharmacy Foundation (1)
- Other Non-Profit/Advocacy Group (1)

The majority (71%) of KIs reported having one or more of the following advanced degrees or certifications that help them with their job:

- Master of Public Health (6)
- Master of Arts (4)
- Master of Science (4)
- Community Health Education Specialist Certificate (3)
- Master of Public Administration (2)
- Medical Doctor (2)
- Case Management Certificate (1)
- Doctor of Education (1)
- Doctor of Pharmacy (1)
- Doctor of Philosophy (1)
- Doctor of Science (1)
- Master of Business Administration (1)
- PhD Candidate (1)
- Registered Nurse (1)

## **FINDINGS**

The 31 key informants were first asked to identify areas where the limited health literacy of patients affects their ability to access the health care they need. The main categories the KIs identified as health literacy problems include:

- Patients' inability to understand health care materials written at a high literacy level.
- Patients' inability to fill out forms correctly because they are too complicated.
- Patients' inability to understand their health care benefits.
- Patients' inability to navigate the health plan or health system.

Key informants were also asked to identify the main areas where health plans experience inefficiencies. The main system inefficiencies the KIs identified include:

- Use of the Emergency Department (ED) for non-urgent problems
- Patient non-compliance with treatment plans and medication regimens
- Missed appointments

- Complicated authorization processes for medications, treatments, and durable medical equipment (DME)

Key informants were then asked to identify areas where the health literacy of members may exacerbate these system inefficiencies. Problems and interventions fell into two broad categories: materials written at too high a literacy level and the difficulty of navigating complicated systems.

### **1. Materials Written at Too High a Literacy Level**

In general, most KIs said that the written materials that health plans give their members are written at too high a literacy level. When patients do not understand these materials, they usually call the health plan, which results in wasted time and resources for health plans.

*“Things are sent out to members that are unclear. The writing is not clear, and this leads to members calling with questions, etc.”*

– Health Educator, LIHP

Written materials that KIs mentioned as especially likely to cause members to call the health plan for additional explanation include

- Billing statements/Explanation of Benefits.
- Letters declining services.
- Evidences of Coverage.

#### **Suggested interventions to reduce the literacy level of written materials from health plans:**

Key informants suggested that health plans should focus on using less jargon and simplifying medical terminology to reduce the literacy level of the written materials they send to members. They specifically said that words such as “network,” “primary care provider,” “co-pays,” and “deductibles” needed to be defined more clearly.

*“We often have to oversimplify when dealing with patients with limited literacy. Something is lost in the process when you simplify things. But that is just something we need to do.”*

– Medical Director, FQHC

Key informants also recommended that it would be more efficient in certain cases to replace letters with phone calls to members. A specific example is the letter sent to notify a member that a service has been denied. One KI suggested that these letters are too vague and result in patients making several phone calls to the health plan for clarification.

*“Patients call the health plan when they get their denial letter to see what to do. Notifying patients by letter is time wasting. It would be easier if a health plan representative called the patient rather than sending a letter since most patients end up calling anyway.”*

– Health Educator, LIHP

#### **The Evidence of Coverage is written at too high a literacy level**

Many KIs said that efficiency is impacted when members do not understand their benefits. For example, when members do not know that they have access to preventative care, they may wait until their illness is very severe before seeing a doctor. This results in higher costs for providers

and health plans. Also, when members do not understand their benefits, they make many phone calls to the health plan, which strains health plan resources.

*“Confusion about benefits creates problems with member relationships that the health plans have to deal with.”*

– Executive Director, LIHP

A primary reason why patients do not understand their benefits is that the information about benefits provided by health plans is not easy to understand. The main culprit is the Evidence of Coverage (EOC), a booklet that is sent to health plan members to explain their benefits and rights within their health plan. Many members who receive an EOC in the mail do not read or refer to it.

*“In most cases [the EOC] is never used by the consumer.”*

– Director of Health Education, CHP

Evidences of Coverage are also inefficient because they are expensive for health plans to print and mail. Health plans have to write and print several versions of EOCs because they offer many different plans and product lines.

*“One big problem is that we print this big, thick EOC and do these massive mailings. Sometimes we make mistakes and mail the wrong EOC to people, then we have to mail again. It’s a huge waste.”*

– Director of Health Education, CHP

Key informants also suggested that members do not read the EOC because it is too long and the information seems overwhelming. Also, when the EOC is mailed, it may not be at a time when a member has a question about benefits, so the information may seem irrelevant.

*“It’s intimidating to get so much information at once, even if it has a glossy cover.”*

– Director of Cultural & Linguistics Services, LIHP

*“Members not only need more information, but they need the information at the point of intersection when they encounter a problem or when they’re deciding what type of plan to choose.”*

– Manager of Cultural & Linguistic Services, CHP

When patients do try to read their EOC they may not understand it. As a result, they call the health plan directly for clarification.

*“More than likely they will only review [the EOC]. If they need more information they will call the health plan. Now, this is a burden for health plans because they spend more money and time on the phone.”*

– Director of Health Promotion, LIHP

*“People don’t understand [the EOC]. This wastes time on the phone explaining to members the differences and the benefits that are covered.”*

– Manager of Cultural & Linguistic Services, CHP

An EOC is very difficult to write at a lower literacy level because health plans are required to cover detailed medical information. In addition, legislation dictates the language used in the EOC and, for those on Medi-Cal, the Department of Health Care Services (DHCS) regulates the language.<sup>1</sup>

*“There is a lot of regulation around how these things like EOCs have to be written. There is this tension between being comprehensive and making it easy to understand.”*

– Program Officer, Health Foundation

*“It’s difficult because DHCS provides language we’re forced to use.”*

– Director Cultural & Linguistic Services, CHP

### **Suggested interventions to improve the EOC and improve efficiency:**

- Write the EOC at a lower reading level.
- Work with regulatory agencies to change the required language for EOCs.
- Send members a summary EOC that they are more likely to read.
- Provide the full EOC online or by request only.
- Create an online EOC that allows for an interactive question-and-answer format.
- Provide monetary incentives for members to read their EOC.

### **Difficulty filling out forms that are at too high a reading level**

Of the 31 KIs, 24 (77.4%) believe that medical form errors affect the efficiency of health plans; only one KI said that medical form errors do not affect the efficiency of health plans. The main reason why consumers have difficulty filling out medical forms is because the design and language are too complicated for many consumers, especially those with limited health literacy. Key informants specifically mentioned these medical forms as being troublesome for consumers:

- Medical History Forms (9)
- Health Plan Enrollment Forms (8)
- Informed Consent Forms (3)
- Staying Healthy Assessment Tool<sup>2</sup> (2)
- Advanced Directive Forms (1)
- Disability Forms (1)
- Federal Forms (i.e., social security forms) (1)
- Medi-Cal Applications (1)
- Medi-Cal Declaration Forms<sup>3</sup> (1)
- Power of Attorney Forms (1)
- Primary Care Provider Forms (1)

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<sup>1</sup> HRA recently worked with California’s DMHC to create an EOC template for California’s HMOs that is easier to read and understand. This template, along with instructions for usage, are posted on the DMHC website.

<sup>2</sup> The Staying Healthy Assessment Tool is an instrument used by physicians to assess patients’ behavioral health.

<sup>3</sup> Medical declaration forms are legal documents that are completed prior to taking part in a particular risky behavior. For example, this form may be required by a school before allowing a student to participate in sports. This form notifies the institution of any pre-existing medical conditions. In most cases, a PCP’s signature is required on a medical declaration form.

There are many reasons why errors in filling out medical forms cause inefficiencies in health plans. If there is an error or a field left blank, the health plan may have to send the forms back and/or make telephone calls to the member, leading to an inefficient use of the health plan's and the member's time.

*"The forms have to be reviewed, sent back, etc., and this is costly and uses a lot of resources. Most forms are returned to the original person who filled it out because there is information missing from them. There is language on the forms that people do not understand (such as the word "spouse"). There is not enough room to write everything. There are long lists of copy without any section breaks."*

– Executive Director, Health Literacy Organization

An **enrollment form** error can also delay a person's access to care, so they are less healthy when they finally get to a doctor or medical provider.

*"Their being able to fill out the enrollment forms to begin with is an issue because they can't get in the door 'til they fill that out."*

– Medical Director, LIHP

An error in a **health history form** can also cause the health plan to deny care that is necessary or result in diagnosis errors, unnecessary tests, and/or prescribing of incorrect medications. All of these issues can cause delays in care or exacerbate a preventable illness.

*"There is a trickle-down effect. The errors may lead to incorrect diagnoses, or the doctors may prescribe medications that might be contraindicated."*

– Health Education Department, LIHP

*"If patients do not fill out the medical history accurately, the doctor may not have an accurate understanding of their problems, leading to inaccurate diagnoses and/or treatments. This affects the health plan because it has to pay for unnecessary things."*

– DHCS Representative

One KI also identified the **form to choose a primary care provider (PCP)** as particularly problematic. Health plan members are typically asked to fill out this form to choose their PCP. When members do not understand the form, they may inadvertently sign up for a PCP other than the one they want or may not sign up for one at all. Many patients in this situation end up getting assigned to a PCP who they may not be aware of, resulting in patients trying to go to the wrong doctor. When this happens, health plans must make many phone calls to get the member to the right doctor.

*"Members go to other PCPs than the one that they are assigned. The process of choosing a PCP and knowing whom your PCP is may be too complicated."*

– Health Educator, LIHP

#### **Recommended interventions to alleviate problems filling out forms:**

- Provide telephone support to people filling out forms.
- Provide in-person assistance in waiting rooms for people filling out forms.

- Increase communication between providers and health plans so that patients do not have to fill out as many redundant forms.
- Simplify forms to have lower literacy levels, less jargon, and less information.
- Design forms so they are easier to read (i.e., with bigger font size and more white space).
- Standardize forms across providers and health plans.

### **Medical instructions are too difficult to understand**

Of the 31 KIs interviewed, 25 (80.6%) believe that consumers' ability to understand medical instructions affects the efficiency of health plans. Only two KIs said consumers' ability to understand medical instructions does not affect the efficiency of health plans. When patients do not understand their medical instructions, there are three main consequences that affect efficiency:

*“Any written instructions that people can't understand will affect the efficiency of the health plan in many ways. One, the client isn't going to do what they're supposed to do, which could result in more cost for the health plan. Two, the client will call the health plan more often, which wastes time and energy of the health plan staff and resources. And three, the client will carry out the wrong instructions, which could result in more costs for the health plan if the client gets sicker as a result of doing the wrong thing.”*

– Senior Editor, Health Education Organization

The main medical instructions that are problematic for patients are

- Discharge instructions.
- Self-care/nutrition/chronic disease management instructions.
- Durable medical equipment (DME) instructions.
- Pharmacy instructions.

**Discharge instructions** that patients get after a hospitalization are particularly problematic. Patients and caregivers often do not understand discharge instructions, or they may be too overwhelmed or sick at the time of discharge to pay attention. Key informants felt this lack of effective communication of discharge instructions results in both preventable readmissions and emergency department visits.

*“If patients don't understand discharge papers and they're supposed to follow-up with their PCP five days later and they don't, they could end up back in the ER again, which can be more costly for the plan.”*

– Manager of Cultural & Linguistic Services, CHP

Key informants also identified trouble understanding **prescription instructions** as another major problem that affects health plan efficiency.

*“When patients can't understand instructions, it leads to improper use of medications and affects care. The treatment plan will not be followed correctly and this leads to more time spent fixing problems, which is more costly for the health plan.”*

– Communications Specialist, LIHP

*“It’s a huge [waste]—people are filling prescriptions and not using them appropriately OR they are not filling them at all, which causes problems.”*

– Health Promotion Educator, Medical Center

**Durable medical equipment** instructions are often difficult to understand or the equipment is delivered without instructions. As a result, the equipment may not be used, which is an inefficient use of health plan resources. Additionally, the equipment might be used incorrectly, which may cause injury to the patient and result in more costs for the health plan.

**Suggested health plan interventions to address medical instructions:**

- Follow up with patients after discharge.
- Train providers to use the teach-back method to make sure patients understand instructions before leaving the hospital or clinic.
- Simplify instructions by using simple and direct language.
- Use audio or video/DVD formats for instructions.

**Suggested health plan interventions for making prescription instructions more understandable:**

- Provide information about prescription medication at a lower literacy level.
- Mandate simpler prescription drug labels.
- Provide prescription refill reminders.
- Provide incentives to pharmacists to do more patient education about prescription adherence.

## **2. Difficulty Navigating Complicated Systems**

According to the KIs, most patients have trouble navigating the complicated medical system. A main problem is access to care -- when patients do not understand the system and do not know what their benefits are, they have greater barriers to accessing care. Key informants identified the following areas as particularly problematic for patients trying to understand how to access care:

- Knowing how to choose a PCP
- Knowing who their PCP is
- Knowing that they have to go to the PCP for authorization before they can see certain specialists
- Knowing about the availability of urgent care
- Knowing who to call and what problems require a doctor’s visit
- Knowing how to get a second opinion
- Knowing how to find providers who participate in their health plan

### **Authorizations and denials for medications, treatments, and DME**

Key informants said the process for getting authorizations for medications, treatments, and DME is a major barrier to system efficiency for health plans. Health plans spend a great deal of time reviewing treatments, medications, and equipment requests and making decisions about whether to authorize and pay for these services.

Since obtaining authorization requires some knowledge of how the system works and some ability to fill out forms and read letters, the process can be more difficult when the member has limited health literacy.

*“Patients get lost in the process of specialist requests.”*

– Director of Health Education and Cultural & Linguistic Services, CHP

Waiting for authorizations causes inefficiencies for the providers’ offices as well. Often, providers are not able to give the patient all the treatments or tests they need in one appointment and must ask the patient to come back after they have received authorization. This is an inefficient use of provider time. It is a problem especially at clinics that serve vulnerable populations with poorer access to health care.

*“[Vulnerable patients] have a high no-show rate and so [providers] want to give the patient everything when the patient is at the clinic. They can’t wait. So for example, they can’t give the patient the injection right there when they are in the clinic. They have to ask the patient to come back in three days when they get approval from their plan. This is not efficient and often times they lose the patient.”*

– Clinic Manager, Provider/Medical Center

Other problems with the authorization process include:

- Reviewing treatments and bills takes a significant amount of time for the health plans.
- Patients do not know who authorizes what service (i.e., the HMO, the medical group, or the provider).
- Providers have numerous restrictions on what they can order.

Another area that causes a great deal of confusion for patients and waste for health plans is **prescription drug authorizations**. Providers often prescribe drugs or dosages that are not covered by the health plan, leaving the patient and pharmacist to figure out how to get the drug authorized.

*“So much of the pharmacists’ time is wasted by dealing with insurance, getting medications authorized, and having to deal with doctors if a prescription was changed. This takes away time that the pharmacist should spend with patients educating them about their medications.”*

– CEO, Non-Profit Pharmacy Foundation

Also, many patients are dissatisfied with generic drugs and request authorizations for brand name drugs.

*“Lots of people have the feeling that the health plan is misleading them and trying to skimp on their care, so they don’t trust the generics.”*

– Director of Market and Policy Monitor Program, Health Foundation

**Suggested interventions for streamlining the authorization process:**

- Educate patients about the authorization process.

- Give physicians who are approved by the health plan more power to provide treatments without going through the authorization process.
- Educate patients so they understand that generics are just as good as brand name drugs.
- Promote e-prescribing, where prescriptions are authorized online by the health plan before going to the pharmacy.
- Give the pharmacist the power to change the dosage or medication to the one covered by the health plan without going back to the doctor.
- Streamline billing and authorizations so the pharmacist has more time to educate patients.

### **Missed appointments**

While KIs believed that missed appointments cause inefficiency in the health system, they had mixed feelings about whether missed appointments cause inefficiencies at the health plan level.

Of the 31 KIs, seven (22.6%) said that missed appointments do not affect the efficiency of health plans. Most of these said that missed appointments were more likely to affect only the efficiency of the provider's office.

*“Missed appointments are an efficiency issue of the provider’s office. Missed appointments are not a huge financial issue for health plans.”*

– Health Educator, LIHP

On the other hand, 20 KIs (64.5%) said that missed appointments do affect the efficiency of health plans because they result in fewer available appointments and poorly used resources.

*“Each missed appointment represents an appointment that is no longer available to another patient/member. This means that resources are not well used within the plan.”*

– Director of Language Services, Medical Center

Also, providers refuse to continue seeing patients after they repeatedly miss appointments. This creates work for the health plan finding a new provider for the patient.

*“Providers don’t want to see people who miss appointments, so when the providers refuse to see them, this forces the health plan to seek out other providers. This requires more time to be spent from the health plan trying to contract with other providers and also wastes more time from the case management department to make calls to patients who miss their appointments.”*

– Case Manager, CHP

Other KIs said that missed appointments affect the health plan when the missed appointment causes the patient's condition to become exacerbated and more expensive to treat.

*“If patients miss appointments, there’s no immediate cost difference to the health plan because we pay a flat fee every month to the providers, so if the patient doesn’t show up, the provider still gets paid. Missed appointments only affect the costs of the health plan if something wasn’t treated or diagnosed early that could have been prevented at the doctor’s appointment.”*

– Manager of Cultural & Linguistic Services, CHP

Fourteen (45.2%) KIs believe that consumers with limited health literacy are more likely to miss appointments than consumers with higher health literacy skills. However, six (19.4%) believe

that consumers with limited health literacy are not more likely to miss appointments; nine (29.0%) were not sure.

When asked why patients miss appointments, KIs gave a wide variety of reasons, including:

- Consumers do not understand the importance of making appointments or canceling appointments they can't come to.
- Clinic hours are not convenient for people; there is a lack of evening appointments.
- There is a lack of transportation to the clinic.
- Consumers have difficulty using the telephone system to cancel appointments.

**Suggested interventions to reduce missed appointments:**

- Work with providers' offices to help them create more drop-in appointments.
- Work with providers' offices to offer extended office hours to make appointment times more convenient for patients.
- Require providers to give appointment reminders.
- Educate patients, via newsletter and direct provider communication, about the importance of canceling appointments they can't come to.
- Charge patients for missed appointments.
- Offer patients financial or other incentives for keeping appointments.

**Use of the Emergency Department (ED) for non-urgent problems**

Of the 31 KIs, 27 (87.1%) believe that use of the ED for non-urgent problems affects the efficiency of health plans. Only one KI said that use of the ED for non-urgent problems does not affect efficiency.

Key informants said that there are many reasons why frequent ED use for non-urgent problems was a problem for health plans. First, ED care is more expensive and health plans end up paying more.

*“ER use is going up, not among the uninsured, but among the insured. So this is a cost issue for the health plans. It costs the health plan more money.”*

– Program Officer, Health Foundation

Using the ED for non-urgent problems also affects system efficiency because it interrupts continuity of care.

*“ER use creates a break in the continuity of care. That is where they get medications that aren't compatible with their current medications. That is where they get treatments that their PCP never finds out about.”*

– Medical Director, FQHC

Emergency Department use for non-urgent problems is also inefficient because it delays treatment for people with real emergencies and creates more paperwork for the health plan.

Key informants gave a wide variety of reasons why patients go to the ED for non-urgent problems:

- Patients do not understand how the health system works; they do not know the difference between emergency care, urgent care, and regular clinic appointments.

- Patients cannot get same-day appointments with their PCP.
- There are long wait times for PCP appointments.
- Patients lack access to urgent care.
- Patients cannot get to the PCP during working hours, and there is a lack of after-hours clinic appointments.
- Patients have a perception that they get better care in the ED and that their PCP gives poor care.

Some KIs pointed out why certain vulnerable groups are more likely to use the ED. First, patients with limited health literacy are more likely to go to the ED because they do not know the difference between the ED and their PCP. Also, they may be less likely to read materials encouraging them not to use the ED inappropriately. One KI also said that the ED is easier for people with limited literacy to find, because there are universal hospital symbols and lettering that guide people to the ED.

*“It’s easy to find an emergency room. They are usually marked on streets/outside the hospital in big red letters that are somewhat standardized. It’s not so easy to find an urgent care clinic, and people don’t necessarily know what it is, even if they do see one. Also, if they cannot read well, they may not recognize the words “urgent care,” whereas “emergency” is a word that most people recognize (it’s a “site word”).”*

– Executive Director, Health Literacy Organization

One KI said that people on Medi-Cal might be more likely to use the ED because they feel discriminated against at their PCPs office. Finally, people who are illegal immigrants are more likely to use the ED because they feel they are less likely to be detected by authorities.

#### **Suggested interventions to address inappropriate emergency department use:**

- Encourage patients to call an advice nurse line instead of going to the ED.
- Extend clinic hours to include nights and weekends.
- Implement financial deterrents such as charging members more for ER visits and less for PCP visits.
- Route patients who come with non-urgent problems directly to a non-urgent clinic.
- Call patients who were seen in the ED to remind them to follow up with their PCP.
- Use the following to educate patients about when it is appropriate to use your PCP and advice nurse instead of the ED:
  - Community classes
  - Mass media campaigns, PSAs
  - Direct communication through the PCP
  - E-mails and text messages
  - Case management or intervention by member services for frequent ER users
  - Targeted information for frequent ER users about “Before you go to the ED, here are some things you can do.”
  - Newsletters and manuals
  - Postcards

#### **CONCLUSION**

Interviews with key informants with a wide range of expertise revealed strong evidence that there is a link between health plan efficiency and consumer health literacy. There are many areas

where experts believe that addressing health literacy issues can improve the efficiency of health plans. These include reducing the literacy level of health plan materials, such as written materials sent to members; forms to be filled out; and instructions for self-care, equipment, and prescriptions. Key informants also recommended providing in-person and telephone support for consumers filling out forms. And they recommended a variety of interventions to educate patients how best to use the system, including education about the importance of not missing appointments, alternatives to using the ED for non-urgent problems, and getting authorizations for specialist care and prescriptions. Other recommendations were to make care more accessible by extending clinic hours to nights and weekends and making urgent care more accessible. Finally, KIs identified areas where the system could be simplified, including streamlining the authorization processes and giving more power to physicians and pharmacists to bypass authorization when necessary. Implementing interventions to simultaneously address health literacy and system efficiencies may result in positive benefits for both health plans and health plan members.

## Focus Group Analysis: Summary of Findings

### FOCUS GROUP ABSTRACT

**Objective:** *The purpose of the Health Plan Access Project was to investigate the links between health literacy and system efficiency in health plans. As one step in accomplishing this goal, Health Research for Action (HRA) completed a total of 12 focus groups with 114 commercial and Medi-Cal HMO members. The purpose of the focus groups was to elicit HMO members' feedback regarding their experiences navigating their HMO and their recommendations for making their HMO easier to use. Participants were also tested to determine their health literacy level. We then explored the extent to which health literacy was a factor in health plan navigation. The topics discussed in the focus groups emerged from earlier key informant interviews with HMO representatives. **Findings:** Data from the focus groups revealed areas in which the health literacy of members and the complexity of the system impacted members' ability to navigate the system. Some of the main areas that focus group participants identified as particularly difficult to navigate/understand included: understanding benefits, Evidence of Coverage, customer service telephone line, website/internet, written communication from the health plan, choosing a primary care provider/using the provider directory, authorizations, referrals and denials, and filing a grievance. Participants made suggestions for how the health plan could simplify the process to make these areas easier for them to navigate or understand. These focus group themes were later presented to the advisory group and were explored as to how they may impact the efficiency of the health plan. Potential interventions to make these areas easier to understand for members with limited literacy were also explored.*

### INTRODUCTION

Health Research for Action (HRA) conducted a total of 12 focus groups with commercial and Medi-Cal HMO members. A total of 114 HMO members participated in the focus groups, which were designed to build on the key informant interview findings (see KI report). The goal was to elicit HMO members' feedback regarding their experiences with their HMO on the topics that had been identified by key informants as potential areas where health literacy and system efficiencies intersect. These areas included understanding benefits, choosing/switching primary care providers, authorizations, denials, referrals to specialist, complaints/grievance process, and contacting the health plan by phone.

### METHODS/SAMPLE

Six of the 12 focus groups were with Medi-Cal HMO members; the other six were with commercial HMO members. To recruit participants, one project partner health plan mailed out 6,000 recruitment letters (3,000 to commercial and 3,000 to Medi-Cal members).

Of the 3,000 letters mailed to the commercial members, 231 were returned as undeliverable. Of the remaining 2,769 letters, 141 members responded to the letter (5.1% response rate). The response rate for the Medi-Cal members was slightly higher. Of the 3,000 letters mailed to the Medi-Cal members, 345 were returned as undeliverable. Of the remaining 2,655 letters, 227 members responded to the letter (8.6% response rate).

**The overall sample of focus group participants included 114 HMO members from the same health plan; 52 were commercial and 62 were Medi-Cal members.**

- 75 (65.8%) were female.
- The mean age was 41.7 with a range from 18 to 70 years old.

- 54 (47.4%) were white, 26 (22.8%) were black/African American, and 17 (14.9%) had a Latino/Hispanic ethnic background.
- 37 (32.5%) were married.
- Household income ranged from below \$20,000 to more than \$70,001.
- 64 (56.2%) had at least some college (trade school, junior college, university, or post-graduate school).
- Half (50.9%) reported that their health was either excellent or very good. The other half reported that their health was good, fair, or poor.

**There were some differences between the commercial and Medi-Cal participants.**

- Commercial participants had higher educational attainment. All of them reporting having a high school diploma (or equivalent) or higher. Of the Medi-Cal participants, 14 (22.6%) completed 11<sup>th</sup> grade or below.
- Commercial participants had a higher annual household income than Medi-Cal participants. Thirty-seven (71.1%) commercial participants had an income of more than \$50,001 and 42 (67.7%) Medi-Cal participants had an income of less than \$20,000. None of the Medi-Cal participants had an income above \$40,001.
- More commercial participants reported being in excellent or very good health compared to Medi-Cal participants (33 = 63.5% and 25 = 40.3% respectively).
- Commercial participants were members of this particular health plan longer than the Medi-Cal participants (mean of 9.6 years and 4.9 years respectively).

**Health Literacy**

Participants were assessed for literacy, health literacy, and numeracy using the questions from the National Assessment of Adult Literacy (NAAL) and the Short Test of Functional Health Literacy in Adults (S-TOFHLA).

- **Literacy:** 41 (78.9%) commercial participants and 32 (51.6%) Medi-Cal participants reported that they read newspapers or magazines either a few times a week or everyday.
- **Numeracy:** Three (5.9%) commercial and nine (14.5%) Medi-Cal participants said they need either some or a lot of help doing basic arithmetic, such as, adding, subtracting, or multiplying.
- **Health literacy:** The majority of participants in each group reported that written information from their doctor’s office was reported as being either very easy or somewhat easy to understand. All of the commercial participants who completed the S-TOFHLA scored as being high health literacy: The mean score was 97.2 (SD=3.5), with a range of 87–100. Among the Medi-Cal participants, five (8.1%) scored as being low health literacy and 57 (91.1%) scored as being high health literacy—The mean score was 94 (SD=10.3), with a range of 34–100.

**FINDINGS**

Before the focus groups began, participants were administered a one-on-one survey. The following results show both the quantitative responses participants gave in the survey and the themes that emerged from the focus group discussions.

**1. Understanding your benefits**

Feedback from key informant interviews and the advisory group suggested that members’ understanding of their benefits was a possible area where limited health literacy impacts the efficiency of the health plan. Primarily, the issue is that when consumers do not know what is covered, their confusion results in calls to the health plan for help. The primary ways that health plans communicate benefit information to

members include: 1) The paper Evidence of Coverage (EOC) booklet that is sent out annually; 2) The online mechanism that allows members to log-in and read about their benefits; and 3) The consumer relations number that members can call to ask questions about their benefits.

**In the focus group survey, participants were asked to report specifically if they had looked up benefits in the past, and if so, where they looked up the information.**

- More commercial participants reported ever looking up what their health plan covers regarding their benefits: 41 (78.8%) commercial and 23 (37.1%) Medi-Cal participants said they have looked up what is covered and what is not covered.
- 23 (56.1%) commercial and 16 (69.6%) Medi-Cal participants looked up benefits in the Evidence of Coverage booklet.
- Eight (19.5%) commercial and one (4.3%) Medi-Cal participant said they looked online.
- Eight (19.5%) commercial and three (13.0%) Medi-Cal participants looked up benefits in the EOC and online.
- Two (4.9%) commercial and two (8.7%) Medi-Cal participants said they got the information from another source.
- One Medi-Cal participant did not respond to this question.

**In the focus group discussion, participants were asked whether they understood their benefits information.**

- 18 commercial participants said that their benefits were clear and they felt confident they understood what was covered by their health plan; no Medi-Cal participants made that same claim.
- There were 12 instances in which both commercial and Medi-Cal participants reported that the benefits information they had was not clear.
- There were four instances in the focus groups where participants described that they received a treatment but were unaware that it was not covered (two commercial, two Medi-Cal), clearly reflecting that they did not understand their benefits.

**Participants identified the following procedures that were unexpectedly denied:**

- Genetic testing
- Physical therapy
- Circumcision
- Out of town urgent care

In each of these instances, the participants were unaware that their health plan did not cover the care and in each instance the participants fought the charges by making phone calls to the health plan.

**Other ways of learning about benefits:** While the EOC, the call center, and the website were the primary ways that participants learned about their benefits, participants also cited other ways they learned about their benefits, including:

- Health fairs for federal employees.
- Health plan's seminar about Medicare.
- Home visit from the health plan about Medicare.
- Employer benefits office.
- Pharmacy.
- Doctor.
- Summary of benefits from Medi-Cal/social security office.
- Flyer/newsletter from the health plan.

- Chart showing when to get different exams and tests.

**The most common areas of confusion about benefits was prescription drug benefits:**

- Information about how to get prescriptions online was not clear and did not give enough information.
- Participants liked getting information informing them about changes to the drug formulary.
- Some participants did not remember ever receiving information about changes to the drug formulary.

***Participants’ recommendations for making it easier to understand the drug formulary:***

- Categorize the formulary list by what conditions the drug treats.
- Include the generic name on the drug formulary.
- When the formulary is changed, send members a list of what is being changed.
- Send members information if they are changing any drugs that they have been prescribed in the past.
- Send changes months ahead of time so members have time to get to the doctor and get different drugs.

**2. Evidence of Coverage**

Key informants and the advisory group identified the Evidence of Coverage (EOC) as potentially problematic for people with limited health literacy. The EOC is also one of the primary ways that members learn about their benefits. Focus group participants were asked specifically about the EOC that they receive in the mail: Do they read it? Do they understand it? What would make it easier to understand?

**Do members read their EOC?**

- The majority of focus group participants said that they do not read or use their EOC.
- Some participants (nine commercial and one Medi-Cal) did not remember receiving an EOC.
- Commercial participants were more likely to have referred to the EOC (20 commercial and three Medi-Cal).
- Of the participants who had referred to the EOC, many thought it was quite understandable.
- Most had just glanced through the EOC or looked up something very specific when they had a health problem.
- Some participants said that they do not look at the EOC when it comes in the mail and that they throw it away.

*“No, I have never used it. I may or may not have gotten it and if I did get it, then I just put it somewhere and then that’s my fault.”*

– 55-year-old African-American male, Medi-Cal member

*“I want to just cut to the chase. I want somebody to answer my question and I don’t want a booklet—I got it in the mail the other day again and I just recycled it.”*

– 46-year-old white female, commercial member

- Most participants who did not read the EOC explained that it was too large or daunting to read.

***Participants' recommendations for making the EOC easier to understand:***

- Have a summary EOC.
- Make the EOC easier to read.
- Increase the font size.
- Put the EOC on a DVD.
- Have individualized EOCs, with providers in your areas and a customized list of medications.
- Inform doctors about your benefits and then they should let you know about your benefits in person.
- Have a section in the EOC for frequently asked questions.

**3. Customer Service Telephone Line**

Key informants and the advisory group proposed using the health plan customer service telephone lines to promote system efficiency and health literacy simultaneously. They also noted that telephone lines are potential areas of inefficiency if trouble understanding benefits results in multiple calls when one call would have been sufficient. The issues that were explored in the focus groups were whether members know when to call the customer service line and how their interactions with that service have been.

**In the focus group survey, quantitative data were collected about participants' history of calling the health plan.**

- The number of times participants called their health plan within the past year for any reason was about the same for commercial and Medi-Cal participants.
- Overall, the mean number of times participants called their health plan for any reason was 2.6 times (SD=5.0), with a minimum of zero times and a maximum of 35 times.
- About 60% of participants reported calling their health plan at least one time in the past year to solve a problem. The numbers were about the same for commercial and Medi-Cal participants.

**In the focus group discussions, participants gave reasons for calling their health plan.**

- The most common reason for calling the health plan was to get clarification about benefits.
- Participants said that they often called their health plan because they just did not trust that the EOC or website was up to date.

*"...I just look up online and then if it's not there.... I have to call anyway... And they usually tell me the answer, but it never seems to stop there. I mean, (you got) to go back and forth."*

– 31-year-old white female, commercial member

- Other common reasons for calling the health plan included switching doctors, inquiring about unexpected medical bills, getting a referral, and trying to get a medication that is not on the formulary.

**Satisfaction with health plan telephone support:** Participants had both positive and negative things to say about their experiences calling their health plan's customer service line.

**Positive experiences with the call center included:**

- Many participants in both commercial and Medi-Cal plans said the customer service representatives themselves were very helpful.

*“I mean, I’ve had them answer right away and, and I’ve gotten people that were very helpful.”*  
– Assistant to 52-year-old African-American male, Medi-Cal member

*“I had to make several calls on behalf of my mother and I just felt that the people who were in customer service are very helpful... they (tried) really hard to explain things and make suggestions, so I’ve been pretty satisfied with customer service by phone.”*  
– 54-year-old white female, commercial member

*“In the experience I’ve had, the other person on the line has been very sympathetic and very compassionate and very assuring that, ‘Okay, we’re going to get this problem solved. This is, this is how it’s going to go -- step one, two, three.’ And you know, when you get off the phone, you actually feel a lot better.”*  
– 31-year-old white female, commercial member

- Many participants said that their health plan call center was more efficient than other health plan call centers they have had experiences with.
- Participants were most likely to report positive experiences when they called their health plan to ask questions about benefits, to change doctors, and to add new members to their plan.

#### **Negative experiences with the call center included:**

- Participants were most likely to report negative experiences when they were calling to contest bills.
- Participants reported being put in the position of making several phone calls between both their health plan and their provider.

*“(When my hospital bed) had to be reauthorized... the company that delivered it called me and so I had to call my doctor and... well, we sent the paperwork in. I had to call [the health plan]. So, I was calling back and forth, each saying, well, we did that. Call your doctor back. Called my doctor. Well, I did that. Call [the health plan]. And... I’m the one in the middle of it. And I’m, and I’m saying to them, why don’t you guys call each other and not call me?”*  
– 42-year-old African American male, Medi-Cal member

- Medi-Cal participants reported sometimes having to make calls between their health plan, their provider, and Medi-Cal.

*“It’s impossible. You know? I spend a lot of my time at work on the phone making calls back and forth between his doctors, between [the health plan], Medi-Cal. I mean, seriously. No one has that kind of time.”*

– Assistant to 52-year-old African-American male, Medi-Cal member

#### **Additional negative experiences with the call center reported by participants:**

- Being transferred to multiple people (up to 6 transfers reported)
- Waiting on hold (up to 25 minutes reported)
- Having someone say they are putting notes in the computer, but when they transfer you, there are no notes for the new person
- Getting hung up on

- Having to use automated systems that do not get you where you need to go
- Needing to call multiple times
- Being told that you have to call the doctor instead
- Saying they will call back, but they do not call back

***Participants’ recommendations for improving the call center:***

- Keep the customer service line open 24 hours a day, 7 days a week.
- Make it easier for representatives to look up your last calls and require them to make notes in your file.
- Have the representatives call the provider instead of asking the member to call the provider.
- Email members a summary of the conversation/notes/transcripts after each call.
- Make it clearer when to call your health plan vs. when to call Medi-Cal.
- Train call representative to be more reassuring and say things like “Don’t worry, we are going to get this taken care of.”
- Make customer service representatives accountable when they say they will do something.
- Use American representatives who know the US health care system—do not contract overseas.
- Allow for live Internet chat instead of calling.
- Allow members to go online and request a representative to call you.

**Call center inefficiencies:**

One of the main areas of inefficiencies this research identified is that people call the call center and do not get their question answered. It is especially inefficient when the health plan asks the member to call their provider’s office. It would be more efficient for the health plan to call the provider’s office, thus reducing the total number of calls made.

Another inefficiency is that the call representatives do not take notes. This leaves the health plan member having to explain to every new representative what the problem is. A solution would be to send notes of the call or call transcripts to members or improve the process for taking notes.

**4. Website/Internet use**

Many KIs recommended encouraging members to use the Internet wherever possible to help improve efficiency. Participants in the focus groups talked about using the Internet both for understanding their benefits and for managing their benefits. It was clear from the discussion that many Medi-Cal and commercial members used the Internet regularly.

In the focus group discussion, participants were asked about their awareness of their health plan’s website, their satisfaction with and use of the website, and recommendations for improving the website.

**Awareness of health plan website:**

- Some participants said that they were not aware their health plan had a website.
- More Medi-Cal members were unaware of the website than commercial members.<sup>4</sup>
- Several participants who were unaware of the website said that now that they knew, they are interested in going online.

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<sup>4</sup> This is most likely due to the fact that at the time of the focus groups, this health plan’s website for Medi-Cal members was not yet live.

*“I didn’t know they had a website. I’m going (to look now after I leave here and go look).”*  
– 19-year-old African-American male, Medi-Cal member

**Satisfaction with health plan website:**

- Most participants (primarily commercial members) who had used the website reported that it was easy to use.
- One member said she liked how the EOC booklet explained how to go online:

*“When I got my booklet in the mail, it had step by step how to go online and register all your information. And so when you do pull it up, it does have the current rates of whatever it is... So, and I don’t know if that’s something new, but it, I found that very helpful.”*

– 24-year-old Asian female, commercial member

**Reasons for using health plan website:**

- Many participants preferred the website because they felt it was more up to date than the printed EOC.
- One Medi-Cal participant explained that she preferred to go online because she felt that it was a direct way to get information without being “bounced around” from person to person.

*“I would rather go on the Net than call because I don’t like being put on hold and bounced from office to office. So, I would rather not even try that with the big, humongous medical service system. I’d rather just look on the Net and see what’s there.”*

– 55-year-old African-American male, Medi-Cal member

**Most common reasons for going on health plan website:**

- Looking up benefits

*“I don’t really look at the member handbook. I will go online, though.”*

– 36-year-old multi-racial male, Medi-Cal member

- Looking up prescription coverage
- Changing primary care provider
- Finding out if the doctor is accepting new patients

*“Well, I was going to say their, their new Internet site seems to be more helpful in my selection of a doctor because they offer more information than the book did. So, now I can go [online] and find out what, without having to do the further research what the doctor’s specialties are. They list it.”*

– 48-year-old Creole male, commercial member

**Things that were difficult to find on health plan website:** The primary critique participants had about looking at benefits online was that the information is not detailed enough. Many said that online they could find their general benefits coverage, but they could not find specifics like prescription coverage or physical therapy coverage. If they could not find the specific information, they would call or look in the EOC.

*“When I was looking at the (the website) I wasn’t finding (what I needed)... I can find an overview. I kind of can see general coverages... But, [my wife] needed physical therapy and so I*

*was looking at how much is covered, how frequently, how many visits, and the book seemed to answer that a lot more [than the website].”*

– 40-year-old white male, commercial member

*“I just remember I had a hard time finding what I was looking for.”*

– 61-year-old white female, commercial member

***Participants’ recommendations for improving the health plan website:***

- Send more frequent reminders about the existence of the website.
- Have instructions for how to get online (preferably postcards mailed to members).
- Put “Frequently Asked Questions” and answers on the website.
- Put a PDF version of the whole EOC on the website that members could download.
- Code the website to make it easier to find/search certain things.
- Make the website user friendly (like the GEICO website).
- Add individual prescription history.
- Add more specifics about benefits.
- Highlight changes in benefits or prescriptions.
- Make it possible to make appointments online.

***Participants’ recommendations for other information to get through the Internet:***

- Benefits information by email
- Live web chatting/relay
- Easier-to-understand instructions for how to fill prescriptions online

*“I probably got three or four (letters in the mail) last year about the online prescription... and it sounds kind of interesting, but they don’t really, in very brief terms, tell you exactly how to do it....”*

– 59-year-old white female, commercial member

**Where system efficiency and health literacy intersect on use of the website:**

When health plan members use the website but cannot find what they need, or they do not understand the content, they usually make at least one phone call to the health plan which could be avoided.

**5. Written Communication from the Health Plan**

**In the focus group survey, participants were asked about written information that they receive from their health plan:**

- Eight (15.4%) commercial and 13 (21.0%) Medi-Cal participants said they have received something in the mail from their health plan that they have not understood.
- Overall, when participants were unable to understand written information, more than half (52.4%) said they called their health plan as a result.
- Of the eight commercial participants who have received something they could not understand, four said they called their health plan, two did nothing, and one did something else, such as talked with the doctor or asked a family member. One participant did respond as to what they did.
- Of the 13 Medi-Cal participants who have received something they could not understand, seven said they called their health plan, two said they did nothing, and four did something else, such as talked with the doctor or asked a family member.

**In the focus group discussions, participants had positive comments about the written communication they received.**

Many participants said that the information they receive from their health plan is informative and clear.

*“I just like their information that they send. It’s pretty concise. It’s helped me out.”*

– 55-year-old multi-racial male, Medi-Cal member

*“...They send stuff out that’s real clear and tells you where to go and who to call and it’s been real easy for me so far.”*

– 58-year-old white male, commercial member

Participants especially liked the information that their health plan personalized for them.

*“I received...something for my asthma... And it said, you know, this is the time of the year, allergy season... This and that. And this is what you should do, make an appointment... Yeah [it was pretty easy and straightforward], it was pretty cool.”*

– 18-year-old white male, Medi-Cal member

Twenty-four participants said they liked their health plan newsletter; they liked the topics that were covered and thought they were easy to read because they were short.

*“(Yeah, I like those) newsletters... Because they’re short topics. If there’s anything that you’re concerned about, it also has resources for generic things, general things like, you know, diet, nutrition, exercise, heart healthy things, tips. It’s just an informative newsletter and if it was something that you didn’t know, it has places where you can go to get more information.”*

– 47-year-old white female, commercial member

**Mailed communication that at least one participant commented positively on:**

- Reminder letters for check-ups
- Information on how to manage a chronic illness (asthma and diabetes)
- Notifications that there is a change in plan coverage
- Notifications that there is a change in prescription benefits or the formulary
- Flu shot reminders
- Notices of a referral to a specialist
- Information about the mail order pharmacy
- Notification of approval for services
- Notification during open enrollment letters notifying that members can change their doctor
- A chart saying what exams members are entitled to at what age
- Information on members’ right to a hearing or on how to file a complaint
- A letter to Medi-Cal members saying that they would get rewards if they took their child to well-child appointments.

**Explanation of Benefits (“This is not a bill”):** Participants had mixed feelings about the usefulness of the Explanation of Benefits (EOB). Twelve participants (ten commercial and two Medi-Cal) remembered getting an EOB in the mail and reported that, while it was not necessarily helpful, it was not confusing.

*“Years and years ago, when I first got it, I would [think] they hadn’t paid and that would be confusing to me...”*

– 66-year-old white female, commercial member

Two participants said that they liked getting the EOB because it put their mind at ease about whether their health plan had paid for their services.

*“I like seeing [it], because a lot of times I’ll go, we didn’t get a bill for that. Did they just pay for it? I don’t know... Yeah, and then I’ll go back to my ‘this is not a bill’ thing and then I look and I’ll go... Yeah. They paid for it.”*

– 31-year-old white female, commercial member

Several participants reported being confused by the EOBs and finding them wasteful. One participant reported calling the health plan because he was confused about them.

*“Yeah, we get those and (it shows) zero. Zero dollar amount when you have a procedure that [the health plan] covers... which is kind of confusing. When I first received those, I thought they were bills... So... I had to waste time, call [the health plan] to have them clarify that to me because I didn’t know what it was... And then now that I get them all the time, they’re just a waste of paper.”*

– 31-year-old Hispanic female, commercial member

**Paperless option:** Several participants said that they are concerned about “waste” with all the paper that is sent out by their health plan. There was a lot of interest in having the option of getting all written communication through email.

*“I would actually prefer if it’s [EOB sent as an email], if everything was on email rather than all these... papers.”*

– 31-year-old white female, commercial member

*“I also have a problem with the waste, you know. (Giving these) booklets when you can go online and see, find out all this information. So, that’s my issue with it. You know what? Let’s not print anymore books and [use the money saved to] give her kid some medication.”*

– 32-year-old white female, commercial member

***Participants’ recommendations about written communication:***

- Send more information through the mail.
- Stop sending the EOB.
- Post the EOB on the website.
- Send more newsletters.
- Send more helpful tips and information that is disease specific and individualized.
- Send information via email.
- Clarify how to get prescriptions online (rewrite and make more clear what the health plan already sends).

## **6. Identifying/choosing a primary care provider (PCP)**

In the Key Informant interviews, KIs noted that the process of choosing a primary care provider could be confusing for health plan members. They suggested that when members do not know who their primary care provider is, several things can happen that are inefficient for the health plan. Members may call their health plan to find out who their provider is. They may go to the wrong doctor, causing a reimbursement headache for the health plan. Or they may put off seeing a doctor, which can result in their condition worsening and their needing more acute care at a later date. Most importantly, there is some indication that not knowing the name of your primary care doctor causes people to use the emergency room unnecessarily.

### **In the focus group survey, quantitative data was collected about choosing a PCP.**

- When participants first enrolled in their HMO health plan, it appeared that more commercial participants (88.5%) choose their primary care provider (PCP) than Medi-Cal participants (48.4%).
- The percentage of participants who have had to switch PCPs was about the same between the commercial (51.9%) and Medi-Cal participants (51.6%).

In the focus group discussion, participants were asked about the process of choosing a PCP and whether they found it difficult or easy.

### **Commercial participants were more likely to choose their PCP rather than being assigned.**

- Most commercial participants described knowing that they needed to choose a PCP and using either the online physician search tool or the paper provider directory to choose a doctor.
- Commercial participants were much more likely than Medi-Cal participants to use the Internet to choose a PCP.
- Since all commercial participants had an employer-based health plan, in some cases participants called their employer benefits department and received assistance in choosing a doctor.
- Most commercial participants said that the overall process of choosing a doctor was easy.

*“I went to the website and I just chose a doctor that was close to me. Mm-hmm. It was really easy.”*

– 43-year-old white female, commercial member

### **Medi-Cal participants were more likely to be assigned a PCP and less likely to choose a PCP.**

- Medi-Cal participants were more likely than commercial participants to report being assigned a PCP.
- Medi-Cal participants who were assigned a PCP found out about it when they received their member ID card.
- For most Medi-Cal participants, it was pretty clear from their health plan ID card who their PCP was.
- Of the Medi-Cal participants who did make an active choice, some looked up a provider in the paper provider directory.
- Many Medi-Cal participants remember being sent a form where they were asked to pick a doctor; they used the provider directory and made a choice.
- Of all Medi-Cal participants, only one reported looking online to choose a provider.

**Difficulties choosing a PCP:** For both the Medi-Cal and commercial participants who reported difficulties choosing a PCP, most of the confusion centered on the provider directory.

- Several participants said that the provider directory did not include enough information for them to feel comfortable making a choice, including not having information about the provider's specialty.
- Information about whether the provider was taking new patients was not accurate.

*“(I would like) one more thing listed besides their name and address and phone number... whether or not they were taking, accepting new patients. So, I would automatically call the ones that said yes. Well, I would call and they would say, ‘No, we’re not taking new patients.’ So, there’s a big conflict there. Like, the information wasn’t current.”*

– 31-year-old white female, commercial member

Many Medi-Cal participants seemed to know that they should call doctors themselves before choosing them to make sure they were still taking Medi-Cal patients. Several reported finding doctors in the directory, calling the doctor, and then finding out that the doctor was not accepting new Medi-Cal patients.

*“Yes, I chose my own doctor. I used the literature that was mailed out and I called all the different doctors according to which ones I wanted to use. Location was a factor in that. And a lot of the doctors, they already met their quota with [the health plan], so they were no longer accepting more [of the health plan’s members] or they changed their policy or - there was quite a few that, that weren’t taking it, that were in the book.”*

– 42-year-old white female, Medi-Cal member

### **Criteria for choosing a doctor:**

Through the course of the conversation about difficulties in choosing a doctor, focus group participants (commercial and Medi-Cal) often described what was most important to them in choosing a doctor. For all participants, the location of the physician's office was the most common criteria they gave for choosing a doctor. The criteria mentioned included:

- Location/proximity to home.
- Reading about the physicians' qualifications.
- Being able to keep the same doctor.
- Finding a doctor who was accepting new Medi-Cal patients.

### ***Participants' recommendations for making it easier to choose/change doctors:***

- Provide more information about the doctors' background and specialty in the provider directory.
- Put ratings of the doctor on the website/in the provider directory.
- Update the information more frequently about whether the doctor is taking new patients.
- Send a provider directory that is geographically tailored.

## **7. Authorizations, Referrals, and Denials**

KIs identified getting authorizations and referrals as areas where members' difficulty navigating the system might cause inefficiencies at the health plan level.

In the pre-focus group survey, participants were asked both about their experiences getting special authorizations for services and their experiences having treatment or medication denied.

**Authorizations for services:** More Medi-Cal participants (40.3%) said they have tried to get special authorization for a drug or treatment that was not automatically covered than commercial participants (34.6%).

**Treatment or medication denied:** Slightly more Medi-Cal participants (32.7%) said they have had a treatment or medication denied from their health plan than commercial participants (40.3%). Two Medi-Cal participants did not know if they have had a treatment or medication denied.

In the focus groups, participants were asked about the process of getting authorizations for services.

**Easy access to authorizations:** Thirteen participants said that they were able to get authorizations and referrals to specialists without a problem. This included:

- Authorizations to see specialists.
- Authorizations for second opinions.
- Authorizations to see out-of-network providers.
- Medication refills.
- Authorizations for medications not on the formulary.

In these cases, participants (or their providers) made one or fewer phone calls and had the problem resolved within 30 days.

**Difficult to get authorizations:** There were other instances where participants reported they had trouble getting services, equipment, or medication authorized. In these cases, participants either waited more than 30 days (sometimes up to a year), or they never received authorization. Participants reported problems getting authorizations for:

- Orthotics.
- Medical marijuana.
- Medications not on the formulary (for migraine, asthma, erectile dysfunction).
- Genetic testing of family members to diagnose a member's condition.
- Special baby formula.
- Infertility treatments.
- Prescription cosmetic creams/anti aging products.
- Durable medical equipment (walker, oxygen, scooter/electric wheelchair)
- Hearing aides.
- Patches to stop smoking.
- Time release ADD medication.
- Medications newly on the market.
- Experimental medications.
- Medications available over the counter.
- Brand name medications when the generic is available.
- Chiropractic care.
- Stress test for pre-term labor.

**What members do when they find out an authorization is denied:** After participants found out an authorization was denied, their primary course of action was to make several phone calls to the health plan.

- Eighteen different participants said they called the health plan.
- One participant reported 40–50 phone calls to get a special baby formula covered.

- One participant reported getting a prescription for a walker denied three times but then on the fourth attempt, it was authorized.
- Many members reported having to call back and forth between the health plan and the provider's office acting as a middleman of sorts.

**Other courses of action members take when services are denied:**

- Write a letter to their health plan.
- Pay the bill out of pocket.
- Have the pharmacist call the health plan.
- Ask their physician to call the health plan.
- Get the procedure and then ignore the bill.
- Go without the treatment or medication.
- Accept a different treatment or medication.
- Repeatedly submit the request.
- Take different dosages than on the formulary.
- Call an attorney.
- Go to the emergency room.
- Use non-western/alternative medicine.
- Change to a health plan that did cover the treatment/medication.
- File an online "petition" to get it covered.

One participant reported getting a letter saying that a service was authorized, but that it was confusing because the letter also asked her to call and confirm.

*"I had received a letter from [my health plan] saying that I had been approved for (the hospitalization). But at the bottom, it said, you know, you need to double check to make sure that you (can be) covered so you don't have unexpected costs. (I had) to take that extra step."*

– 54-year-old white female, commercial member

**Participants reported being informed that the service or treatment was denied in several different ways:**

- Getting a notice in the mail (11)
- Finding out through their doctor (5)
- Being notified by their pharmacist (16)

***Participants' recommendations for making it easier to get authorizations:***

- Train physicians to know what is covered.
- Make the authorization letter clearer.
- Tell members the steps they need to take to get something authorized.
- Respond in one week instead of 30 days.
- Have a dedicated phone line that just deals with authorizations and denials.
- Notify members by phone if something is authorized or denied.
- Put the process online so that members can follow where the health plan is in the process and review their log of phone calls.
- Give members lists of medical alternatives when a service is denied.
- Let members know if something is not authorized before they get the service.
- Create a review panel of expert physicians to review experimental treatments.
- Send a list to members of services/treatments/medications that are routinely denied.

- Give an explanation of why the service/treatment/medication is not covered (e.g., it is experimental, it is expensive).
- Provide a phone number that members can call prior to a treatment/test to find out if it will be covered.

## 8. Filing a Grievance or Complaint

Data from Key Informant interviews indicated that health literacy and health plan efficiency intersect in the area of member complaints. KIs felt that when members do not know about the complaint process, they end up making unnecessary phone calls.

In the focus group survey, quantitative data was collected about participants' experiences filing complaints. Overall, the majority of participants said they had never filed a grievance or formal complaint with their health plan. Of the 114 participants, only five commercial and six Medi-Cal participants said they had filed a grievance or formal complaint.

In the focus group discussion, participants were asked if they were aware of the complaint process and what their experiences had been filing complaints.

**Unaware of complaint process:** The majority of participants said they were unaware that they could file a complaint:

*"I didn't even know I had the option of filing a grievance."*

– 31-year-old white female, commercial member

The few participants who did know about the complaint/grievance process learned about it from letters from their health plan, or they learned about it when they called member services with a complaint.

*"Yeah. They send you a letter... And also, when you get denied for anything, they also tell you, you have a right to a hearing or a complaint or whatever."*

– 34-year-old multi-racial female, Medi-Cal member

Most said that they would call their health plan first and try to resolve the issue before filing a complaint or grievance.

*"If the effort failed with [my health plan], I would file a complaint."*

– 69-year-old white female, commercial member

The most common ways of filing a complaint were over the phone or through the mail.

*"The thing that they sent me was from [my health plan]. They said that anybody can do a complaint if something happens to them, so that's what I did about my asthma, to get my medication and stuff like that... And I got my medicine. It was at the door the next day."*

– 42-year-old African-American female, Medi-Cal member

**The most common reasons for filing complaints included:**

- Being unhappy with doctor/quality of care.
- Contesting an unexpected medical bill.

- Requesting a medication or treatment that is not covered.

**Complaint process too lengthy:** Several participants said that they had wanted to file a complaint but were hesitant because they had the impression it was a very long process.

*“I am a bit hesitant about maybe filing a grievance or anything like that. The process is so long...”*

– 55-year-old multi-racial male, Medi-Cal member

*“You know, I, I think I looked at [the forms online] to try to do something about it and it appeared too cumbersome. And I thought oh gosh. I don’t know. I can’t, I don’t exactly remember but I just know that I had to write something to somebody... I would rather just deal with it on the phone. And then I don’t have that much time, so... But I just remember whatever it was that I read appeared cumbersome to me.”*

– 55-year-old white female, commercial member

***Participants’ recommendations for making the complaint/grievance process easier:***

- Make it more clear that you can file a complaint online.
- Have a phone number specifically for complaints.
- Send out more reminder letters that we have the option of filing a complaint.
- Conduct a member satisfaction survey so that members can let the health plan know how they feel even if they do not file a complaint.

**CONCLUSION**

The focus groups, conducted with a diverse group of Medi-Cal and Commercial HMO members, demonstrated areas in which the health literacy of members and the complexity of the health care system impacted their ability to navigate it. The main areas that focus group participants identified as being troublesome and difficult to navigate/understand included understanding benefits, Evidence of Coverage, customer service telephone line, website/internet, written communication from the health plan, choosing a primary care provider/using the provider directory, authorizations, referrals and denials, and filing grievances. Participants provided suggestions for how the health plan could make changes to simplify the process in order to make these areas easier to navigate or understand. Potential areas of intervention were explored further during the in-depth, one-on-one usability test interviews.

## Usability Test Interviews: Summary of Findings

### USABILITY TEST INTERVIEWS ABSTRACT

**Objective:** Health Research for Action (HRA) completed 20 usability tests with commercial and Medi-Cal HMO members between April 22, 2009 and May 7, 2009. The primary focus of the usability tests was to gather in-depth information regarding various themes that emerged from the previous 12 focus groups and 31 key informant interviews. To accomplish this, participants were asked to review materials and provide feedback and thoughts on: 1) Knowledge of appropriate use of emergency room; 2) Knowledge and use of health plan websites; 3) Knowledge and use of nurse advice lines; 4) Understanding of medical groups vs. health plans; and, 5) Knowledge of member rights and responsibilities. Six different materials were tested with the commercial participants and six materials were tested with the Medi-Cal participants.

**Findings:** Usability test interviews revealed that both Medi-Cal and commercial participants have a keen interest in learning more about their health plan and how to use it most efficiently. However, there is also a disconnect between what health plans would like members to do in certain situations, what members know their health plans want them to do in these situations, and what actually happens when the situation occurs. However, members demonstrated that they are receptive to receiving communication information from their health plan about a variety of topics, including proper use of the emergency room, nurse advice lines, learning the differences between their health plan and their medical group, being informed about their rights and responsibilities as a health plan member, and learning more about their health plan's website. Those interviewed most frequently suggested that information about these subject areas be mailed to them.

### INTRODUCTION

The usability tests (UTs) took place in Sacramento, California, between April 22, 2009 and May 7, 2009. There were a total of 20 HMO members from the same health plan who participated: ten commercial members and ten Medi-Cal members. All participants were members of Health Net HMO.

The objective of the UTs was to gather in-depth information regarding various themes that emerged from the previous 12 focus groups and 31 key informant interviews. Trained interviewers who are part of the HRA staff conducted the UTs.

Each interview began with a brief quantitative survey about participants' experiences with their health plan, followed by the Short Test of Functional Health Literacy in Adults (S-TOFHLA). Next, participants completed the in-depth, one-on-one UT, where they were shown various materials and asked questions to determine how clear and understandable those materials were and whether the materials accomplished their objectives. Each UT took no more than 90 minutes and participants received a \$40 cash stipend for their time.

### PARTICIPANT DEMOGRAPHICS

**Gender:** There were 16 female and four male participants.

**Age:** The age range was from 19 – 63, with an average age of 48. Overall, the commercial participants were older than the Medi-Cal participants.

**Race:** All of the commercial participants were Caucasian. Of the Medi-Cal participants, four were black/African American, four were Caucasian, one was Latino/Hispanic, and one was of another race or multi-racial.

**Education:** Commercial participants had significantly higher educational levels than Medi-Cal participants.

*Health Literacy:* Commercial and Medi-Cal participants all had high health literacy scores (S-TOFHLA), with only one exception. All of the commercial participants' scores were between 91 and 100; all of the Medi-Cal scores were between 89 and 100, except for one, which was 52 (indicating low health literacy).

*Health Status:* Self-reported health status was similar for commercial and Medi-Cal participants. Overall, six participants reported their health as excellent, four as very good, six as good, three as fair, and one as poor.

## **PARTICIPANT HEALTH PLAN INFORMATION**

### *Number of Years in HMO*

Commercial members had been with their health plan longer (average 11.3 years) than Medi-Cal members (average 7.1 years).

### *Primary Care Provider*

All of the commercial participants chose their PCP when first enrolling in Health Net; among the Medi-Cal participants, six chose their PCP and four were automatically assigned to one.

### *Switching PCPs*

Six commercial participants had switched PCPs and five Medi-Cal participants had done so.

### *Looking Up Benefits*

More commercial participants (7) reported having looked up their health plan benefits than had Medi-Cal participants (3). Of the seven commercial participants who looked up their benefits, three looked them up in the EOC, one looked online, and three looked in the EOC and online. Of the three Medi-Cal participants who looked up their benefits, two looked them up in the EOC and one looked in the EOC and online.

### *Getting Special Authorization*

Overall, eight participants (six commercial and two Medi-Cal) have tried to get special authorization for a drug or treatment that was not automatically covered.

### *Filing a Grievance or Complaint*

None of the commercial participants had ever filed a grievance or complaint against their health plan; one Medi-Cal participant had done so.

### *Having Treatment or Medication Denied*

Five commercial and two Medi-Cal participants had had a treatment or medication denied by their health plan.

### *Receiving Something Not Understandable*

Two commercial and two Medi-Cal participants had received something in the mail from their health plan that they did not understand. Three of them called the health plan for clarification; one did not do anything.

### *Calling Health Plan to Solve a Problem*

Six commercial and five Medi-Cal participants had contacted their health plan by phone to solve a problem.

### *Calling Health Plan for Any Reason*

Commercial and Medi-Cal participants called their health plan approximately the same number of times for any reason with in the past year, with an average number of calls being 1.2.

## **THE USABILITY TEST INTERVIEWS**

### ***Domains Tested***

The commercial and Medi-Cal participants each reviewed some materials that were the same and some that were different, due to the fact that member materials vary between product lines. However, the following domains were tested with both groups:

1. Knowledge of appropriate use of emergency room
2. Knowledge and use of health plan websites
3. Knowledge and use of nurse advice lines
4. Understanding of medical groups vs. health plans
5. Knowledge of member rights and responsibilities

### **1. Knowledge of Appropriate Use of Emergency Room**

#### ***Commercial Participants***

The ten commercial participants were asked to look at a health plan newsletter article about the difference between needing emergency and urgent care, what to do in each situation, and how to follow up with the PCP afterwards. (See Appendix C1: Commercial Newsletter – Emergency Room and Urgent Care.) Material on when to go to the emergency room was tested because KIs identified this as an area of inefficiency.

- Nine of the ten participants were able to correctly identify the main messages from the article.

Participants were given a scenario in which they were asked what they would do, based on the newsletter article they had just read, if they had a situation in which they were unsure if it was an emergency or not.

- Six said they would call their doctor, one would call her doctor or 9-1-1, one would call her doctor or the nurse advice line, and two would go to the ER or call 9-1-1.

*“When you’re not sure, you’d err on the safe side and do too much. I’d probably call 9-1-1.”*  
– 56-year-old white female, commercial member

*“Call the doctor, or I’d call the advice nurse.”*  
– 54-year-old white female, commercial member

The participants were then asked what they would do, based on the newsletter article they had just read, if they were not sure if their situation was an emergency or not and it was late at night and the doctor’s office was closed.

- Five participants said they would call the doctor’s 24-hour advice line and five said they would call 9-1-1 or go to the emergency room.

*“You should be able to call 24 hours a day and there should be an on-call doctor to give you advice.”*  
– 46-year-old white female, commercial member

Participants were asked how they wanted to get information about what to do in an emergency:

- Through the mail, such as a brochure with the information outlined in detail (5)
- By email or online (4)
- At the doctor's office (2)
- Booklet (1)
- For benefit information, with newsletter, preferably in a chart (1)
- Bulleted list of emergency examples on her ID card (1)
- Public service announcements or television ads (1)

*"Getting it from [my health plan] would be like junk mail; maybe put it in the doctor's office. Like in the exam room on the walls. When you are waiting 30 minutes for your doctor, you can read this."*

– 51-year-old white female, commercial member

*"Definitely hard physical mail; not everyone has Internet. It's an easy reference to go back and read rather than trying to find it somewhere on the Internet."* – 41-year-old white female, commercial member

*"Email, because it doesn't waste paper. It's easy to store and to dump if not needed."*  
– 62-year-old white male, commercial member

*Conclusion:* Commercial participants were interested in receiving information via email or postal mail about emergency room use, following up with their PCP, and using the advice nurse line. This information should include a flow chart of various examples of common reasons members incorrectly use the ER and what to do instead in those situations. These flow charts could be on a wallet card or something to hang on the refrigerator so that members could easily reference it when the need arises.

### ***Medi-Cal Participants***

The Medi-Cal participants were shown three different documents describing emergencies, how to avoid going to the ER when a problem is non-emergent, and why it is important to follow up with the PCP after an ER visit.

#### *Newsletter Article*

The first material tested was a newsletter article from a Medi-Cal Managed Care health plan. (See Appendix C2: Medi-Cal Newsletter – Emergency Room and Urgent Care.)

- All ten Medi-Cal participants could correctly summarize one of the main messages from the article.

*"[The main message is] to make sure you have an emergency before you to the ER."*  
– 39-year-old white female, Medi-Cal member

- Even though participants understood the content of the article theoretically, how that plays out in real life is not always quite as straightforward:

*“Call your PCP – what if your physician never calls you back? It’s frustrating when they don’t call you back for three days.*

– 34-year-old white female, Medi-Cal member

*“Anytime your child has a fever above 100, take them to the hospital. Even if you are not sure about the problem or symptoms, take them to the hospital anyway.”*

– 19-year-old African-American female, Medi-Cal member

Based on the information given in the newsletter article, participants were then given a scenario and asked to infer an action step.

- Six of the ten participants said that if they woke up in the middle of the night in a lot of pain they would err on the safe side and call 9-1-1 or go to the emergency room, rather than call their PCP or health plan’s nurse advice line.

*“Call 9-1-1. You can’t go to your doctor at that time of the day. You can call the emergency [nurse] line, but they will probably only be able to tell you how to ease the pain, but you have to be somewhere they can control the pain.”*

– 25-year-old white female, Medi-Cal member

- Four participants gave the correct response and said that they would try to contact their PCP.

*“I would call my PCP because he knows my medical history and knows me and has all my medical charts. It would be better than someone who doesn’t know my history.”*

– 34-year-old white female, Medi-Cal member

*Conclusion:* This document seemed very effective and the Medi-Cal participants were able to understand it. However, it does not seem entirely realistic that in “real life” members will do what this article instructed them to do. Adding testimonials (perhaps with pictures) from real members about how they avoided going to the ER and/or listing common yet unnecessary reasons for going there would be helpful.

### Postcard

Medi-Cal participants were next shown a postcard from a Medi-Cal Managed Care Health Plan. (See Appendix C3: Medi-Cal Postcard – Emergency Room.) This postcard is typically sent out by the health plan to Medi-Cal members who went to the emergency room for a non-emergent situation; it encourages members to contact the nurse advice line in a future similar situation instead of going to the ER. We tested the postcard to ascertain whether or not participants could understand the reasons they might receive something like this in the mail and whether or not they liked the idea of receiving a postcard like this. The postcard was tested with the ten Medi-Cal participants.

- All ten of the Medi-Cal participants understood the point of the postcard.
- Nine participants said they would read and keep the postcard, as it contains important information.
- Eight participants said it was a good idea to send these to people who went unnecessarily to the ER.
- Seven participants liked the postcard and described it as informative, clear, and easy to understand.

- Three participants said that sending the postcards could help both the health plan and the member save time and money.
- Two participants said that having information about the nurse advice line on the postcards might keep people from going unnecessarily to the ER.

*“I’d probably tote it around in my purse at all times because of the 800 number. If I left my wallet at home, then I’d at least still have the number in case I need it.”*

– 34-year-old white female, Medi-Cal member

*“1. Very informative; 2. Easy to understand; 3. Nice to have tips right here in your hand; 4. Clear and bold number to call; 5. Statements are clear; and, 6. Good tips and good facts.”*

– 39-year-old white female, Medi-Cal member

- Only one participant strongly expressed his opinion against getting something like this in the mail, as it would make him feel dumb and like the postcard was an insult.

*“I would call [my health plan or HMO] and ask them why they sent me something stupid like that. What’s not an emergency to you might be an emergency to me. Send[ing] this is an insult, making me feel like I’m a dummy. Unless, they know what’s going on in the household, they shouldn’t send these out.”*

– 47-year-old multi-racial male, Medi-Cal member

The ten Medi-Cal participants were asked if the postcard would make a difference in their actions the next time they had an emergency.

- Seven of the ten participants said that the postcard would affect their actions and they would try the steps that are listed.

*“I would follow it step-by-step; all the steps that are listed because I don’t want to waste money – mine or theirs.”*

– 34-year-old white female, Medi-Cal member

- Three participants said that the postcard would have no impact on them and that they would do what they felt was right. One participant said she would return to the ER, one said she would follow her doctor’s advice, and the other said he would act based on past experiences, not based on what the postcard suggests.

*Conclusion:* Overall, the Medi-Cal participants liked this intervention, understood it, and felt that it was useful. This is an intervention that is low cost yet captures the attention of those who are frequent users of the ER for non-emergent reasons. In addition to educating about when not to use the emergency room, it tells them about alternative options.

### *Statewide Emergency Room Collaborative Brochure*

The ten Medi-Cal participants were also shown a brochure created by the Statewide Emergency Room Collaborative, a collaborative in which all Medi-Cal Managed Care Health Plans must participate. (See Appendix C4: Statewide Emergency Room Collaborative Brochure.) The goal of the interventions designed by the Collaborative is to reduce the number of ER visits for the five most common non-urgent problems for pediatric patients and to encourage members to connect with their PCP (medical home) or

the nurse before going to the ER. The main messages of the brochure were why it is important to take your child for regular check-ups, how to keep your child from getting sick, and how to make your child feel better. We tested this brochure to see if the materials were effective in communicating these message(s).

- All of the participants were able to identify some key messages from the brochure, though none of them understood that they should call their PCP or advice nurse if they're unsure if it's an emergency.
- Four participants specifically pointed out that one of the main messages from the brochure was to avoid going to the emergency room for a non-emergency situation.
- One participant said that one of the goals of the brochure was to teach you not to waste time by going to ER for a non-emergency situation.
- One participant said that going to see her child's regular doctor was better than going to the ER for regular care.
- All of the participants were able to capture the importance of regular check-ups and having a medical home.

Interviewers told participants that the state created the brochure.

- Five participants said that this would cause them to trust the information more; four said that knowing this made no difference to them.

*"I feel like they care about people, they don't want people to get sick – it's too expensive from an economical point of view – if they are sick they can't work and then can't pay taxes. The government – most of the time they have our best interests at heart. They're human beings too – they have families, friends, and neighbors too.*

– 63-year-old white male, Medi-Cal member

Overall feedback on the brochure included:

- Three participants felt it was not helpful but simply contained common sense information.
- Seven participants felt the tips on how to keep your child healthy were helpful.
- Participants felt they would follow the doctor's advice but did not specifically say that the information on the brochure would affect their decision on using the ER.
- Five participants said they would not use the space provided to write notes; five said that they would.

*Conclusion:* This brochure was effective in that the Medi-Cal participants understood its main messages. Because this brochure is being distributed by the collaborative, it has the potential for Medi-Cal managed care members to see it with great frequency. In addition to being available at the doctor's office, it should be mailed to all Medi-Cal members in the target population (e.g., parents of young children), made available at hospitals and specifically in emergency rooms, put on the DHCS website, and made available at social service offices that the target population visits.

## **2. Knowledge and Use of Health Plan Websites**

All ten commercial and ten Medi-Cal participants were asked about their Internet usage to find information on health and health plans.

- More commercial participants than Medi-Cal participants reported using the Internet.
- All of the commercial participants and two Medi-Cal participants reported using the Internet daily.

- More commercial participants reported using the Internet to look up healthcare information than did the Medi-Cal participants.
- All of the commercial participants were aware that their health plan had a website; only four Medi-Cal participants were aware that their health plan had a general website for its members.<sup>5</sup>
- Commercial participants knew about their health plan’s website from their ID card, work, a newsletter, brochure, or email. One Medi-Cal participant said she saw it announced on TV; another saw it in papers she had received from her health plan.
- Seven commercial and one Medi-Cal participant had visited their health plan’s web site.

### **Experience Visiting the Health Plan Website**

- Of the seven commercial participants who had been to their health plan’s website before, only two had a positive experience. The other five had negative experiences because it was difficult to navigate the website and to update personal information. Two of these participants ended up calling their health plan.

*“It was fine. I didn’t have a problem... found what I needed. I would recommend it to others because it’s quick and easy to access information.”*

– 59-year-old white female, commercial member

*“...It was almost too much stuff. It just seemed overwhelming –a lot of steps to find what I was looking for and I had to call my HMO... they walked me through it...”*

– 54-year-old white female, commercial member

The Medi-Cal participant who visited the HMO website said that she liked it and felt it was user-friendly. She also said she found the information she was looking for and would recommend others to use it.

Participants wanted the following types of information from their health plan’s website:

- The ability to type in health symptoms and get feedback about a condition.
- Health tips about specific topics, such as breastfeeding, anger management, or cancer.
- Information about classes and resources available through their health plan.
- Information about medicines.
- Information about doctors in their area.
- Information about home remedies.
- The ability to email your PCP and get a response within 24 hours.
- Access to test results online.

### **Ordering a New ID Card or Changing Doctors Online**

- Six commercial and three Medi-Cal participants said they would order new ID cards or change their doctor online.
- The commercial participants who would do this online thought it would be fast and convenient; the four who would not do this online stated security concerns.

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<sup>5</sup> At the time of conducting the UTs, the health plan was in the process of developing a website specific for its Medi-Cal members. Medi-Cal participants who commented on the health plan’s website were less likely to be aware that the website for Medi-Cal members would be different than the existing website.

- The Medi-Cal participants who would not do this online said it was mainly due to not having a computer and/or Internet access.

### **Notifying Members of New Website**

- Medi-Cal participants overwhelmingly said that the best way to notify them of a new website was by mail. Two participants suggested alternative forms of communication, including television commercials and email/text messages. (Only Medi-Cal participants were asked about this.)

*Conclusion:* Both commercial and Medi-Cal members are interested in using their health plan’s website to access and update information. It is critical that the health plans make it clear to users that all information on their website is being sent via a secure link and will remain confidential. Health plans should strongly consider having live chat feeds available and a mechanism for members to track past conversations and/or progress being made on their issue.

### **3. Knowledge and Use of Nurse Advice Lines**

The commercial and Medi-Cal participants were asked different questions regarding nurse advice lines.

#### ***Nurse Advice Line and Commercial Participants***

- Of the ten commercial participants, only two had heard of their health plan’s advice line. They had both called it before and had had a positive experience.

*“It’s a resource where you can call in and talk to a nurse about medications... Ask them what to do if you need to go to the ER or not... Positive – every time. I’ve called and it was positive.”*

– 58-year-old white female, commercial member

Interviewers read all ten commercial participants a brief description of what their health plan’s advice line offers (this was not one of the materials tested), and then participants were asked if they had heard of that particular nurse advice line before.

- Of the eight participants who had not previously heard of it, only one of them said she would absolutely call. The other seven had varying reasons why they would not call, including preferring to call their doctor or medical group or using other resources.
- Of the eight participants who had not heard of the advice line, five said they would like to get written material in the mail (i.e., brochure, pamphlet, or article in the newsletter); three would like to get information online, either via email or on the health plan’s website; one participant wanted to get information on TV; two did not want to get information on it.

*“Probably in written form; a pamphlet that would explain what it is.”*

– 59-year-old white female, commercial member

*“Spotlight it online and in the newsletter.”*

– 46-year-old white female, commercial member

- All of the commercial participants were asked how frequently they would like to be reminded about the advice line; responses ranged from monthly to yearly to never.

### ***Promoting the Advice Line to Commercial Members***

Participants were asked for feedback on ways their health plan could best notify them about the existence of an advice line. In addition to getting the advice line number on ID cards and newsletters, participants had many other useful suggestions.

#### *Magnet*

A color photocopy of one health plan’s magnet promoting their advice line was shown to the commercial participants. (See Appendix C5: Commercial Health Plan Nurse Advice Line Magnet.) We tested this magnet to determine whether this would be an effective method of reminding members that there was an advice line available.

- Two of the ten participants said they had seen a magnet like that before.
- Six participants said a magnet like the one they were shown was something they would keep and put on their refrigerator, one said she might keep it, and three said they would not keep it.

*“This, I would keep. I would obviously put it on my fridge. I wouldn’t have to search through my purse.”*

– 41-year-old white female, commercial member

*“I would probably throw it away because I don’t like clutter on my refrigerator. If I needed the information, I’d go look it up somewhere else.”*

– 51-year-old white female, commercial member

- Five participants thought a magnet would have a big impact on helping them to remember the advice line; four did not.

*“It would probably help make me more likely to see it and call because I’m always in the kitchen.”*

– 56-year-old white female, commercial member

*“No impact for me, but I think it would be useful for others. It would be useful if I had something to stick in my wallet.”*

– 59-year-old white female, commercial member

#### *Other Materials*

Only one participant suggested other ways to let people know about the advice line, and suggested items such as advertisements on buses and billboards, and bumper stickers.

### ***Nurse Advice Line and Medi-Cal Participants***

- Two of the ten Medi-Cal participants had heard of the nurse advice line.
- Of the eight participants who had never heard of a nurse advice line, after it was explained to them in the interview, all of them said they would call and ask questions regarding their health or a family member’s health.
- All of the participants said that to learn about the nurse advice line, they would like to receive something in the mail, such as a postcard, flier, brochure, or letter. Two participants also suggested email notification.

- Participants were split on how often they would like to get reminders about their health plan’s nurse advice line. Three participants wanted only one notification; the other participants wanted more frequent reminders, like quarterly or every six months.
- Participants stated that they would use the nurse advice line to get help deciding whether to go to the ER or an urgent care center, to find the nearest hospital or urgent care center, and to learn about things they can do at home to avoid a trip the ER.
- Participants reviewed information about their nurse advice line and overall, they liked it. They said the information was informative, well written, and friendly.

*Conclusion:* Most commercial participants had not heard of their health plan’s nurse advice line, and therefore were not using it. They felt it would be useful to promote this intervention in the health plan newsletter or inserts to the newsletter. Additionally, contracting clinics and hospitals could provide information about the advice line, as they could capture members who may not have truly needed to come into either the clinic or emergency room, which would save time and money for both the member and the health plan.

#### **4. Understanding Medical Groups vs. Health Plans**

##### ***Knowledge of Medical Group***

Both commercial and Medi-Cal participants were asked questions to determine whether they were aware of their medical group and whether they understood the role of their medical group. This was added as part of the usability tests because it had come up as a potential area of confusion in the focus groups and we wanted more information about it.

- Commercial participants, overall, were more aware of what their medical group is and the differences between a medical group and a health plan.
- All of the commercial participants were able to correctly identify the name of their medical group; only three Medi-Cal participants were able to correctly do so. Of the seven Medi-Cal participants who did not know the name of their medical group, only four of them had heard the term previously.

*“[The] medical group is the medical association of doctors and hospitals and [my health plan] is the insurance company.”*

– 62-year-old white male, commercial member

*“[The health plan] would be my provider and River Bend [Medical Group] is actually the doctors that I utilize.”*

– 47-year-old white female, Medi-Cal member

##### ***When to the Call Medical Group or the Health Plan***

- After defining the term “Medical Group” for participants, all of them correctly stated that to get a referral to see a specialist they would call their medical group.
- Of the ten commercial participants, three said that they had had a question about their benefits in the past and were unsure if they should call their medical group or Health Net. Of the ten Medi-Cal participants, two said they had been in such a situation, but they had a third element of confusion: They were not sure if they should call their medical group, their health plan, or Medi-Cal.

### ***Information Explaining the Differences***

- Of the ten commercial participants, only one said she had received materials from her health plan explaining the differences between a health plan and a medical group. Of the nine commercial participants who had not received this type of information, two said they would like this type of information presented in a brochure or letter, and one said she did not want to receive this type of information.
- Of the ten Medi-Cal participants, three said they have received information explaining the differences between a health plan and a medical group. Of these three participants, two said the information came from their health plan and was useful; the third could not remember what she had received or if it was useful or not. Of the seven who had not received information explaining the differences, four said they would like to receive information about it, including: a brochure, notifications of what their doctor is able to take care of and/or what the health plan covers, ratings of the different medical groups to compare qualifications, and a basic definition of medical groups.

*Conclusion:* Commercial participants were more aware of medical groups and their function than were Medi-Cal participants. One way to explain the differences to members is to put a flow chart in the health plan's newsletter. This flow chart could provide concrete examples of when to call the medical group versus the health plan. This knowledge would save members, the health plan, and medical groups time and money and therefore increase efficiency for all.

## **5. Knowledge of Member Rights & Responsibilities**

All of the participants were asked about their rights and responsibilities as a health plan member. However, the commercial and Medi-Cal participants were shown different materials. The commercial participants were asked to read an article from the health plan's winter 2009 newsletter, which explained the health plan's members' rights and responsibilities. (See Appendix C6: Commercial Newsletter – Rights & Responsibilities.) The Medi-Cal participants were asked to read a page from a Medi-Cal Health Plan's EOC. (See Appendix C7: Medi-Cal EOC – Rights & Responsibilities.)

### ***Member Rights***

Prior to reading the materials, the participants were asked if they knew what any of their rights as a health plan member were, and if so, to name 2-3 of them.

- Of the ten commercial participants, two did not know any of their rights; of the eight who said they knew what some of their rights were, only two could correctly name 2-3 of the rights. The rights that were correctly identified include the right to:
  - Chose and/or change a doctor (3).
  - Receive information, including the EOC (2).
  - File appeals and grievances (2).
  - Have your privacy and confidentiality respected (2).
  - Be treated with respect (1).
  - Discuss treatment options with your doctor (1).
- Of the ten Medi-Cal participants, four did not know any of their rights. Of the six who were able to correctly list 2-3 rights, they identified the right to:
  - Request a hearing (2).
  - Request special authorizations (2).
  - File a grievance (2).

- Change doctors (2).
  - Ask for a referral (1).
- After reading the materials about member’s rights, four commercial participants said they learned something new about their rights. Three learned that they have the right to make recommendations regarding their health plan’s member rights and responsibilities, one learned that she has the right to participate in decisions about her health, and one also learned that she has the right to receive information from her health plan.
  - After reading the materials about member’s rights, six of the Medi-Cal participants reported learning something new. Four reported learning that they can discuss personal care and treatment with their providers, three learned that they have the right to view and get copies of their medical records, two learned that they can request information about the formal training of the providers and one said that getting a second option was new information.

***Member Responsibilities***

- Of the ten commercial participants, all of them said they knew their responsibilities as health plan members; however, only five were able to correctly identify at least one responsibility. Half of the participants made an incorrect response regarding payment and paying bills.
- Of the ten Medi-Cal participants, five participants could correctly list 2-3 member responsibilities, which included:
  - Reporting any changes (4).
  - Filing grievances (3).
  - Keeping appointments (3).
  - Taking medicines as prescribed (1).
  - Being honest about medical needs (1).
- After reading the materials, only one commercial and one Medi-Cal participant said she learned something new about responsibilities as a health plan member.
- Of the ten commercial participants, four said they had seen a list of the responsibilities before. Of the ten Medi-Cal participants, four said they had seen a list like this before. However, it was unclear if they were thinking of the correct list, as the places they mentioned having seen it were the welfare office and a hospital. One participant did say that she got a list like this from her health plan in her enrollment packet, and another mentioned getting it from her health plan in the mail every 2-3 months.

***Relevance to Members of Knowing their Rights and Responsibilities***

- Of the ten commercial participants, eight felt that it is important for members to know their rights and responsibilities. All of the Medi-Cal participants felt it was important for health plan members to have a list like this.

*“Yes, to let us know exactly what our rights and responsibilities are and to remind us that we have responsibilities to maintain our health plan.”*

–39-year-old white female, Medi-Cal member

- If the health plan were to create materials about members’ rights and responsibilities, eight commercial participants said they would like to get the information:
  - In the mail (3).
  - At their provider’s office (2).

- In the newsletter (2).
  - On the Internet, either an email or on the website (2).
  - Included in the enrollment packet (1).
- All of the Medi-Cal participants mentioned that they would want to get this information in the mail.

## **CONCLUSION**

Both commercial and Medi-Cal participants were interested in learning more about their rights and responsibilities as health plan members. A list could be sent out with the health plan's newsletters, be part of a cover letter in the EOC, or sent to members anytime they call their health plan with a question or complaint.

## Advisory Group: Summary of Meeting

Wednesday June 3, 2009  
The Double Tree Hotel, Berkeley

### PARTICIPANTS

Advisory Group Members	Joyce Adams, Diana Carr, Diona Cox, Troy Kaji, Pat Lawson-North, Suzanne Michaud, Michael Negrete, Liliana Ramirez, Maricel Santos, Maribeth Shannon, Thomas Siegmeth, Kelvin Wade
Office of Patient Advocate (OPA) Staff	Ed Mendoza, Martha Torres-Montoya
UC Berkeley Staff	Carrie Graham, Susana Konishi, Linda Neuhauser, McKenzie Oliver, Beccah Rothschild
Facilitator	Babs Kavanaugh

### SUMMARY

#### 1. Welcome and Review of Purpose of the Advisory Group

Babs Kavanaugh, facilitator, welcomed the Advisory Group and reviewed the purpose as well as the agenda for the meeting. Health Research for Action (HRA) would like the advisors to review research findings and give recommendations for choosing and implementing interventions that simultaneously address the intersection between health literacy and health plan inefficiencies, with the result of positive benefits for both health plans and health plan members.

Linda Neuhauser Co-Principal Investigator of HRA, welcomed everyone. HRA is a center in UC Berkeley's School of Public Health that specializes in creating clear health communication, with a goal of improving access to health services. Their projects have reached over 30 million people in the United States. Dr. Neuhauser noted that there is a great deal of concern, nationally, about health literacy. She thanked Ed Mendoza and Martha Torres-Montoya from the Office of the Patient Advocate (OPA) for their leadership and dedication in advocating for health plan members and for being statewide leaders in the area of health literacy. She also thanked Health Net, especially Diana Carr and Nancy Wongvipat, for partnering on this project, including help recruiting members, both commercial and Medi-Cal, for focus groups and usability testing.

Ed Mendoza, Deputy Director of OPA, then thanked participants for helping OPA provide the best advocacy services possible to Californians who have managed care health plans. He provided a brief description of OPA's history, and stated that several years ago, OPA recognized that consumers need understandable information about how to access and use their health plan. OPA identified HRA as an organization with particular expertise in health literacy and the ability to create health information that is accessible and understandable. The Health Access Project is one step that OPA is taking in helping HMOs communicate clearly and simply with their members.

The facilitator then reminded the Advisory Group that they will be asked to provide guidance about which interventions and topics HRA should focus on, based on the following criteria:

1. Address both health literacy and health plan efficiency

2. Relevant to all health plans
3. Relevant to both commercial and Medi-Cal product lines
4. Build on what has been done in the past
5. Fall within OPA's mission.

## **2. Health Literacy, System Efficiency in Health Plans, and Health Plan Access Project Overview**

Beccah Rothschild, Director of Health Literacy Projects at HRA and Co-Director of the Health Access Project, provided an overview of the project. She also talked in detail about health literacy. (See PowerPoint slides for details on health literacy definition and statistics.) She also talked about health plan efficiency (see PowerPoint slides for details), and reiterated that health system inefficiencies can happen at many levels: at the doctor's office, within medical groups, at hospitals and within health plans. This project and the topic of today's meeting focus on inefficiencies that are directly controllable by health plans that relate to members with limited health literacy skills.

The Health Access Project's goals are to:

1. Identify specific system inefficiencies that prevent health plans from providing cost-effective care.
2. Examine the relationship between those system inefficiencies and the health literacy of health plan members.
3. Identify changes that health plans can make to help members with limited health literacy navigate and understand their plan more efficiently.

Next, Carrie Graham, Assistant Director of Research at HRA and Co-Director of the Health Access Project, presented the project's research methodology and findings. The goals of the research were to identify areas where system efficiency and health literacy intersect and to identify interventions that could address both simultaneously. To accomplish this, HRA conducted three different types of research:

- 31 key informant telephone interviews with representatives from health plans, literacy experts, providers and other stakeholders;
- 12 focus groups with 114 health plan members (both Medi-Cal and commercial); and,
- 20 usability interviews, which are one-on-one interviews that probe deeper about issues raised in focus groups and that test existing interventions.

Key informants were asked to identify areas where inefficiencies exist in health plans, which of these areas may be exacerbated by health literacy of members, and for ideas for interventions that could both address members' health literacy and improve health plan efficiency.

The discussion points for the focus groups with health plan members were based on main topics identified by the key informants. The usability interviews allowed HRA staff to test existing materials for their effectiveness with health plans members and to ask further questions.

## **3. Navigating Health Plans: Research Findings and Suggested Interventions**

### **Choosing a Primary Care Provider/Provider Directories**

- When members do not know how to choose a primary care provider (PCP):
  - They are less likely to make an active choice;
  - They are less likely to know who their PCP is; and,

- They are more likely to go to the wrong doctor.
- Key informants said that members may have difficulty filling out forms and using the provider directory.
- Members said that the provider directory was their biggest concern: it is too big, does not contain enough information to make an informed choice, and is not always up-to-date.

Research-Identified Interventions:

- Educate members on the step by step process of choosing a PCP.
- Make the provider directory easier to read and use.
- Add more useful information to the directory:
  - Geographic location/individualized directories
  - Doctor specialty
  - Whether the doctor is taking new patients
  - Ratings, training, or other information to measure quality

**Using the Emergency Department (ED)**

Inappropriate emergency department use is an efficiency problem for several reasons: it is more expensive than outpatient care for the health plans, causes a disruption of continuity of care, and delays treatment for people with true emergencies.

Patients with limited health literacy may use the ED for non-emergent problems for a variety of reasons: they do not understand how the system works, including where they should go for what type of illness; they are less likely to read information explaining when to use the ED; and the ED is well branded and easy to find for people with limited literacy.

Research-Identified Interventions:

Health plans are working to decrease inappropriate use of emergency departments:

- Promoting the use of nurse advice lines
- Teaching members to call their PCP before going to the ED
- Promoting the use of urgent care clinics
- Educating patients about following up with their PCP after using the ED to address the continuity of care issue

**Discussion**

Comment: In terms of ED utilization, our health plan looked at “frequent flyers,” who used the ED several times in a year. We found that the vast majority of people in this group were under age 18. Teens learned that services are delivered at the ED without asking questions, and as a result, many came seeking confidentiality, although they did not have emergencies.

Comment: Did participants raise issues about members’ relationship with their PCP?

Response: This did not come up in key informant interviews; it did come up in focus groups.

Comment: Medi-Cal Managed Care requires more information about follow-up for people who went to EDs. However, just handing them a brochure with generic follow-up information is not sufficient.

Response: We tested the DHCS ED brochure. While it suggests contacting one’s PCP or calling the nurse line, it does not include phone numbers (though there is a space for this to be included). It was, in general, well received.

Comment: Was it possible to correlate health literacy with health status from the CHIS data?

- Response: These data are available; staff will check and report back. The technique to do this has not been available until recently, because health literacy and health status reporting generally should be done in person. In this case, HRA was looking at social and demographic factors and how they correlate. The correlations are quite strong and directional.
- Comment: In a study with plan members, commercial plan members seemed to be in good health compared to Medi-Cal plan members. If a person has a chronic disease, the ED brochure might be less of a problem, because that person is in touch with their provider.
- Response: In the focus groups, 64% of commercial members reported good or excellent health; 40% of Medi-Cal members reported good or excellent health.

## **Authorizations/Denials/Grievances**

### **Authorizations**

- Key informants saw authorizations as a major efficiency issue for health plans.
- Health plan members said authorizations were only a problem when they were denied.
- When authorizations are denied, members call the health plan several times, because they do not know what to do. Members are forced to make calls back and forth between their health plan and provider. Medi-Cal members call their health plan, provider and Medi-Cal.

### **Research-Identified Interventions:**

- Educate patients about the authorization process using step-by-step instructions.
- When sending out denial letters, include information about why the service is denied and information about alternative services and treatment options.
- Send members a list of services and treatments and medications that are routinely denied; this way, they may opt to stay away from those or to obtain prior authorization. Include this information in newsletter inserts.

### **Filing Grievances**

- Only 11 of 114 focus group participants had filed a formal complaint. Many participants were unaware of the complaint process. Those who were aware of the grievance process thought it would be lengthy and cumbersome.
- When members do not know about the complaint process, they make unnecessary calls.
- In denial letters, do not just remind members that they can file a complaint, but educate them about the step-by-step process, so that they can make an informed choice.

## **Discussion**

Interventions that Address Health Literacy and Health Plan Efficiency, Build on Existing Models, and are Relevant to all Health Plans

Comment: Members want individualized letters. The template letters may not address this.

Comment: Staff from Licensing and Certification is specific about the language that must be included. There is a legal responsibility. There is tension between the ability of members to read through the legalistic material and the need to provide information so that the health plan has fulfilled its obligation to inform its members. The template letters would not address this.

Comment: DHCS requires language at too high a reading level.

Response: Participants in the focus groups wanted to know where they stood in the authorization process. They suggested mechanisms similar to FedEx's online package tracking system for following their authorization process. Similarly, they suggested that the advice line

have the capacity to track calls and send callers the information that had been discussed, plus any health education materials.

Comment: Did people say how they wanted to make contact with the health plan?

Response: People are really interested in paperless options. They also liked newsletter inserts, public service announcements (PSAs) and information provided through service agencies they already use.

Comment: People still need to know which to read first. What is the role of technology and technology partners? Consider using the concepts of universal design, and identify the best time to provide the information. For example, the time spent waiting for an appointment could be teachable moment. In addition to technology, consider the kinds of collaborations that would be most effective. For example, a video at a doctor's office requires collaboration.

Response: People said they wanted things on television, but did not mention waiting rooms. It is not clear whether they imagined putting those two things together.

Response: We have found that checklists are extremely engaging. The consumer wants to know, "Why should I care and what should I do?" Use of too much narrative risks losing their attention. Once an agency posts checklists on-line, people respond. This would address 90% of the situations.

Response: People want to know how to do something, what steps to follow. Identify the teachable moments. Perhaps the time when people receive their Evidence of Coverage (EOC) might be one such moment. The OPA could customize inserts that describe what to do under specific circumstances. Another moment might be when people arrive at the ED.

Comment: Did people talk about automated voice response system? There has been research that it is successful, especially when it is interactive.

Response: People did not discuss the automated voice, as a problem or at all.

Comment: Kaiser has developed a system in partnership with community health centers that plays DVDs covering specific health topics, such as when to use the emergency department, health promotion topics, what to do when your child is sick, etc. Research is showing that these interventions do make a difference.

Comment: Teams of health plan staff have been working together to develop uniform templates for service denial to be approved by the Department of Managed Health Care (DMHC).

Comment: Health plan administrative staff is not allowed to offer alternative treatments on forms, because they are not physicians.

Response: Can OPA create a DVD that would be useful for every health plan, or does it need to be customized?

Comment: It needs to be customized. For example, Health Net's structure is different from other health plans.

Comment: Also, the provider group fits in differently depending on the health plan.

Comment: Consumers generally do not know there is an intermediary. It is important for consumers to know who all the players are.

Comment: Did focus group participants discuss appeals?

Response: There was little mention of appeals, most likely because no one was aware of them. No one mentioned the term "TAR" for treatment authorization request. The discussion was general: participants related that they did not get their medication or they did not like their doctors.

#### 4. Discussion about Interventions

##### **OPA, HRA, Health Net, and Research-Identified Intervention Formats:**

- Newsletter inserts: members really like the newsletters
- Flow charts/Diagrams that show step-by-step processes
- Checklists to help people make decisions

##### **Research-Identified Content**

- Help members choose a PCP.
- Make the provider directory easier to use.
- Help members learn when to use the ED.
- Help members understand how to navigate the authorizations and denials process.
- Help members learn how to file a grievance or complaint.

HRA asked Advisory Group members to suggest additional interventions.

##### **Advisory Group Discussion: Avoidance of Unnecessary Use of ED**

- Response: Going to the ED is not a favorite experience for most families. Therefore it is a teachable moment for parents to learn how to avoid it in the future.
- Comment: Is there an opportunity before families use the ED to teach people about urgent/emergent situations, such as at enrollment? Is there an urgent care clinic association that wants to promote them?
- Comment: Urgent care is only available where the provider group authorizes it.
- Comment: Share peer-to-peer stories to educate members about ED use.
- Response: So much has been done; what can be done to build on that?
- Comment: The Institute for HealthCare Advancement's (IHA) book and curriculum for *What To Do When Your Child's Sick* appears to be an excellent tool for helping parents avoid the ED. California First 5 has included it in a kit for new parents that can be ordered from local hospitals.
- Comment: Utilization of the book increases when the curriculum is used in a classroom setting. Molina Health Plan sends follow up letters to families, for example, reminding them that it is flu season, and page X of the book describes flu symptoms and home treatments.
- Comment: Medi-Cal managed care plans are working on a flow chart process for decision-making about ED use.
- Comment: People go to the ED because the public has come to know it as a reliable source of urgent care. We need to brand the other health care services. Who could give this message?
- Comment: An ED offered information to patients in its waiting room about what signs and symptoms should be seen at an ED and which ones could be taken care of elsewhere, as well as options for following up on the lesser symptoms. Perhaps this information could be provided before patients check in at the reception desk.

##### **Advisory Group Discussion: Selecting a PCP and Provider Directories**

- Comment: Content is important. For example, people want to do know about PCPs, including what other members think about their provider.
- Comment: What additional information do the users want when choosing their provider?
- Response: Participants asked for photos, where the provider trained, languages they speak, and ratings, which could be provided through a link to a website such as RateYourDoctor.com.

- Comment: Brochures about PCPs should include more information about the provider, such as a biography or picture. A list of names and addresses is not enough, because sometimes the closest provider is not the right provider. Sometimes Googling is a good idea; however, people with low health literacy are not likely to do so.
- Comment: People do not know to ask about some important issues in PCP selection, such as board certification; a checklist or flow chart should include this information.
- Comment: Do you have to do a print directory?
- Comment: Yes, it is a Medi-Cal requirement to maintain a paper directory.
- Comment: People report in surveys that they have good Internet access, regardless of income.
- Comment: They might have access, but not the literacy skills to use the Internet effectively.
- Comment: Many people use the Internet to search for their providers.
- Comment: People are looking online to find out if their doctor is involved in malpractice.
- Comment: There is a website that allows everyone to say anything about any provider. Because this kind of information is already available, it might be helpful for plans to participate in designing how best to use and disseminate the information.
- Comment: It might be worth separating malpractice from opinion.
- Comment: Our health plan prints a large provider directory with basic information. The directory is not easy to use. If we want to customize it, are we withholding some information? If we wanted to offer more information, could we put that on the website and make the directory more manageable, or would that leave out 60% of the membership? We need to determine what is most important, what process is most efficient and how best to support the members. At the same time, it is an ongoing struggle to maintain a provider network for Medi-Cal.
- Comment: Research shows that a major reason many people use the ED is because of their lack of relationship with their provider. Therefore, this quality issue is important both for selecting a PCP and reducing inappropriate use of the ED. The use of ratings could result in the loss of more providers; the lack of ratings leaves Medi-Cal members in the dark about the quality of their choices. The answer should not be lack of transparency.

### **Advisory Group Discussion: Authorizations/Denials/Grievance Process**

- Response: Prescription drug issues were the number one area of confusion identified by focus group participants, such as generic vs. brand, changes in the formulary, notification for drugs that effect the patient, etc.
- Comment: Did any of the participants say what would motivate them to file a grievance?
- Response: People were more motivated when they learned how easy it was to file a grievance. They had expected a more complicated filing process.
- Comment: I filed a complaint: what motivated me was that my doctor and I had a very adversarial relationship, and the doctor was rude. The process was relatively easy, and then, the doctor “fired me.” The next time, I used a different means to choose a doctor. The office of the first doctor was closer to my house. The second time, I researched the doctor carefully.
- Comment: When you filed a grievance, did they offer the opportunity to change your PCP?
- Comment: No.
- Comment: While the option to change one’s PCP is always there, health plan staff should offer such a change when someone files a grievance against their provider.
- Comment: It would be good to follow people who have been through the grievance process.
- Comment: Flow charts work well for this issue, using an “if/then” format.

- Comment: Authorizations and denials are fairly regulated in terms of time frames: this could be standardized across health plans.
- Comment: Prevent authorization problems in the first place: provide people a checklist to take to their appointments. This could include questions about the plan's formulary, generics, dosage, etc. There are definitely common elements in terms of questions, whereas the responses from the provider would vary by health plan.
- Comment: There are some rules about using managed health care that are consistent across health plans. There are some rules for navigating it in a managed care plan. These could be put into a DVD.
- Comment: There is a broad conceptual message about health plans that could be general.
- Comment: Checklists and flow charts could be set up for all health plans, with space for customization. Checklists are good for picking a PCP, but for something more complex, such as when to go to the ED, a flow chart might be more appropriate.
- Comment: Is there a way to pool resources and create a common way to educate consumers about selecting a PCP?
- Comment: Technology is important for data mining. Health plans hold a large amount of data that can be used for customization.
- Response: Mass customization is valuable to follow up on. Every day it is improving.
- Comment: Newsletter inserts are a good idea.
- Comment: Checklists are a great idea, but people need an incentive to complete them now rather than later.
- Comment: When is the best time to disseminate information? People have many different priorities; it is likely that the information will be best used when it is most needed. It should be available on demand.
- Comment: It is important to consider the receptivity to the source: OPA might be more acceptable than the health plan in some areas.

## **5. Understanding Benefits: Research Findings and Suggested Interventions**

### **Evidence of Coverage (EOC)**

Health plans are required to send an EOC to members every year. HRA's research found that most members do not read their EOC; they recycle it, because the document is long and cumbersome and members expressed concern that the information is out-dated. Members with limited health literacy said it was written at too high a level, while members with proficient health literacy said they had no trouble understanding it. Although the EOC is still a tool, it appears to only be useful for those at a higher literacy level.

#### **Research-Identified Interventions:**

There are many creative alternatives out there. Focus group participants identified the following potential interventions:

- Rewrite the EOC to make it easier to read, using FAQs, checklists, etc.
- Create a summary EOC. However, consider that some people want more information than the summary EOC provides.
- Put the EOC on a DVD.
- Create an online EOC with interactive questions/answers and/or enhanced search capabilities.
- Offer a paperless option by putting the EOC online and making it downloadable.
- Create an individualized EOC, with information that relates to members' specific health issues.

## **Medication Coverage/Prescription Drug Formularies**

The primary area of confusion for most people concerns medications, especially generics, formulary changes when medications are removed, and prescriptions that are not covered.

### **Research-Identified Interventions:**

- Educate members on how to get a medication authorized.
- Educate members about generic vs. brand name drugs.
- Write step-by-step instructions for ordering prescriptions online.
- Send letters to members when there are changes to the status of their medications on the formulary, with instructions of what to do, with at least a month to make changes.
- Redesign the medication formulary:
  - Lower the literacy level.
  - Categorize the formulary list by what condition the medication treats.
  - Include generic names in the formulary.

## **6. Discussion About Interventions**

After the presentation of the research findings was complete, and Advisory Group members obtained answers to their questions, the Advisory Group was asked to speak about EOC and prescription drug issues in terms of which interventions best met the criteria stated above.

### **EOC Interventions**

#### **Legal & Regulatory Issues**

- The EOC is a legal contract between the member and the health plan. Much of the information is required to be stated in particular ways.
- Think of the EOC as a patient education piece, rather than just a contract.
- It is possible that there will be legal issues arising from the use of a summary EOC. The EOC is an ongoing challenge.
- The EOC was driven by the State.
- OPA wants to move away from the regulatory issues and focus on educational materials.
- ICE-standardized forms use a good process. They are working on standardized denial letters. This process has addressed five different templates of the hundreds of forms health plans use. The process includes legal review, followed by literacy review and translation.
- HRA has created a template for EOCs for commercial plans, with language already approved by the State. HRA could do this for Medi-Cal plans as well.

#### **Summary Version**

- It might be best if OPA creates something different from the legal EOC, because it might be impossible to make the EOC itself engaging. Consider creating a summary of benefits.
- A summary is a good idea, using a format similar to a quick start guide or cliff notes. Consider including a flow chart and a troubleshooting section.
- Consider creating a document called, “What are my benefits?” Organize it differently from the EOC.
- Include FAQs for issues that are the same for all health plans.
- Provide a summary of patients’ rights and responsibilities.
- Think of it as a “Roadmap” to follow, using a flow chart. However, be aware that these flow charts might be considered legal documents.
- Engage people through incentives.

- There is significant tension between the need for complexity versus the concern of diluting the material too much for people with low literacy. People who receive excellent care do not have to worry about their EOC. Send the message that OPA thinks it is important that consumers are part of the conversation, that they have rights and responsibilities. That message leads to empowerment.

#### Online Version

- Any online version has to be searchable, with a short version that includes hyperlinks for more detail.
- An online version could be linked to members' benefits or conditions. Allow the member to personalize fields.
- Provide easy access to the EOC when members need it, either online or on a DVD.
- An online version EOC will help members.
- Make the online version interactive and engaging, using real life cases and Q & As.

#### Other Intervention Format Issues

- Consider breaking out different components/sections that are not part of the EOC contract.
- Develop patient education tools that support the EOC.
- Use newsletter inserts for some case examples.
- Recruit ethnic media to develop a "Dear Abby" type communication about the EOC.

### **Pharmacy Interventions**

#### Content

- Tailor what people need to know about their own medication, similar to Consumer Reports' drug website.
- There are many pieces of information people do not know, such as vacation refills, how to find out if a medication is covered, differences in co-pays for different drugs, etc.
- Educate about generic vs. brand name drugs.
- Make sure definitions and acronyms are explained.
- Make sure people know whom to call in the event of changes.
- Provide information about prescriptions by disease or condition and class within it.
- Have a handout that explains exactly when to take each medication.

#### Format/Interventions Across Health Plans

- There is basic knowledge people need, such as definitions for "formulary" or "generic" or understanding dosages.
- Create a checklist for going to the provider's office, with specific conceptual questions, i.e., about the formulary, cheaper alternatives, dosages, etc.
- Send letters to members when their medication changes for any reason, such as manufacturer, system of delivery, etc.
- Formularies are online now. There should be a website that has the formulary and other information that is listed on a card given to every member.
- Use a catchy title for the handout, such as *Ten Things Your Pharmacy Won't Tell You* or *Ten Things Your Health Plan Won't Tell You*.

#### Other Suggestions

- Make sure the doctor has access to each plan's formulary.
- Make prior authorization criteria transparent: publicize it.

- Do more work with providers, who have so many different plans with different formularies.

## 7. Recommendations

Each Advisory Group member was given two stickers to select two formats and two stickers to select two topics to be addressed. The results are below.

<b>TOPICS</b>	<b>VOTES</b>
Emergency department use	8
Medication coverage/prescription drug formularies	7
Authorizations/denial/grievances	4
How to use benefits	4
Primary care provider/provider directory	2
<b>FORMATS</b>	<b>VOTES</b>
Flowcharts	7
Checklists	6
TV	4
DVDs	2
Automated voice system	2
Fact sheets	1
Book/guidebooks; newsletters and inserts; Internet; PSAs (Radio or TV)	0

Flow charts and checklists were the most frequently identified formats and ED use and medications were the most frequently identified topics. As noted throughout the discussion, flow charts and checklists could be used and made available in a variety of formats, including newsletter inserts, guidebooks, online, etc. Their purpose is to simplify complex information and provide clear direction for making health care decisions, thereby empowering members to more effectively manage their own health care choices.

It was also noted that if people understood how to use their benefits, they might not use EDs as much. For example, one health plan did extensive education for teens concerning maintaining their confidentiality at their Primary Care Provider and there was a subsequent reduction in ED use.

## 8. Travel Reimbursements and Next Steps

Advisory Group members were reminded to complete their travel reimbursement form as soon as possible.

HRA and OPA will debrief about this meeting and talk about what interventions will be feasible in Year 2 of this project. OPA is waiting to hear about funding for the next fiscal year. OPA is interested in moving forward with this project, in partnership with HRA.

HRA and OPA thanked everyone for their time and commitment to reviewing the findings and guiding the selection of interventions to improve health literacy and health plan efficiencies.

**9. Adjourn**

The meeting adjourned at 4:00 pm.

## **Appendixes**

Appendix A: Intervention and Evaluation Tools from Literature Review

Appendix B: CHIS Analysis Tables

Appendix C: Material Usability Tested

## **Appendix A: Intervention and Evaluation Tools**

### **1. The Health Literacy Environment of Hospitals and Health Centers**

Authors: Rima Rudd, Jennie Anderson

Summary: Guide to evaluating the health literacy environment in hospitals for low-literacy patients. Guide provides a rating tool to evaluate facility navigation, print communication, oral exchange, technology, and policies and protocols. Includes an action plan and needs assessment.

Information: <http://www.ncsall.net/?id=1163>

### **2. Care Transitions Program**

Author: Eric Coleman

Summary: Patients work with “transition coaches” for 30 days after discharge to build their self-management skills. The goals of the program are: 1) Medication self-management: Patient is knowledgeable about medications and has a medication management system. 2) Use of a dynamic patient-centered record: Patient understands and utilizes the Personal Health Record (PHR) to facilitate communication and ensure continuity of care plan across providers and settings. The patient or informal caregiver manages the PHR. 3) Primary care and specialist follow-up: Patient schedules and completes follow-up visits with the primary care physician or specialist physician and is empowered to be an active participant in these interactions. 4) Knowledge of red flags: Patient is knowledgeable about indications that his or her condition is worsening and how to respond.

The program includes a Care Transitions Measure, which is a 15-item measure to assess the quality of care transitions. The measure demonstrated the power to discriminate between: 1) patients discharged from the hospital who did/did not experience a subsequent emergency visit or rehospitalization for their index condition, and 2) health care facilities with differing levels of commitment to care coordination.

Information: <http://www.caretransitions.org/>

### **3. Safety Net Health Information Exchange Toolkit**

Author: California Regional Health Information Organization (CalRHIO)

Summary: Supported by a grant from the Blue Shield of California Foundation, CalRHIO has developed a Health Information Exchange Toolkit (HIE) for safety net providers. The purpose of the toolkit is to provide templates, processes, and documents that can be used in a variety of ways to support HIE initiatives. These tools can be leveraged across the safety net community, including providers, consortia staff, organizational IT staff, etc. The templates can easily be modified based on the specific needs of each organization or initiative.

Information: <http://www.calrhio.org/?cridx=410>

#### 4. **Responsible Health Care Purchasing Statement**

Author: Midwest Business Group on Health, The Juran Institute

Summary: Four-step action cycle that purchasers can employ when contracting with health plans. Each of the four steps considers issues of quality and efficiency in responsible purchasing: identifying high-priority problems; measuring performance of plans; educating and sharing performance information with members; and rewarding high-quality plans.

Information: <http://www.mbg.org/index.php?t=initiatives/COPQ>  
("Reducing the Cost of Poor Quality Health Care" PDF, Appendix E)

#### 5. **Evaluating the Impact of Value-Based Purchasing: A Guide for Purchasers**

Author: Agency for Healthcare Research and Quality (AHRQ)

Summary: This guide was developed to be an evaluation tool for purchasers, particularly employers, in assessing their value-based purchasing activities. It is geared toward value-based purchasing, but the outcomes can be modified to align with measures of efficiency.

Information: <http://www.ahrq.gov/About/cods/valuebased/index.html#contents>

## **Appendix B: CHIS Analysis Tables**

- Table 1: Frequencies for Variables of Interest (2003-2005-2007 CHIS).... pages 99-107
- Table 2: Frequencies for Insurance Variables ....pages 108-109
- Table 3: Profile Type of HMO by demographics ....page 110
- Table 4: Communication with Doctor by Insurance/HMO type ....page 111
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**Table 1 (multiple pages)  
Frequencies for Variables of Interest  
2003, 2005, and 2007 California Health Interview Survey (CHIS)**

<b>Frequencies for Variables of Interest: 2003, 2005, and 2007 California Health Interview Survey (CHIS), unweighted data</b>						
			<b>year CHIS Survey Year</b>			
			<b>2003</b>	<b>2005</b>	<b>2007</b>	<b>Total</b>
sample size			<b>42,044</b>	<b>43,020</b>	<b>51,048</b>	<b>136,112</b>
<b>Demographics</b>						
<b>GENDER</b>	1.00 MALE	n	17,477	17,472	20,507	55,456
		Column %	41.6%	40.6%	40.2%	40.7%
	2.00 FEMALE	n	24,567	25,548	30,541	80,656
		Column %	58.4%	59.4%	59.8%	59.3%
<b>RACE - UCLA CHPR DEFINITION</b>	1.00 LATINO	n	7,135	6,369	5,922	19,426
		Column %	17.0%	14.8%	11.6%	14.3%
	2.00 PACIFIC ISLANDER	n	152	120	115	387
		Column %	0.4%	0.3%	0.2%	0.3%
	3.00 AMERICAN INDIAN/ALASKAN NATIVE	n	580	554	642	1,776
		Column %	1.4%	1.3%	1.3%	1.3%
	4.00 ASIAN	n	3,875	3,941	4,381	12,197
		Column %	9.2%	9.2%	8.6%	9.0%
	5.00 AFRICAN AMERICAN	n	2,691	1,954	2,512	7,157
		Column %	6.4%	4.5%	4.9%	5.3%
	6.00 WHITE	n	26,506	28,979	34,234	89,719
		Column %	63.0%	67.4%	67.1%	65.9%
	7.00 OTHER SINGLE/MULTIPLE RACE	n	1,105	1,103	3,242	5,450
		Column %	2.6%	2.6%	6.4%	4.0%
<b>EDUCATIONAL ATTAINMENT (recoded categories)</b>	1.00 & 91 Low Education ( $\leq 8$ years)	n	2,746	2,338	2,549	7,633
		Column %	6.5%	5.4%	5.0%	5.6%
	2.00 GRADE 9-11	n	2,554	2,293	2,414	7,261
		Column %	6.1%	5.3%	4.7%	5.3%
	3.00 GRADE 12/HS DIPLOMA	n	10,083	9,962	11,380	31,425
		Column %	24.0%	23.2%	22.3%	23.1%
	4.00-6.00 Some College (including Vocational or AA)	n	11,847	11,763	14,456	38,066
		Column %	28.2%	27.3%	28.3%	28.0%
	7.00 BA OR BS DEGREE	n	8,534	9,537	11,436	29,507
		Column %	20.3%	22.2%	22.4%	21.7%
	8.00-10.00 At Least Some Grad School	n	6,280	7,127	8,813	22,220
		Column %	14.9%	16.6%	17.3%	16.3%

**Frequencies for Variables of Interest: 2003, 2005, and 2007 California Health Interview Survey (CHIS), unweighted data**

			year CHIS Survey Year				
			2003	2005	2007	Total	
sample size			42,044	43,020	51,048	136,112	
CITIZENSHIP STATUS - 3 LEVELS	1.00 US-BORN CITIZEN	n	31,624	33,102	39,973	104,699	
		Column %	75.2%	76.9%	78.3%	76.9%	
	2.00 NATURALIZED CITIZEN	n	5,360	5,380	6,597	17,337	
		Column %	12.7%	12.5%	12.9%	12.7%	
	3.00 NON-CITIZEN	n	5,060	4,538	4,478	14,076	
		Column %	12.0%	10.5%	8.8%	10.3%	
YEARS LIVED IN THE U.S. (recoded)	1.00 < 1 Year	n	225	227	200	652	
		Column %	0.5%	0.5%	0.4%	0.5%	
	2.00-3.00 2-9 Years	n	2,156	1,882	1,763	5,801	
		Column %	5.1%	4.4%	3.5%	4.3%	
	4.00-5.00 10 or More Years	n	8,039	7,809	9,112	24,960	
		Column %	19.1%	18.2%	17.8%	18.3%	
	-1.00 Born in the U.S.	n	31,624	33,102	39,973	104,699	
		Column %	75.2%	76.9%	78.3%	76.9%	
HOW WELL YOU SPEAK ENGLISH	-1.00 Inapplicable (Speak English Only)	n	28,338	30,308	37,648	96,294	
		Column %	67.4%	70.5%	73.8%	70.8%	
	1.00 Very Well	n	5,811	5,399	5,645	16,855	
		Column %	13.8%	12.5%	11.1%	12.4%	
	2.00 Well	n	3,539	3,343	3,804	10,686	
		Column %	8.4%	7.8%	7.5%	7.9%	
	3.00 Not Well	n	2,890	2,590	2,695	8,175	
		Column %	6.9%	6.0%	5.3%	6.0%	
	4.00 Not At All	n	1,466	1,380	1,256	4,102	
		Column %	3.5%	3.2%	2.5%	3.0%	
	LANGUAGE OF INTERVIEW	1.00 ENGLISH	n	37,136	38,476	46,746	122,358
			Column %	88.3%	89.4%	91.6%	89.9%
2.00 SPANISH		n	3,737	3,141	3,132	10,010	
		Column %	8.9%	7.3%	6.1%	7.4%	
3.00 VIETNAMESE		n	322	371	291	984	
		Column %	0.8%	0.9%	0.6%	0.7%	
4.00 KOREAN		n	326	430	453	1,209	
		Column %	0.8%	1.0%	0.9%	0.9%	
5.00 CANTONESE		n	277	269	138	684	
		Column %	0.7%	0.6%	0.3%	0.5%	
6.00 MANDARIN		n	246	333	288	867	
		Column %	0.6%	0.8%	0.6%	0.6%	
POVERTY LEVEL	1.00 0-99% FPL	n	4,833	4,312	5,096	14,241	
		Column %	11.5%	10.0%	10.0%	10.5%	

**Frequencies for Variables of Interest: 2003, 2005, and 2007 California Health Interview Survey (CHIS), unweighted data**

			year CHIS Survey Year			
			2003	2005	2007	Total
sample size			<b>42,044</b>	<b>43,020</b>	<b>51,048</b>	<b>136,112</b>
	2.00 100-199% FPL	n	7,201	6,941	8,031	22,173
		Column %	17.1%	16.1%	15.7%	16.3%
	3.00 200-299% FPL	n	6,068	5,559	6,924	18,551
		Column %	14.4%	12.9%	13.6%	13.6%
	4.00 300% FPL AND ABOVE	n	23,942	26,208	30,997	81,147
		Column %	56.9%	60.9%	60.7%	59.6%
HOUSEHOLD'S TOTAL ANNUAL INC	Mean		61,278.4	68,741.8	72,034.8	67,671.4
	Std. Deviation		55,370.8	60,605.8	63,122.7	60,186.3
	Minimum		0.0	0.0	0.0	0.0
	Maximum		300,000.0	300,000.0	300,000.0	300,000.0

**Frequencies for Variables of Interest: 2003, 2005, and 2007 California Health Interview Survey (CHIS), unweighted data**

		year CHIS Survey Year				
		2003	2005	2007	Total	
		sample size	<b>42,044</b>	<b>43,020</b>	<b>51,048</b>	<b>136,112</b>
<b>Healthcare Access</b>						
HAVE USUAL PLACE TO GO TO WHEN SICK OR NEEDING HEALTH ADVICE	1.00 YES	n	37,778	39,094	43,727	120,599
		Column %	89.9%	90.9%	85.7%	88.6%
	2.00 NO	n	4,266	3,926	7,321	15,513
		Column %	10.1%	9.1%	14.3%	11.4%
<i>Note: 2007 data from AskCHIS, not in public file</i>						
USUAL SOURCE OF CARE - 7 LEVELS	1.00 DOC OFFICE/HMO/KAISER	n	31,199	30,286	36,100	97,585
		Column %	74.2%	70.4%	70.7%	71.7%
	2.00 COMMUNITY / GOV'T CLINIC, COMMUNITY HOSP	n	5,596	8,147	6,664	20,407
		Column %	13.3%	18.9%	13.1%	15.0%
	3.00 EMERGENCY ROOM	n	514	340	313	1,167
		Column %	1.2%	0.8%	0.6%	0.9%
	4.00 URGENT CARE	n	155	0	0	155
		Column %	0.4%	0.0%	0.0%	0.1%
	5.00 SOME OTHER PLACE	n	244	269	562	1,075
		Column %	0.6%	0.6%	1.1%	0.8%
	6.00 NO ONE PARTICULAR PLACE	n	70	52	88	210
		Column %	0.2%	0.1%	0.2%	0.2%
	7.00 NO USUAL SOURCE OF CARE	n	4,266	3,926	7,321	15,513
		Column %	10.1%	9.1%	14.3%	11.4%
<i>Note: 2007 data from AskCHIS, not in public file</i>						
DELAYED OR NOT GET PRESCRIPTION MEDICATION IN PAST 12 MOS	1.00 Yes	n	5,433		6,875	12,308
		Column %	12.9%		13.5%	13.2%
	2.00 No	n	36,611		44,173	80,784
		Column %	87.1%		86.5%	86.8%
DELAYED/DID NOT GET OTHER MEDICAL NEEDED CARE PAST 12 MOS	1.00 Yes	n	6,520		8,500	15,020
		Column %	15.5%		16.7%	16.1%
	2.00 No	n	35,524		42,548	78,072
		Column %	84.5%		83.4%	83.9%
HAD HARD TIME UNDERSTANDING DOCTOR LAST VISIT	-2.00 Proxy Skipped	n	0	141	168	309
		Column %	0.0%	0.3%	0.3%	0.2%
	-1.00 Inapplicable (asked only of people: Seen Doctor in Past 2 Years)	n	3,118	2,751	3,156	9,025
		Column %	7.4%	6.4%	6.2%	6.6%
	1.00 Yes	n	1,442	1,300	1,516	4,258
		Column %	3.4%	3.0%	3.0%	3.1%
	2.00 No	n	37,484	38,828	46,208	122,520
		Column %	89.2%	90.3%	90.5%	90.0%
MD SPOKE DIFFERENT LANGUAGE REASON WHY DIFFICULT TO UNDERSTAND	-2.00 Proxy Skipped	n	0	141	168	309
		Column %	0.0%	0.3%	0.3%	0.2%
	-1.00 Inapplicable (asked only of people: Seen	n	40,602	41,579	49,364	131,545
		Column %				

**Frequencies for Variables of Interest: 2003, 2005, and 2007 California Health Interview Survey (CHIS), unweighted data**

		year CHIS Survey Year				
		2003	2005	2007	Total	
		sample size	<b>42,044</b>	<b>43,020</b>	<b>51,048</b>	<b>136,112</b>
	Doctor in Past 2 Years and Had Hard Time Understanding Doctor on Last Visit)	Column %	96.6%	96.7%	96.7%	96.6%
	1.00 Yes	n	848	792	860	2,500
		Column %	2.0%	1.8%	1.7%	1.8%
	2.00 No	n	594	508	656	1,758
		Column %	1.4%	1.2%	1.3%	1.3%
<b>NEEDED SOMEONE ELSE TO HELP UNDERSTAND DOCTOR</b>  <i>Note: different "inapplicable" criteria for 2007</i>	-2.00 Proxy Skipped	n	0	141	168	309
		Column %	0.0%	0.3%	0.3%	0.2%
	-1.00 Inapplicable (asked only of people: Seen Doctor in Past 2 Years and Had Hard Time Understanding Doctor on Last Visit)	n	40,602	41,579	40,869	123,050
		Column %	96.6%	96.7%	80.1%	90.4%
	1.00 Yes	n	625	506	531	1,662
		Column %	1.5%	1.2%	1.0%	1.2%
	2.00 No	n	817	794	985	2,596
		Column %	1.9%	1.8%	1.9%	1.9%
<b>Health Insurance</b>						
<b>ANY INS IN LAST 12 MOS</b>	1.00 CURRENTLY UNINSURED	n	5,089	4,824	5,096	15,009
		Column %	12.1%	11.2%	10.0%	11.0%
	2.00 UNINSURED ANY PAST 12 MO	n	1,923	1,709	1,608	5,240
		Column %	4.6%	4.0%	3.2%	3.9%
3.00 INSURED ALL PAST 12 MO	n	35,032	36,487	44,344	115,863	
	Column %	83.3%	84.8%	86.9%	85.1%	
<b>HEALTH INS COVERAGE LAST 12 MOS, W/ CURRENT STATUS</b>	-1.00 INAPPLICABLE-AGE>=65	n	8,668	9,833	14,653	33,154
		Column %	20.6%	22.9%	28.7%	24.4%
	1.00 MEDI-CAL (MEDICAID) ONLY	n	2,962	2,879	3,216	9,057
		Column %	7.0%	6.7%	6.3%	6.7%
	2.00 EMPLOYER-BASED OR MILITARY ONLY	n	20,066	20,182	22,354	62,602
		Column %	47.7%	46.9%	43.8%	46.0%
	3.00 UNINSURED ONLY	n	3,818	3,676	2,451	9,945
		Column %	9.1%	8.5%	4.8%	7.3%
	4.00 PRIVATELY PURCHASED ONLY	n	2,173	2,402	1,099	5,674
		Column %	5.2%	5.6%	2.2%	4.2%
	5.00 PARTIALLY INSURED WITH MC/HEALTHY FAMILIES	n	749	686	745	2,180
		Column %	1.8%	1.6%	1.5%	1.6%
	6.00 PARTIALLY INSURED WITH NO MC/HEALTHY FAMILIES	n	2,329	2,055	3,961	8,345
		Column %	5.5%	4.8%	7.8%	6.1%
	7.00 INSURE ALL YEAR WITH SOME MC/HEALTHY FAMILIES	n	149	154	1,084	1,387
		Column %	0.4%	0.4%	2.1%	1.0%
8.00 HEALTHY FAMILIES ONLY/OTHER ALL YEAR	n	1,130	1,153	1,485	3,768	
	Column %	2.7%	2.7%	2.9%	2.8%	

**Frequencies for Variables of Interest: 2003, 2005, and 2007 California Health Interview Survey (CHIS), unweighted data**

		year CHIS Survey Year			
		2003	2005	2007	Total
sample size		42,044	43,020	51,048	136,112

CURRENT HEALTH COVERAGE - < 65 YRS	-1.00 SKIPPED - AGE >= 65	n	8,668	9,833	14,653	33,154
		Column %	20.6%	22.9%	28.7%	24.4%
1.00 UNINSURED	n	5,060	4,778	5,032	14,870	
	Column %	12.0%	11.1%	9.9%	10.9%	
2.00 MEDI-CAL (MEDICAID)	n	3,671	3,494	3,738	10,903	
	Column %	8.7%	8.1%	7.3%	8.0%	
3.00 MEDICARE	n	342	412	543	1,297	
	Column %	0.8%	1.0%	1.1%	1.0%	
4.00 EMPLOYMENT-BASED	n	21,208	21,218	23,652	66,078	
	Column %	50.4%	49.3%	46.3%	48.6%	
5.00 PRIVATELY PURCHASED	n	2,521	2,698	2,702	7,921	
	Column %	6.0%	6.3%	5.3%	5.8%	
6.00 CHIP/OTHER PUBLIC PROGRAM	n	574	587	728	1,889	
	Column %	1.4%	1.4%	1.4%	1.4%	

TYPE OF CURRENT HEALTH COVERAGE SOURCE FOR ELDERLY 65+	-1.00 SKIPPED - AGE < 65	n	33,376	33,187	36,395	102,958
		Column %	79.4%	77.1%	71.3%	75.6%
1.00 MEDICARE + MEDI-CAL (MEDICAID)	n	1,446	1,534	2,175	5,155	
	Column %	3.4%	3.6%	4.3%	3.8%	
2.00 MEDICARE + OTHER	n	6,305	7,179	10,757	24,241	
	Column %	15.0%	16.7%	21.1%	17.8%	
3.00 MEDICARE ONLY	n	555	694	1,040	2,289	
	Column %	1.3%	1.6%	2.0%	1.7%	
4.00 OTHER ONLY	n	333	380	617	1,330	
	Column %	0.8%	0.9%	1.2%	1.0%	
5.00 UNINSURED	n	29	46	64	139	
	Column %	0.1%	0.1%	0.1%	0.1%	

TYPE OF CURRENT HEALTH COVERAGE SOURCE FOR ALL AGES(PUF RECODE)	1.00 UNINSURED	n	4,824	5,096	9,920
		Column %	11.2%	10.0%	10.5%
2.00 MEDICARE & MEDICAID	n	2,120	2,957	5,077	
	Column %	4.9%	5.8%	5.4%	
3.00 MEDICARE & OTHERS	n	6,931	10,642	17,573	
	Column %	16.1%	20.8%	18.7%	
4.00 MEDICARE ONLY	n	1,354	1,698	3,052	
	Column %	3.1%	3.3%	3.2%	
5.00 MEDICAID	n	2,953	3,028	5,981	

**Frequencies for Variables of Interest: 2003, 2005, and 2007 California Health Interview Survey (CHIS), unweighted data**

		year CHIS Survey Year				
		2003	2005	2007	Total	
sample size		<b>42,044</b>	<b>43,020</b>	<b>51,048</b>	<b>136,112</b>	
	6.00 EMPLOYMENT-BASED	Column %		6.9%	5.9%	6.4%
		n		21,482	24,115	45,597
	7.00 PRIVATELY PURCHASED	Column %		49.9%	47.2%	48.5%
		n		2,743	2,754	5,497
	8.00 HEALTHY FAMILIES/OTHER PUBLIC	Column %		6.4%	5.4%	5.8%
		n		613	758	1,371
NAME OF HEALTH PLAN		Column %		1.4%	1.5%	1.5%
		n		36	4,116	4,224
<i>Note: 2007 CHIS has slightly different categories (the options 8 and 9 Medicare and Medi-Cal were eliminated and not available to interviewee)</i>		-9.00 Not Ascertained	72	36	4,116	4,224
		Column %	0.2%	0.1%	8.1%	3.1%
		-8.00 Don't Know	1,048	1,015	4,468	6,531
		Column %	2.5%	2.4%	8.8%	4.8%
		-7.00 Refused	281	306	426	1,013
		Column %	0.7%	0.7%	0.8%	0.7%
		-5 CHIS 2003 Skip Pattern fix	2,239	0	0	2,239
		Column %	5.3%	0.0%	0.0%	1.6%
		-1.00 Inapplicable (asked only of people: Any Health Insurance)	5,120	9,363	11,724	26,207
		Column %	12.2%	21.8%	23.0%	19.3%
		1.00 Kaiser	7,572	5,949	6,154	19,675
		Column %	18.0%	13.8%	12.1%	14.5%
		2.00 Blue Cross	6,773	7,240	9,388	23,401
		Column %	16.1%	16.8%	18.4%	17.2%
		3.00 PacifiCare	1,435	1,450	1,707	4,592
		Column %	3.4%	3.4%	3.3%	3.4%
		4.00 Blue Shield	2,737	2,762	3,554	9,053
		Column %	6.5%	6.4%	7.0%	6.7%
		5.00 Health Net	2,148	1,796	2,195	6,139
		Column %	5.1%	4.2%	4.3%	4.5%
		6.00 Aetna/Us Healthcare/Prudential	1,064	1,144	1,538	3,746
		Column %	2.5%	2.7%	3.0%	2.8%
		7.00 Cigna Healthcare	846	576	835	2,257
		Column %	2.0%	1.3%	1.6%	1.7%
		8.00 Medicare	2,844	3,476	4,943	6,320
		Column %	6.8%	8.1%	9.7%	4.6%
		9.00 Medi-Cal (Medicaid)	1,167	1,855	0	3,022
		Column %	2.8%	4.3%	0.0%	2.2%
		91.00 Other	6,698	6,052	0	17,693
		Column %	15.9%	14.1%	0%	13.0%
MAIN HEALTH PLAN IS HMO		-9.00 Not ascertained	0	0	776	776
		Column %	0	0	1.5%	0.05%
		-1.00 Inapplicable (only people: Any Health	5,072	9,363	11,722	26,157

**Frequencies for Variables of Interest: 2003, 2005, and 2007 California Health Interview Survey (CHIS), unweighted data**

			year CHIS Survey Year			
			2003	2005	2007	Total
sample size			<b>42,044</b>	<b>43,020</b>	<b>51,048</b>	<b>136,112</b>
	Insurance)	Column %	12.1%	21.8%	23.0%	19.2%
	1.00 Yes	n	20,046	16,788	17,814	54,648
		Column %	47.7%	39.0%	34.9%	40.2%
	2.00 No	n	16,926	16,869	20,736	54,531
		Column %	40.3%	39.2%	40.6%	40.1%
COVERED BY INDIAN HEALTH SERVICES	1.00 YES	n	162	157	163	482
		Column %	0.4%	0.4%	0.3%	0.4%
	2.00 NO	n	41,882	42,863	50,885	135,630
		Column %	99.6%	99.6%	99.7%	99.7%
COVERED BY MEDICARE	1.00 YES	n	9,115	10,405	15,297	34,817
		Column %	21.7%	24.2%	30.0%	25.6%
	2.00 NO	n	32,929	32,615	35,751	101,295
		Column %	78.3%	75.8%	70.0%	74.4%
COVERED BY MEDICARE SUPPL POLICY	-1.00 Inapplicable (asked only of people: With Medicare Not Provided through HMO)	n	32,252	36,603	41,828	110,683
		Column %	76.7%	85.1%	81.9%	81.3%
	1.00 Yes	n	6,725	3,629	5,450	15,804
		Column %	16.0%	8.4%	10.7%	11.6%
	2.00 No	n	3,067	2,788	3,770	9,625
		Column %	7.3%	6.5%	7.4%	7.1%
MEDICARE COVERAGE PROVIDED THROUGH HMO	1.00 Yes	n		4,675	6,628	11,303
		Column %		10.9%	13.0%	12.0%
	2.00 No	n		6,417	9,020	15,437
		Column %		14.9%	17.7%	16.5%
	-1.00 Inapplicable (asked only of people: With Medicare)	n		31,928	35,274	67,202
		Column %		74.2%	69.1%	71.4%
	-9.00 Not ascertained	n			126	126
		Column %			0.3%	0.1%
NAME OF MEDICARE HMO PLAN	-9.00 Not Ascertained	n		182	364	546
		Column %		0.4%	0.7%	0.6%
	-8.00 Don't Know	n		162	877	1,039
		Column %		0.4%	1.7%	1.1%
	-7.00 Refused	n		33	51	84
		Column %		0.1%	0.1%	0.1%
	-1.00 Inapplicable (asked only of people: Medicare Provided through HMO)	n		38,345	44,294	82,639
		Column %		89.1%	86.8%	87.9%
	1.00 Kaiser	n		1,900	2,346	4,246
		Column %		4.4%	4.6%	4.5%
	2.00 Blue Cross	n		284	356	640
		Column %		0.7%	0.7%	0.7%
	3.00 PacifiCare	n		382	1,217	1,599

**Frequencies for Variables of Interest: 2003, 2005, and 2007 California Health Interview Survey (CHIS), unweighted data**

		year CHIS Survey Year				
		2003	2005	2007	Total	
sample size		<b>42,044</b>	<b>43,020</b>	<b>51,048</b>	<b>136,112</b>	
	4.00 Blue Shield	Column %		0.9%	2.4%	1.7%
		n		209	246	455
	5.00 Health Net	Column %		0.5%	0.5%	0.5%
		n		296	477	773
	6.00 Aetna/US Healthcare/Prudential	Column %		0.7%	0.9%	0.8%
		n		78	102	180
	7.00 Medicare	Column %		0.2%	0.2%	0.2%
		n		271	0	271
	8.00 Medi-Cal (Medicaid)	Column %		0.6%	0.0%	0.3%
		n		42	0	760
91.00 Other	Column %		0.1%	0%	0.8%	
	n		836	718	836	
COVERED BY MEDI-CAL	1.00 YES	n	5,184	5,073	5,985	16,242
		Column %	12.3%	11.8%	11.7%	11.9%
	2.00 NO	n	36,860	37,947	45,063	119,870
		Column %	87.7%	88.2%	88.3%	88.1%
COVERED BY OTHER GOV'T PLANS	1.00 YES	n	281	286	356	923
		Column %	0.7%	0.7%	0.7%	0.7%
	2.00 NO	n	41,763	42,734	50,692	135,189
		Column %	99.3%	99.3%	99.3%	99.3%
# OF YEARS ON CURRENT HEALTH PLAN	Mean		7.3	8.2		7.8
	Std. Deviation		9.9	10.2		10.1
	Minimum		0	0		0
	Maximum		83	77		83
# MOS COVERED BY HEALTH PLANS LAST 12 MOS	Mean		10.51	10.61	10.77	10.64
	Std. Deviation		3.71	3.63	3.47	3.59
	Minimum		0	0	0	0
	Maximum		12	12	12	12



**RAW DATA**

Type of HMO Coverage				
Not ascertained	0 0.0%	0 0.0%	776 1.5%	776 0.6%
Public	3,035 7.2%	6,645 15.5%	8,216 16.1%	17,896 13.1%
Commercial	14,036 33.4%	14,098 32.8%	14,554 28.5%	42,688 31.4%
Both	2,685 6.4%	328 0.8%	439 0.9%	3,452 2.5%
Other	232 0.6%	249 0.6%	1,231 2.4%	1,712 1.3%
Uninsured	5,224 12.4%	4,913 11.4%	5,096 10.0%	15,233 11.2%
Non-HMO insurance	16,832 40.0%	16,787 39.0%	20,736 40.6%	54,355 39.9%

**WEIGHTED DATA**

Type of HMO Coverage				
Public	16.3%	27.9%	23.9%	22
Commercial	72.7%	70.2%	69.5%	70
Both	10.1%	0.9%	0.9%	3
Other	1.0%	0.9%	5.7%	2

*p < 0.001*

**Table 3**  
**Profile of Type of HMO Coverage by Demographics**  
 2003, 2005, and 2007 California Health Interview Survey (CHIS)

Profile of People Covered by Different HMO Types, California Health Interview Survey (CHIS) 2003, 2005, and 2007				
	<b>Education</b> At least some college	<b>Income</b> Annual household income (\$10k)	<b>English Proficiency</b> Speak only English or English very well	<b>Self-reported Health</b> Good, very good, or excellent health
Overall (n=65,878)	60.0%	6.98	77.1%	82.3%
Public (n=18,023)	42.4%	3.84	68.5%	66.3%
Commercial (n=42,691)	66.1%	8.17	79.5%	88.3%
Both (n=3,452)	56.0%	4.70	87.4%	72.2%
Other (n=1,712)	55.8%	5.85	74.3%	76.5%
<i>P value for all 4 groups</i>	<i>p &lt; 0.001</i>	<i>p &lt; 0.001</i>	<i>p &lt; 0.001</i>	<i>p &lt; 0.001</i>

**Bivariate Associations**  
**Table 4**  
**Communication with Doctor by HMO Coverage and HMO Type**  
 2003, 2005, and 2007 California Health Interview Survey (CHIS)

**Communication with Doctor by HMO Coverage and HMO Type, California Health Interview Survey (CHIS) 2003, 2005, and 2007**

	aj8 Hard Time Understanding Doctor <sup>6</sup>	aj10 Needed Help Understanding Doctor (among hard time understanding) <sup>7</sup>
<b>Covered by HMO</b>		
Overall (n=135,366)	4.2%	46.6%
Covered by HMO (n=65,748)	4.0%	43.4%
Covered by Non-HMO (n=54,355)	3.4%	43.6%
No insurance (15,233)	6.5%	58.6%
<i>P value for all 3 groups</i>	<i>p &lt; 0.001</i>	<i>p &lt; 0.001</i>
<i>P value HMO v. Non-HMO only</i>	<i>p = 0.007</i>	<i>p = 0.955</i>
<b>HMO Type</b>		
Overall (n=65,748)	4.0%	43.3%
Public (n=17,896)	5.9%	50.6%
Commercial (n=42,688)	3.4%	38.6%
Both (n=3,452)	4.5%	42.3%
Other (n=1,712)	3.1%	64.9%
<i>P value for all 4 groups</i>	<i>p &lt; 0.001</i>	<i>p &lt; 0.001</i>
<i>P value public v. commercial HMO only</i>	<i>p &lt; 0.001</i>	<i>p &lt; 0.001</i>

<sup>6</sup> SURVEY ITEM #: AJ8: The last time you saw a doctor, did you have a hard time understanding the doctor?

<sup>7</sup> SURVEY ITEM #: AJ10: Did you need someone to help you understand the doctor?

**Table 5**  
**Communication with Doctor by HMO type, Stratified by English Proficiency**  
 2003, 2005, and 2007 California Health Interview Survey (CHIS)

Communication with Doctor by English Proficiency, HMO Coverage, and HMO Type, CHIS 2003, 2005, and 2007						
	aj8 Hard Time Understanding MD <sup>8</sup>			aj10 Needed Help Understanding MD (among hard time understanding) <sup>9</sup>		
Covered by HMO	English Only ah37 = -1 (58.5%)	English Very Well ah37 = 1 (15.0%)	English Less than Very Well ah37 > 1 (26.5%)	English Only ah37 = -1 (58.5%)	English Very Well ah37 = 1 (15.0%)	English Less than Very Well ah37 > 1 (26.5%)
Overall (n=135,366)	2.7%	2.8%	8.5%	25.5%	31.4%	66.0%
Covered by HMO (n=65,748)	2.8%	3.0%	8.1%	23.2%	33.9%	64.9%
Covered by Non-HMO (n=54,355)	2.3%	2.5%	8.5%	29.9%	27.4%	61.9%
No insurance (15,233)	4.0%	2.8%	9.1%	23.2%	29.0%	70.9%
<i>P value for all 3 groups</i>	<i>p &lt; .001</i>	<i>p = .675</i>	<i>p = .439</i>	<i>p = .053</i>	<i>p = .712</i>	<i>p = .177</i>
<i>P value HMO v. Non-HMO only</i>	<i>p = .005</i>	<i>p = .382</i>	<i>p = .664</i>	<i>p = .019</i>	<i>p = .448</i>	<i>p = .472</i>
HMO Type						
Overall (n=65,748)	2.8%	3.0%	8.1%	23.2%	33.9%	64.9%
Public (n=17,896)	4.0%	3.7%	10.2%	31.5%	47.1%	64.9%
Commercial (n=42,688)	2.4%	2.8%	7.1%	18.0%	28.6%	64.0%
Both (n=3,452)	3.4%	3.2%	11.8%	28.2%	53.9%	63.9%
Other (n=1,712)	2.1%	1.5%	6.4%	39.5%	54.2%	86.0%
<i>P value for all 3 groups</i>	<i>p &lt; .001</i>	<i>p = .041</i>	<i>p = .004</i>	<i>p = .034</i>	<i>p = .181</i>	<i>p = .198</i>
<i>P value public v. commercial only</i>	<i>p &lt; .001</i>	<i>p = .228</i>	<i>p = .002</i>	<i>p = .020</i>	<i>p = .115</i>	<i>p = .852</i>

<sup>8</sup> AJ8: The last time you saw a doctor, did you have a hard time understanding the doctor?

<sup>9</sup> AJ10: Did you need someone to help you understand the doctor?

**Multivariate Models**  
**Table 6**  
**Communication with Doctor – Hard Time Understanding, by Insurance/HMO Type**  
 2003, 2005, and 2007 California Health Interview Survey (CHIS)

Dependent Variable: aj8. Hard Time Understanding Doctor (n = 126,778) <sup>10</sup>						
	Model 1 Odds Ratio	sig	Model 2 Odds Ratio	Model 3 Odds Ratio	Model 4 Odds Ratio	Model 5 Odds Ratio
Constant	0.06	*	0.08	0.10	0.06	0.05
HMO public	1		1	1	1	1
HMO commercial	0.57	*	0.69	0.92	0.90	1.01
HMO both	0.75		0.83	0.86	1.02	1.03
HMO other	0.51	*	0.56	0.63	0.62	0.65
non-HMO	0.57	*	0.68	0.83	0.86	0.90
Not insured	1.11		1.06	1.06	0.89	0.95
Less than college education			1	1	1	1
At least some college or above			0.43	0.54	0.64	0.68
Household income (continuous, in 10K increments)				0.91	0.93	0.94
English only or very well					1	1
English Less Than Very Well					2.29	2.07
Good, very good, or excellent health						1
Fair or poor health						2.00

\*  $p < .05$

<sup>10</sup> **AJ8:** The last time you saw a doctor, did you have a hard time understanding the doctor?

**Table 7**  
**Communication with Doctor – Needed Help, by Insurance/HMO type**

Dependent Variable: aj10. Needed Help Understanding Doctor (among hard time understanding) (n = 4,258) <sup>11</sup>					
	Model 1 Odds Ratio	Model 2 Odds Ratio	Model 3 Odds Ratio	Model 4 Odds Ratio	Model 5 Odds Ratio
Constant	1.05	1.36 *	1.72 *	0.69 *	0.54
HMO public	1	1	1	1	1
HMO commercial	0.60 *	0.70 *	0.96	0.90	0.98
HMO both	0.70	0.79	0.81	1.00	1.04
HMO other	1.76	1.82	2.16 *	2.23 *	2.32
non-HMO	0.73 *	0.78	0.90	0.93	0.94
Not insured	1.35 *	1.27	1.29	0.99	1.04
Less than college education		1	1	1	1
At least some college or above		0.41 *	0.52 *	0.62 *	0.63
Household income (continuous, in 10K increments)			0.89 *	0.93 *	0.94
English only or very well				1	1
English less than very well				4.03 *	3.93
Good, very good, or excellent health					
Fair or poor health					1.49

\*  $p < .05$

<sup>11</sup> AJ10: Did you need someone to help you understand the doctor?

**Table 8**  
**Delayed Medical Care, by Insurance/HMO type**  
 2003 and 2007 California Health Interview Survey (CHIS)

Delayed Medical Care by HMO Coverage and HMO Type, California Health Interview Survey (CHIS) 2003 and 2007		
	ah16 Delayed or Did Not Get Prescription <sup>12</sup>	ah22 Delayed or Did Not Get Other Needed Medical Care <sup>13</sup>
<b>Covered by HMO</b>		
Overall (n=92,316)	12.1%	15.5%
Covered by HMO (n=44,486)	11.8%	14.2%
Covered by Non-HMO (n=37,662)	13.0%	14.7%
No insurance (n=10,168)	11.0%	21.0%
<i>P value for all 3 groups</i>	<i>p &lt; 0.001</i>	<i>p &lt; 0.001</i>
<i>P value HMO v. Non-HMO only</i>	<i>p = 0.002</i>	<i>p = 0.189</i>
<b>HMO Type</b>		
Overall (n=44,429)	11.8%	14.2%
Public (n=11,251)	13.4%	12.9%
Commercial (n=28,591)	11.5%	15.1%
Both (n=3,124)	8.5%	6.6%
Other (n=1,463)	13.6%	16.6%
<i>P value for all 4 groups</i>	<i>p &lt; 0.001</i>	<i>p &lt; 0.001</i>
<i>P value public v. commercial only</i>	<i>p = 0.003</i>	<i>p &lt; 0.001</i>

<sup>12</sup> AH16: During the past 12 months, did you either delay or not get a medicine that a doctor prescribed for you?

<sup>13</sup> AH22: 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?

**Table 9**  
**Usual Source of Medical Care, by Insurance/HMO Type**  
 2003 and 2005 California Health Interview Survey (CHIS)

Usual Source of Medical Care by HMO Coverage and HMO Type, California Health Interview Survey (CHIS) 2003 and 2005 <sup>14</sup>							
	MD Office, HMO, Kaiser	Community / Gov't Clinic, Community Hospital	Emergency Department	Urgent Care	Some Other Place	No One Particular Place	No Usual Source of Care
<b>Covered by HMO</b>							
Overall (n=85,064)	66.2%	18.3%	1.2%	0.2%	0.5%	0.2%	13.4%
Covered by HMO (n=41,308)	77.9%	15.5%	0.9%	0.1%	0.3%	0.1%	5.1%
Covered by Non-HMO (n=33,619)	70.0%	18.6%	1.2%	0.3%	0.6%	0.2%	9.2%
No insurance (n=10,137)	23.4%	26.3%	2.2%	0.2%	0.9%	0.3%	46.7%
<i>P value for all 3 groups</i>				<i>p &lt; 0.001</i>			
<i>P value for HMO v. non-HMO only</i>				<i>p &lt; 0.001</i>			
<b>HMO Type</b>							
Overall (n=41,308)	77.9%	15.5%	0.9%	0.1%	0.3%	0.1%	5.1%
Public (n=9,680)	68.2%	22.5%	1.8%	0.1%	0.2%	0.1%	7.1%
Commercial (n=28,134)	79.7%	14.1%	0.7%	0.1%	0.4%	0.1%	4.8%
Both (n=3,013)	93.9%	4.3%	0.2%	0.0%	0.0%	0.1%	1.6%
Other (n=481)	81.3%	16.1%	0.2%	0.0%	0.7%	0.5%	1.2%
<i>P value for all 4 groups</i>				<i>p &lt; 0.001</i>			
<i>P value Public v. Commercial only</i>				<i>p &lt; 0.001</i>			

<sup>14</sup> USUAL: 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 medical doctor's office, a clinic or hospital clinic, an emergency room, or some other place?

**Table 10**  
**Health Literacy Questions, Frequency**  
 2007 California Health Interview Survey (CHIS)

<b>Health Literacy Questions, California Health Interview Survey (CHIS) 2007</b>						
	-2 Skipped (proxy)	1 Very Easy	2 Somewhat Easy	3 Somewhat Difficult	4 Very Difficult	5 Don't Get ( / Written Ir
<b>aj51. Easy To Read Instructions On Prescription Bottle</b> <sup>15</sup>	0.4%	66.5%	23.7%	5.6%	2.3%	1.5%
<b>aj52. Easy To Understand Written Info At Dr</b> <sup>16</sup>	0.4%	51.1%	30.9%	10.4%	4.4%	2.9%

**Table 11**  
**Health Literacy Questions, by Insurance/HMO type**

	<b>aj51</b> <b>Easy To Read Instructions On Prescription Bottle</b>					<b>aj52</b> <b>Easy To Understand Written Info Get from Doctor</b>				
	1 Very Easy	2 Somewhat Easy	3 Somewhat Difficult	4 Very Difficult	5 No Pre- scriptions	1 Very Easy	2 Somewhat Easy	3 Somewhat Difficult	4 Very Difficult	5 No Writt Info
<b>Covered by HMO</b>										
Overall (n=50,272)	66.8%	23.8%	5.6%	2.2%	1.5%	51.3%	31.0%	10.4%	4.4%	2.9%
HMO Coverage (n=24,440)	69.1%	22.8%	5.1%	2.0%	1.0%	54.0%	30.1%	9.6%	3.8%	2.7%
Non-HMO Coverage (n=20,736)	68.9%	23.6%	4.7%	1.5%	1.4%	53.5%	30.8%	8.8%	3.8%	3.1%
No insurance (n=5,096)	55.4%	27.5%	9.3%	4.6%	3.2%	38.6%	34.2%	16.3%	7.7%	3.2%
<i>P value for all 3 groups</i>			<i>p &lt; 0.001</i>					<i>p &lt; 0.001</i>		
<i>P value for HMO v. non-HMO only</i>			<i>p = 0.066</i>					<i>p = 0.189</i>		
<b>HMO Type</b>										
Overall (n=24,440)	69.1%	22.8%	5.1%	2.0%	1.0%	54.0%	30.1%	9.6%	3.8%	2.7%
Public (n=8,216)	64.7%	23.5%	6.4%	4.0%	1.4%	51.0%	28.1%	11.3%	5.4%	4.2%
Commercial (n=14,554)	70.7%	22.6%	4.4%	1.4%	0.9%	55.0%	30.6%	8.8%	3.3%	2.2%
Both (n=439)	74.7%	14.8%	7.6%	2.0%	0.9%	68.9%	16.9%	5.5%	5.0%	3.7%
Other (n=1,231)	67.4%	23.5%	6.7%	1.5%	1.0%	50.9%	33.8%	11.6%	2.6%	1.2%
<i>P value for all 4 groups</i>			<i>p &lt; 0.001</i>					<i>p &lt; 0.001</i>		

<sup>15</sup> **AJ51:** When you read the instructions on a prescription bottle, would you say it is very easy, somewhat easy, somewhat difficult, or very difficult to understand?

<sup>16</sup> **AJ52:** When you get written information at a doctor's office, would you say it is very easy, somewhat easy, somewhat difficult, or very difficult to understand?

	aj51 Easy To Read Instructions On Prescription Bottle					aj52 Easy To Understand Written Info Get from Doctor				
	1 Very Easy	2 Somewhat Easy	3 Somewhat Difficult	4 Very Difficult	5 No Pre- scriptions	1 Very Easy	2 Somewhat Easy	3 Somewhat Difficult	4 Very Difficult	5 No Writt Info
<i>P value for public v. commercial only</i>	<i>p &lt; 0.001</i>					<i>p &lt; 0.001</i>				
<b>EVERYONE AGE 65+</b>										
<b>Covered by HMO</b>										
Overall (n=13,896)	67.4%	20.8%	6.4%	3.5%	2.0%	56.8%	23.7%	8.4%	5.2%	6.0%
HMO Coverage (n=7,280)	67.2%	20.8%	6.4%	3.6%	2.0%	56.8%	23.9%	8.8%	5.0%	5.5%
Non-HMO Coverage (n=6,557)	67.8%	21.0%	6.4%	3.1%	1.7%	56.8%	23.5%	7.8%	5.4%	6.5%
No insurance (n=59)*	54.1%	13.3%	5.9%	9.9%	16.8%	53.3%	16.4%	7.9%	7.3%	15.1%
<i>P value</i>	<i>p = 0.221</i>					<i>p = 0.289</i>				
<b>HMO Type</b>										
Overall (n=7,280)	67.2%	20.8%	6.4%	3.6%	2.0%	56.8%	23.9%	8.8%	5.0%	5.5%
Public (Medicare HMO, n=6,461)	66.8%	20.8%	6.4%	3.8%	2.1%	56.1%	23.9%	9.1%	5.1%	5.8%
Commercial (n=0)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Both (n=438)	74.7%	14.8%	7.6%	2.0%	0.9%	68.9%	16.9%	5.5%	5.0%	3.7%
Other (n=381)	67.4%	24.9%	4.2%	2.5%	1.0%	57.5%	30.0%	7.7%	2.7%	2.1%
<i>P value</i>	<i>p = 0.003</i>					<i>p &lt; 0.001</i>				
*Small Number of People, potential for unstable estimates										

**Table 12**  
**Health Literacy and Insurance Coverage past 12 months**  
 2007 California Health Interview Survey (CHIS)

**Health Literacy by Insurance/Uninsurance in Previous Year, California Health Interview Survey (CHIS) 2007**

		<b>1</b> Very Easy	<b>2</b> Somewhat Easy	<b>3</b> Somewhat Difficult	<b>4</b> Very Difficult	<b>5</b> Don't Get ( / Info)
aj51 <b>Easy To Read Instructions On Prescription Bottle</b> <sup>17</sup>	Overall	66.8%	23.8%	5.6%	2.3%	1.5%
	Had insurance all of previous 12 months	69.4%	22.8%	4.9%	1.8%	1.1%
	Was uninsured some part of last year	56.6%	27.7%	8.7%	4.1%	2.8%
	<i>P Value</i>			<i>p &lt; 0.001</i>		
aj52 <b>Easy To Understand Written Info At Doctors</b> <sup>18</sup>	Overall	51.3%	31.0%	10.4%	4.4%	2.9%
	Had insurance all of previous 12 months	54.3%	30.1%	9.1%	3.7%	2.9%
	Was uninsured some part of last year	39.7%	34.5%	15.7%	7.1%	3.0%
	<i>P Value</i>			<i>p &lt; 0.001</i>		

<sup>17</sup> **AJ51:** When you read the instructions on a prescription bottle, would you say it is very easy, somewhat easy, somewhat difficult, or very difficult to understand?

<sup>18</sup> **AJ52:** When you get written information at a doctor's office, would you say it is very easy, somewhat easy, somewhat difficult, or very difficult to understand?

**Table 13**  
**Health Literacy items by Doctor Communication**  
 2007 California Health Interview Survey (CHIS)

**Communication with Doctor and Healthcare Access by Health Literacy, California Health Interview Survey (CHIS) 2007**

		Communication		Delayed Care	
		aj8 Hard Time Understanding MD <sup>19</sup>	aj10 Needed Help Understanding MD (among hard time understanding) <sup>20</sup>	ah16 Delayed or Not Get Rx <sup>21</sup>	ah22 Delayed / Did Not Get Other Medical Care <sup>22</sup>
aj51 Easy To Read Instructions On Prescription Bottle <sup>23</sup>	Overall	3.5%	42.2%	12.4%	16.4%
	1 Very Easy	2.4%	29.2%	12.5%	16.3%
	2 Somewhat Easy	4.1%	40.4%	12.7%	17.4%
	3 Somewhat Difficult	9.4%	68.6%	13.0%	16.3%
	4 Very Difficult	17.5%	64.2%	11.1%	16.1%
	5 Don't Get Prescriptions	2.6%	42.0%	5.6%	10.8%
<i>P value</i>		<i>p &lt; 0.001</i>	<i>p &lt; 0.001</i>	<i>p &lt; 0.001</i>	<i>p = 0.032</i>
aj52 Easy To Understand Written Info at Doctors <sup>24</sup>	Overall	3.5%	42.2%	12.4%	16.4%
	1 Very Easy	1.7%	31.6%	12.3%	15.0%
	2 Somewhat Easy	3.5%	33.7%	12.4%	17.8%
	3 Somewhat Difficult	8.1%	51.8%	13.8%	19.3%
	4 Very Difficult	14.6%	60.0%	12.5%	16.8%
	5 Don't Get Prescriptions	3.7%	33.8%	10.4%	16.4%
<i>P value</i>		<i>p &lt; 0.001</i>	<i>p &lt; 0.001</i>	<i>p = 0.090</i>	<i>p &lt; 0.001</i>

<sup>19</sup> **AJ8:** The last time you saw a doctor, did you have a hard time understanding the doctor?

<sup>20</sup> **AJ10:** Did you need someone to help you understand the doctor?

<sup>21</sup> **AH16:** During the past 12 months, did you either delay or not get a medicine that a doctor prescribed for you?

<sup>22</sup> **AH22:** 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?

<sup>23</sup> **AJ51:** When you read the instructions on a prescription bottle, would you say it is very easy, somewhat easy, somewhat difficult, or very difficult to understand?

<sup>24</sup> **AJ52:** When you get written information at a doctor's office, would you say it is very easy, somewhat easy, somewhat difficult, or very difficult to understand?

**Table 14**  
**Multivariate Models**  
**Health Literacy Variables**  
 2007 California Health Interview Survey (CHIS)

**Description of Outcome Variables**

<b>aj51. Easy to Read Instructions on Prescription Bottle<sup>25</sup></b>						
	<b>Original Variable</b>		<b>categorization</b>		<b>Recoded for Regression</b>	
	<b>Frequency</b>	<b>Percent</b>			<b>Frequency</b>	<b>Percent</b>
Skipped (proxy)	168	0.33%	missing			
Very Easy	35,642	69.82%	yes	YES	35,642	71.27%
Somewhat Easy	10,956	21.46%	no	NO	14,368	28.73%
Somewhat Difficult	2,538	4.97%	no			
Very Difficult	874	1.71%	no			
Don't Get Rx	870	1.70%	missing			

<b>aj52. Easy to Understand Written Info at Doctor's Office<sup>26</sup></b>						
	<b>Original Variable</b>		<b>categorization</b>		<b>Recoded for Regression</b>	
	<b>Frequency</b>	<b>Percent</b>			<b>Frequency</b>	<b>Percent</b>
Skipped (proxy)	168	0.33%	missing			
Very Easy	28,667	56.16%	yes	YES	28,667	58.54%
Somewhat Easy	14,418	28.24%	no	NO	20,301	41.46%
Somewhat Difficult	4,266	8.36%	no			
Very Difficult	1,617	3.17%	no			
Don't Get Written Info	1,912	3.75%	missing			

**Statistician comments:** the "original variables" columns are the frequencies of each variable. Because the regression analysis requires a binomial variable (e.g., yes/no), I re-categorized the variables into:

- "very easy" = 1 (yes) and
- "less than very easy" (i.e., somewhat easy, somewhat difficult, and very difficult) = 0 (no).

People who skipped this question or responded that they didn't get prescriptions or written information were excluded from these analyses.

<sup>25</sup> **AJ51:** When you read the instructions on a prescription bottle, would you say it is very easy, somewhat easy, somewhat difficult, or very difficult to understand?

<sup>26</sup> **AJ52:** When you get written information at a doctor's office, would you say it is very easy, somewhat easy, somewhat difficult, or very difficult to understand?

**Table 15**  
**Multivariate Model**  
**Easy to Read Instructions on Prescription Bottle**

Dependent Variable: aj51. Easy to Read Instructions on Prescription Bottle <sup>27</sup>					
	Model 1 Odds Ratio	Model 2 Odds Ratio	Model 3 Odds Ratio	Model 4 Odds Ratio	Model 5 Odds Ratio
Constant	1.87	1.60	1.48	2.40	2.57
HMO public	1	1	1	1	1
HMO commercial	1.34 *	1.21 *	1.06	1.09	1.06
HMO both	1.58 *	1.47 *	1.33	1.26	1.25
HMO other	1.15	1.10	1.03	1.04	1.02
non-HMO	1.23 *	1.12 *	1.00	0.97	0.96
Not insured	0.71 *	0.73 *	0.72 *	0.91	0.89
Less than college education		1	1	1	1
At least some college or above		1.49 *	1.34 *	1.13 *	1.12 *
Household income (continuous, in 10K increments)			1.03 *	1.02 *	1.01 *
English only or very well				1	1
English Less Than Very Well				0.33 *	0.34 *
Good, very good, or excellent health					1
Fair or poor health					0.84 *

\*  $p < .05$

<sup>27</sup> AJ51: When you read the instructions on a prescription bottle, would you say it is very easy, somewhat easy, somewhat difficult, or very difficult to understand?

**Table 16**  
**Multivariate Model**  
**Easy to Understand Written information at the Doctor's Office**

Dependent Variable: aj52 Easy to Understand Written Info at Doctor's Office <sup>28</sup>					
	Model 1 Odds Ratio	Model 2 Odds Ratio	Model 3 Odds Ratio	Model 4 Odds Ratio	Model 5 Odds Ratio
Constant	1.11	0.89	0.83	1.20	1.29
HMO public	1	1	1	1	
HMO commercial	1.16 *	1.01	0.90	0.91	0.88 *
HMO both	2.06 *	1.86 *	1.70 *	1.61 *	1.60 *
HMO other	0.96	0.90	0.86	0.85	0.83
non-HMO	1.11 *	0.97	0.88 *	0.85 *	0.84 *
Not insured	0.60 *	0.61 *	0.60 *	0.72 *	0.70 *
Less than college education		1	1	1	
At least some college or above		1.74 *	1.59 *	1.39 *	1.37 *
Household income (continuous, in 10K increments)			1.03 *	1.02 *	1.01 *
English only or very well				1	
English less than very well				0.40 *	0.41 *
Good, very good, or excellent health					
Fair or poor health					0.83 *

\*  $p < .05$

<sup>28</sup> AJ52: When you get written information at a doctor's office, would you say it is very easy, somewhat easy, somewhat difficult, or very difficult to understand?

## Appendix C: Usability Testing Materials

(For privacy purposes, names of health plans have been deleted from the usability test materials.)

### Appendix C1: Commercial Newsletter – Emergency Room and Urgent Care



**my health**

# How to Get Emergency and Urgent Care

What should you do when you or one of your family members becomes ill suddenly or has an accident? Learn as much as you can about how to get emergency and urgent care before you need it.

**When It's an Emergency**  
An emergency is an accident or sudden illness that a person with an average knowledge of medical science believes needs to be treated right away to prevent loss of life, serious medical complications, or permanent disability. Your plan covers emergency care.

**HOW TO KNOW.** Examples of emergency conditions can include:

- Uncontrollable bleeding
- Seizure or loss of consciousness
- Chest pain or squeezing sensation in the chest

- Shortness of breath
- Suspected overdose or poisoning
- Sudden paralysis or slurred speech
- Broken bones
- Severe pain
- Active labor

**WHAT TO DO.** Seek medical care immediately. Go directly to the nearest emergency facility or call 911 or your local emergency services number. You do not need a referral from your doctor or authorization before receiving emergency care.

**HOW TO FOLLOW UP.** Call your doctor (or have someone call for you) for further assistance and follow-up care. When possible, you should call your doctor within 48 hours of visiting the emergency room. Call sooner if your emergency doctor says you should.

**When It's Urgent**  
Your doctor or an on-call doctor should be available 24 hours a day, seven days a week, to provide advice or treatment in an urgent situation.

**HOW TO KNOW.** Examples of conditions usually considered urgent

include minor cuts or burns, vomiting, ear infections, and minor pain.

**WHAT TO DO.** If you are in doubt about what to do, you may call your doctor for advice. He or she will direct you to the most appropriate place for care: an urgent care center, the doctor's office, or the emergency room.

**When You're Traveling**  
If you need emergency or urgent care while you are traveling, rest assured that wherever you go, your coverage goes with you.

**WHAT TO DO.** If an emergency arises while you are traveling, go to the nearest emergency facility or call 911. In an urgent situation, go to a local doctor, an urgent care center, or an emergency room. If you need to pay for your treatment at the time you receive it, save your receipts so that you can submit them for reimbursement. Call the toll-free number on your [redacted] healthCare ID card to find out how to submit your receipts.

**HOW TO FOLLOW UP.** If you are ever hospitalized while traveling, call your doctor as soon as possible.

**TERMS TO KNOW**

**Referral:** When your doctor sends you to another doctor, usually a specialist, for treatment or consultation.

**Reimbursement:** When you pay for covered services out of your own pocket, you can submit proof of the payment to [redacted] to be repaid according to the terms of your plan.

**24-HOUR HEALTH INFORMATION**  
When you have a health question or want to learn more about a health-related topic, call the [redacted] HealthCare 24-Hour Health Information Line<sup>SM</sup>. Just dial the toll-free number on your [redacted] HealthCare ID card and get the answers today.

8 [redacted]

## What to Do in an Emergency

**It's 1 a.m. and your 4-year-old daughter has a fever of 102°.** She says she is cold and that her stomach hurts. Is this an emergency? Should you take her to an emergency room?

Sometimes it's easy to know you have an emergency (see the box for a few examples).

But when you're not sure, you can call your PCP doctor. The PCP doctor's phone number is on a member's ID card. If you cannot reach your PCP doctor, you can call [REDACTED] 4-hour nurse advice line at 1-800-249-3619. A caring nurse will ask you to describe what is going on and help you decide what to do.

Call 911 or go to the nearest emergency room if you have an emergency. Emergency care is covered at all times and in all places.

If you go to an emergency room, call your PCP doctor as soon as you can afterwards. This is very important. After you leave the hospital, make an appointment with your PCP doctor for any follow-up care.

*To learn more about how your health plan works, please read your Member Handbook (which is also called an Evidence of Coverage, or "EOC") that your health plan sent you. If you would like another copy of the Member Handbook, or want a copy in another language, call your health plan or [REDACTED]-888-839-9909.*



### Emergency Examples

According to most health plans, emergencies include (but are not limited to) the following:

- breathing problems
- seizures (convulsions)
- lots of bleeding
- unconsciousness/blackouts (will not wake up)
- severe pain (including chest pain)
- swallowing of poison or medicine overdose
- broken bones
- head injury
- eye injury

### Nurse Advice Line Numbers

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

Appendix C3: Medi-Cal Postcard – Emergency Room

Outside of postcard:

**NOT SURE  
IF IT'S AN EMERGENCY?**

**GET FAST FREE ADVICE FROM  
A REGISTERED NURSE...  
AVAILABLE 24 HOURS A DAY!**



Inside of postcard:

**CALL [REDACTED] MEMBER SERVICES  
AT 1-800-675-6110 ASK FOR THE NURSE  
ADVICE LINE**

**THE NURSE ADVICE LINE IS AVAILABLE 24 HOURS A DAY IN  
YOUR LANGUAGE AND CAN HELP YOU:**

- Decide if you need to go the emergency room
- Decide if you need to go to the urgent care center TODAY
- Find an urgent care center near your home
- Decide if you can wait to see your family doctor
- Learn steps you may take at home to manage symptoms

**STICK  
MAGNET  
HERE**

**DEAR MEMBER,**

**Asthma** causes many signs, including coughing, wheezing, tightness in the chest and shortness of breath. It's important to know what to do when there is a sudden flare up of symptoms and how to treat asthma when it gets worse.

**MORE INFORMATION ABOUT ASTHMA**

**HERE ARE SOME TIPS YOU CAN USE TO GET YOUR ASTHMA UNDER CONTROL:**

- Use your rescue medicine (often an inhaler) at the FIRST sign of breathing problems.
- Follow the instructions that your doctor has given you in your Asthma Care Plan. If you don't have a plan, ask your doctor for one.
- Try sitting or standing in a warm shower for 5 or 10 minutes.
- Stay away from items that may make your asthma worse, such as pets, dust, chemical smells like paint or perfumes, and pollen.

**YOU CAN HELP TO PREVENT ASTHMA SYMPTOMS BY:**

- Washing all of your bed linens in hot water once a week.
- Washing your child's favorite blanket or toys once a week.
- Not smoking, and not letting anyone smoke in the house.

**CALL YOUR DOCTOR RIGHT AWAY IF YOUR RESCUE MEDICINES DO NOT HELP, OR IF YOU ARE NOT FEELING BETTER WITHIN A DAY.**



## Appendix C4: Statewide Emergency Room Collaborative Brochure

### Cover, back, and inside of brochure

**Is your child seeing the doctor today?**

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**Ask your child's doctor when to go to the emergency room.**

The doctor knows your child's medical history.

Your doctor can help you make better choices for your child.



**Use this space to write down what your doctor tells you today:**

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Sponsored by California's Statewide Emergency Room Collaborative — Medi-Cal Managed Care Health Plans  
09/11/11

**Not Sure It's An Emergency?**

Call our office or your health plan's advice line



**They can give you advice on where to go and what to do if your child has an:**

- Earache
- Sore throat
- Cough
- Cold
- Flu

### Inside of brochure

**Why should I take my child to the doctor for regular check-ups?**

**With regular check-ups your doctor will:**

- Get to know your child's medical history better.
- Give your child the best care — when it is needed.
- Give you advice on how to keep your child healthy.
- Give you advice on when to use the emergency room and when to call the doctor **first**.

**Avoid the long waits and the crowds in the Emergency Room.**

**Find help by calling your child's doctor or the health plan's advice line.**

**How can I keep my child from getting a cold or flu?**

You can't always keep your child from getting sick, but here are things that can help:

- **Make sure your child's shots are up-to-date.**
- **Get your child a flu shot if the doctor suggests it.**
- **Teach your child to:**
  - Wash hands for at least 20 seconds after using the toilet and before eating.
  - Avoid touching eyes, nose or mouth.
  - Not share food, drinks or eating utensils.
  - Keep away from others who have a cold or cough.

**How can I help my child feel better?**

If your child gets a sore throat, cough, cold, or flu, here are things you can do:

- **Make sure your child:**
  - Gets lots of rest and sleep.
  - Drinks plenty of fluids.
- **Use a humidifier or salt water nose drops to help with a stuffy nose.**
- **Ask your doctor if your child needs cold or cough medicine.**



Appendix C5: Commercial Health Plan Nurse Advice Line Magnet



## Know your rights and responsibilities

██████████ is committed to treating you in a manner that respects your rights, recognizes your specific needs and maintains a mutually respectful relationship. To demonstrate our commitment, ██████████ has adopted a set of member rights and responsibilities.

### **You have the right to:**

- Receive information about ██████████, its services, its practitioners and providers, and members' rights and responsibilities.
- Be treated with respect and recognition of your dignity and right to privacy.

- Participate with practitioners in making decisions about your health care.
- Have a candid discussion about appropriate or medically necessary treatment options for your condition(s), regardless of cost or benefit coverage.
- Voice complaints or appeals about the organization or the care it provides.
- Make recommendations regarding ██████████'s member rights and responsibilities policies.

### **You have the responsibility to:**

- Supply information (to the extent

possible) that ██████████ and its practitioners and providers need to provide care.

- Follow plans and instructions for care that you have agreed on with your practitioners.
- Understand your health problems and participate in developing mutually agreed upon treatment goals to the degree possible.

These rights and responsibilities apply to your relationship with ██████████, our contracting practitioners and providers, and all other health care professionals.

## Appendix C7: Medi-Cal EOC – Rights & Responsibilities

### Member's Rights:

#### **Members Have Rights & Responsibilities**

As a member of the [REDACTED] you have both rights and responsibilities.

##### **Your Rights**

You have the right to:

- Take part in all decisions about your care.
- Hear about all care options.
- Tell us what kind of care you want if you become unable to make your own health care decisions.
- See your medical record and get a copy.
- Know the names of the people who give you care and what kind of training they have.
- Have an interpreter who speaks your language.

You also have the right to:

- Get care with dignity and respect.
- Be assured of privacy and confidentiality.
- Get care in a place that is safe, secure, clean and accessible.
- Get a second opinion from one of the doctors in the Health Plan at any time.
- Know how to get help and solve problems. Your care will not be affected if you file a grievance or make a complaint.

## Member's Responsibilities:

### Members Have Rights & Responsibilities

#### Your Responsibilities

You are responsible to:

- Keep appointments or call to cancel or reschedule.
- Tell your doctor about your health and health history.  
Ask questions about your health care.
- Follow the care plan you and your doctor agree on.
- Recognize the effects of your lifestyle on your health.
- Tell the Health Plan when your address or phone number changes.  
Call Member Services at 1-800-260-2055.
- Renew your eligibility and membership on time.
- Present your Health Plan ID card when you are receiving services.

#### Healthy Families and Healthy Kids Members

- Make your premium payments on time.  
You pay \$4-\$6 per month per child. You pay no more than \$18 per month for all the children in your family. That payment includes medical, dental and vision services. If you pre-pay 3 months' premiums, then the 4th month is free.
- Pay your co-pay or co-payments for visits and medicines.

#### Medi-Cal Members

- You do not have premium payments or co-payments.  
Services are provided at no cost to you.