Office of Health Information Technology

MEDI-CAL EHR INCENTIVE PROGRAM

Landscape Assessment Summary Report

McKinsey&Company

The LEWIN GROUP®

California's Medi-Cal EHR Incentive Program Landscape Assessment

The Department of Health Care Services (DHCS), The Lewin Group and McKinsey & Company completed an initial landscape assessment of outpatient providers, hospitals, *electronic* health records (EHR) vendors, and expected return on investment for providers adopting EHR. The assessment was completed to gain an understanding of the size and complexity of the program that DHCS will be responsible for implementing under the ARRA-funded program to provide financial incentives to Medicaid providers and hospitals for adopting and using EHRs meaningfully in practice. The following is a brief summary of the findings of this landscape assessment.

I. Introduction

In addressing the largest single obstacle to adoption of EHRs – high upfront and ongoing costs – the HITECH Act offers California an unparalleled opportunity to build the health information technology infrastructure of both outpatient providers as well as acute-care inpatient hospitals. This landscape assessment projects that California can expect to receive as much as $1.4 billion in Medicaid incentive funds if all eligible hospitals and providers apply for and receive full incentive funding.

II. Outpatient Provider landscape

According to interim regulations released by CMS in December 2009, non-hospital based outpatient providers (physicians, dentists, nurse practitioners, certified nurse midwives, and physician assistants that practice in an FQHC or RHC) qualify for incentive payments if at least 30% of their total encounters are with Medicaid beneficiaries. There are some exceptions to the patient volume threshold criteria: pediatricians are eligible for an incentive if at least 20% of their total encounters are with Medicaid beneficiaries and providers practicing in FQHCs and RHCs can include "needy individuals" not eligible for Medi-Cal to reach the 30% threshold. Hospital-based providers, both inpatient and outpatient, are excluded from the incentive program.

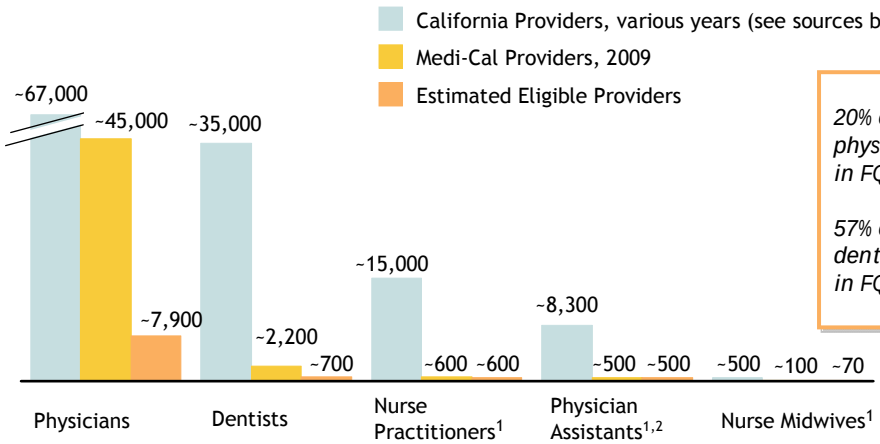
Using available data sources, including externally published data and the Medi-Cal eligibility and claims databases, it is estimated that approximately 67,000 physicians practice in California. Approximately forty-five thousand physicians participate in the Medi-Cal program. Of the total 35,000 dentists practicing in California, only 2,200 (6%) provide care to Medi-Cal beneficiaries. Information on allied health professionals participating in Medi-Cal is limited and, therefore, estimates of their participation in the program are imprecise.

Approximately 20%, or nearly 10,000 Medi-Cal providers, are estimated to meet the patient volume threshold (Figure 1). This includes approximately 7,900 physicians, approximately 700 dentists, and approximately 1,200 affiliated professionals. Among physicians, pediatricians and OB/GYNs are considerably more likely to meet the patient volume threshold than primary care providers and other specialists.

Providers in counties with a higher proportion of Medicaid members are more likely to meet the patient volume threshold, as are providers in rural areas. In rural areas, nearly half (45%) of providers who meet the patient volume threshold practice in clinics.

Figure 1: Estimation of Medi-Cal Eligible Providers

Approximately 20%, or nearly 10,000 Medi-Cal providers, are estimated to meet the patient volume thresholds; the percentage varies substantially by provider type



	Physicians	Dentists	Nurse Practitioners[1]	Physician Assistants[1,2]	Nurse Midwives[1]
Percent of Medi-Cal providers	18%	32%	100%	100%	70%
Percent of California providers	12%	2%	4%	6%	16%

1 Outside of FQHC/Look-Alike/RHC/IHS data, information on allied professionals participating in Medi-Cal is limited, likely resulting in an underestimate of the total number of allied professionals participating in Medi-Cal and an overestimate of the proportion of those meeting the patient volume threshold

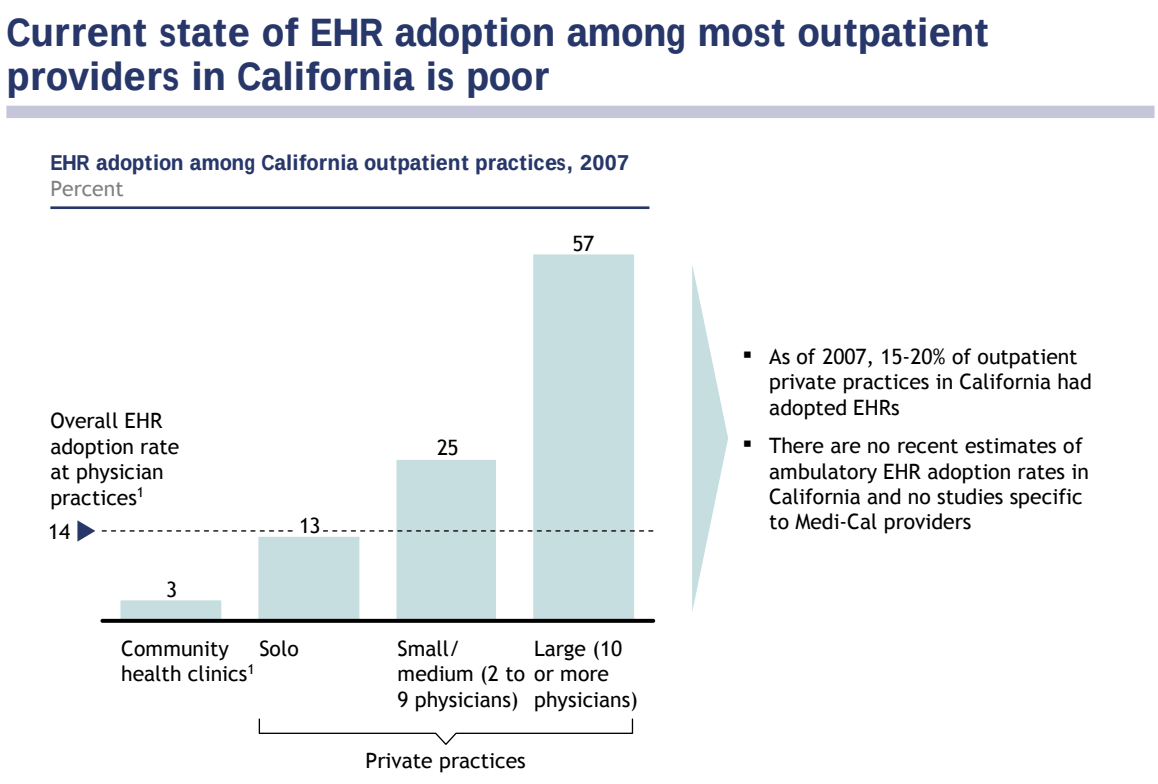
2 Physician Assistant estimates do not reflect that eligible Physician Assistants must be in Physician Assistant-led clinics

SOURCE: California: CHCF, June 2009, "Fewer and more specialized: A new assessment of physician supply in California"; American Dental Association; Dental Data 2008; American Academy of Nurse Practitioner, 2001; American Academy of Physician Assistants, 2008 Census Survey; Certified Nurse Midwife Survey, 2003. Medi-Cal: MIS/DSS, 2009; Lewin analysis

Outpatient Provider Perspectives & Segmentation

Based on 2005 data from a study conducted by the California HealthCare Foundation, overall EHR adoption rates by providers in California is quite low (14%). The rate of adoption was found to be variable based on practice characteristics such as practice type (e.g., private practice, community health centers) and practice size. Community health centers have the lowest level of adoption (3%), while the adoption rate for private practices increases with practice size (Figure 2).

Figure 2: EHR Adoption in California



1 Data is from 2005

SOURCE: 2008, CHCF, "Snapshot - The State of Health Information Technology in California: Use Among Physicians and Community Clinics"; McKinsey analysis

Outpatient providers can be considered to fall into the following segments: community health centers, solo/ small private practices, medium private practices, large private practices, and community health centers. Among the large set of providers who have not adopted EHR, published literature and interviews indicate that it may be helpful to consider providers' current attitudes to adoption as existing along a spectrum:

- At one extreme, many providers, particularly those in small/ solo practices, are not actively considering EHR adoption. These providers are often focused on other clinical priorities not related to health information technology. They often perceive adoption as unwise given the relative immaturity of the EHR market and prefer a 'watch and wait' approach. Many, particularly older physicians nearing retirement, are reluctant of adopting new technology. They broadly assume EHRs are cost-prohibitive and lack an understanding of the longer-term potential return on investment.
- Many providers are considering EHR adoption but still have not made a definitive decision as to the net value of implementation. This group, often comprised of providers in slightly larger practices, lack a complete understanding of financial benefits of EHR adoption, perceive that the benefits of EHR systems accrue to the payer and health system rather than to the provider, is reluctant given the known adverse impact on clinic productivity pre-, during, and post-installation,

and lack awareness of the range of software options and their financial implications.

- Providers working in somewhat larger practices or working in community health centers may be convinced of the net value of EHR, but still have not adopted. In many cases, these providers feel overwhelmed and confused by the number of EHR products on the market and the different types of EHR technologies and doubt their capacity to make a wise and informed vendor selection. Their practices often lack the IT capabilities present in the largest physician groups that are needed to assist with this vendor decision, as well as the broader needs of implementation planning and execution (e.g., workflow redesign).

- At the other end of the spectrum is a group of providers, often in the largest physician practices, that are currently planning for or are in the process of implementation. They struggle with the details of implementation such as staff training, organizational change, and workflow redesign. They often have encountered challenges with the product selected and seamlessly integrating it into their practice.

There are an estimated 3,200 providers likely to be eligible for Medi-Cal incentive funding in the community health center segment and approximately 2,100 in each of the remaining private practice segments. Across outpatient provider types, common themes related to both the ARRA program and EHR adoption emerged from interviews with providers and other stakeholders. There was a notable lack of awareness and understanding of the ARRA stimulus funding legislation and at times frank misunderstanding or misinformation related to specific program elements (e.g., timing of payments, process for disbursing funds, eligibility criteria, definition of meaningful use, source of funding being the State vs. the federal government, etc.). Providers indicated concern with the State of California's involvement in the program in two specific areas: 1) the State's ability to efficiently and effectively disburse stimulus funds in a timely manner and 2) the perceived likelihood that the State will seek to modify meaningful use requirements, thus compounding existing confusion and making meaningful use and qualifying for incentive payments harder to achieve. Providers interviewed also uniformly expressed frustration with several important aspects of EHR adoption including: confusion on the best vendor choices, the ability of vendors to facilitate achievement of meaningful use, and how best to interpret vendor offers and commitments (e.g., meaningful use guarantees, financing options).

Also consistent across interviews was the finding that providers' most trusted sources of information are regional medical associations, trade associations, local medical societies, medical groups/ IPAs, and their peer providers. This has clear implications for development of a promotional campaign plan for the incentive program.

III. Inpatient Provider Landscape

Hospital Eligibility

According to the CMS' interim regulations, to qualify for Medicaid EHR incentive payments, hospitals must meet three criteria: (1) have a CMS Certification Number

(CCN) between 0001-0879; (2) have an average length of stay of 25 days or fewer; and (3) have at least 10% of total discharges attributable to Medicaid. Children's hospitals must have a CCN between 3300-3399 and are exempt from the Medicaid volume and length of stay requirements. Critical Access Hospitals are ineligible for the Medicaid incentive under the current criteria.

Of the 435 hospitals in California, 242 (56%) are potentially eligible for Medi-Cal incentive payments (Figure 3). Eight of these are Children's hospitals; the remaining 234 are general acute care facilities. Statewide, these eligible hospitals cover nearly 93% of all Medi-Cal discharges.

Figure 3: Facilities Meeting Eligibility Threshold

All children's hospitals qualify for the incentive; 55% of all other hospitals meet eligibility thresholds

	Total in California	Facilities meeting eligibility threshold[1]	
		Acute care definition (LOS and CCN)	Patient volume threshold (and acute care definition)
Children's hospitals	8	8 (100%)	8 (100%)
All other hospitals	427	308 (72%)	234 (55%)
TOTAL	435	316 (73%)	242 (56%)

1 Analysis based on hospitals with an eligible CCN number indicating acute care or children's status. Eligibility estimates are based on discharges in hospital fiscal year ending in 2008

SOURCE: California Office of Statewide Health Planning and Development, Healthcare Information Division, 2008; Lewin analysis

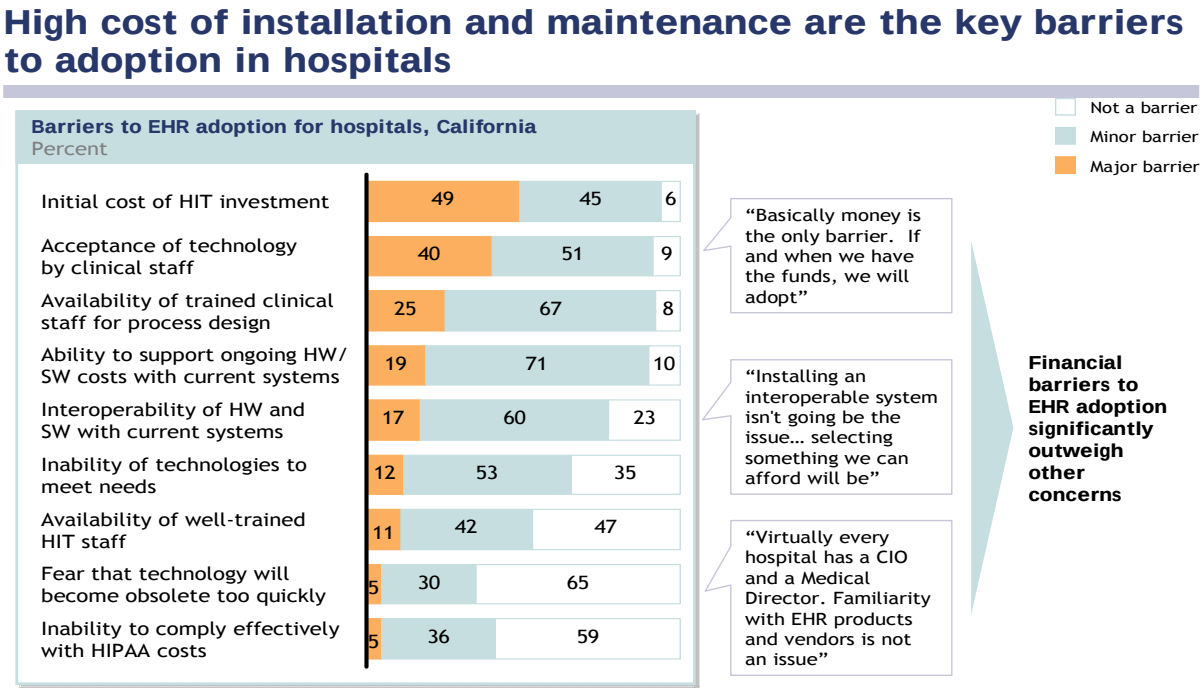
The CMS interim regulations specifically exclude Critical Access Hospitals from the Medicaid incentive program. These hospitals serve Medicaid and other "safety net" populations in rural and underserved areas. An additional four rural hospitals (based on the OSHPD definition of California Rural Hospitals, are ineligible due to length of stay or discharge volume criteria. Additionally, of the 111 Disproportionate Share Hospitals (DHS) in California, 21 are ineligible due to their status as a Critical Access Hospital, length of stay, or discharge volume criteria.

Inpatient Hospital Perspectives & Segmentation

While adoption rates among inpatient facilities are also low, they are higher than in the outpatient setting (13% fully implemented, 42% partially implemented, 45% not implemented). Though hospitals are generally more sophisticated than outpatient providers in their knowledge of the HITECH Act and consideration of EHR adoption, they expressed many concerns similar to outpatient providers, including confusion regarding the vendor landscape, lack of understanding of ARRA, and concerns that the State may seek to modify meaningful use requirements (Figure 4). These concerns are particularly prominent among smaller hospitals. Integration of an EHR with other inpatient (and outpatient) hospital systems (e.g., PACS, OR scheduling) creates an additional layer of complexity compared to the situation faced in the outpatient setting.

Based on trends in adoption rates, inpatient hospitals can be segmented based on system affiliation and hospital type (e.g., children's hospitals, critical access hospitals).

Figure 4: Factors influencing hospital adoption of EHRs



Source, CHCF, 2008, "Snapshot - The State of Health Technology in California; use among hospitals and Long Term Care Facilities"; provider and expert interview; McKinsey Analysis.

In general, it is anticipated that hospitals will be heavily motivated to adopt EHRs because of Medicare penalties scheduled to begin in 2015.

IV Vendor Landscape

The vendor landscape, while still immature, is quickly adapting to the HITECH world. The ambulatory EHR market is far less mature and consolidated than the inpatient EHR market, in which a few key vendors dominate. Client-site models, once dominant in the market overall, are gradually losing popularity to off-site models in the outpatient setting, particularly among smaller practices. Such off-site models include SaaS (Software as a Service) where both software and data are maintained by the software vendor and accessed through a web-interface. SaaS software is multi-tenant, with functionality and features determined by the vendor. ASP (Application Service Provider) is a similar off-site model in which software is purchased by the end-user from a third-party rather than from the vendor. The user operates and maintains software and data through an ASP server and software may be accessed through a web interface or via special interface software. With both SaaS and ASP, the user pays for services on a subscription or as-used basis. These two closely-related types of off-site models are lower cost solutions than are client-site models, but are less able to be customized to meet specific provider needs and do not possess the complexity required by inpatient facilities. Open source software is also an evolving segment of the vendor landscape that should be monitored over time.

Vendors are uniformly aware of meaningful use requirements and are taking active steps to ensure software will be ready for providers to prove meaningful use according to stages defined by the Office of the National Coordinator (ONC). The ONC has estimated that ~90% of previously CCHIT-certified-EHRs will qualify for meaningful use certification upon publication of federal criteria. However, the amount of effort it will take providers, both inpatient and outpatient, to achieve meaningful use should not be understated. Providers must also be aware that vendor software, while necessary, is not sufficient to achieve meaningful use. Furthermore, providers must be cautioned that the capability of software to facilitate meaningful use does not imply either cost-effectiveness or ease of use. Providers must also take caution in interpreting vendor commitments related to meaningful use given the high costs of switching between vendors and the still-evolving nature of the meaningful use criteria. Providers in interviews express the most doubt about achieving the reporting, patient-portal functionality, and interoperability components of various stages of meaningful use. Providers and vendors must proactively seek meaningful use compliance due to the tight incentive funding timeline.

In an effort to secure market share in a crowded and rapidly changing field, vendors are striving to differentiate themselves in part by offering providers high levels of customer support, novel software offerings (e.g., ASP hosting arrangements), financial assistance or low-cost financing options, and guarantees of meaningful use. Providers must exercise caution and diligence in interpreting and comparing these vendor offerings. Furthermore, providers would be wise to consider a larger set of characteristics in selecting an EHR vendor than simply software characteristics. Other important considerations include the vendors' organizational stability/capacity, total cost of ownership, and issues that affect the overall usability of the installed system.

V Return-On-Investment Analysis

Providers almost uniformly lack financial understanding of the return-on-investment (ROI) from adoption of EHRs. They also lack understanding of the factors influencing their ultimate ROI, including timing of incentive payments, choice of software, and extent of practice productivity decline. For this reason an analysis of the ROI for typical outpatient practices and inpatient hospital types was conducted. This was assessed through the following categories of costs/ benefits.

- Direct costs (e.g., hardware, software)
- Indirect costs (e.g., transient productivity loss)
- Indirect benefits (e.g., improved coding accuracy, improved quality of care)
- Direct benefits (i.e., incentive payments)

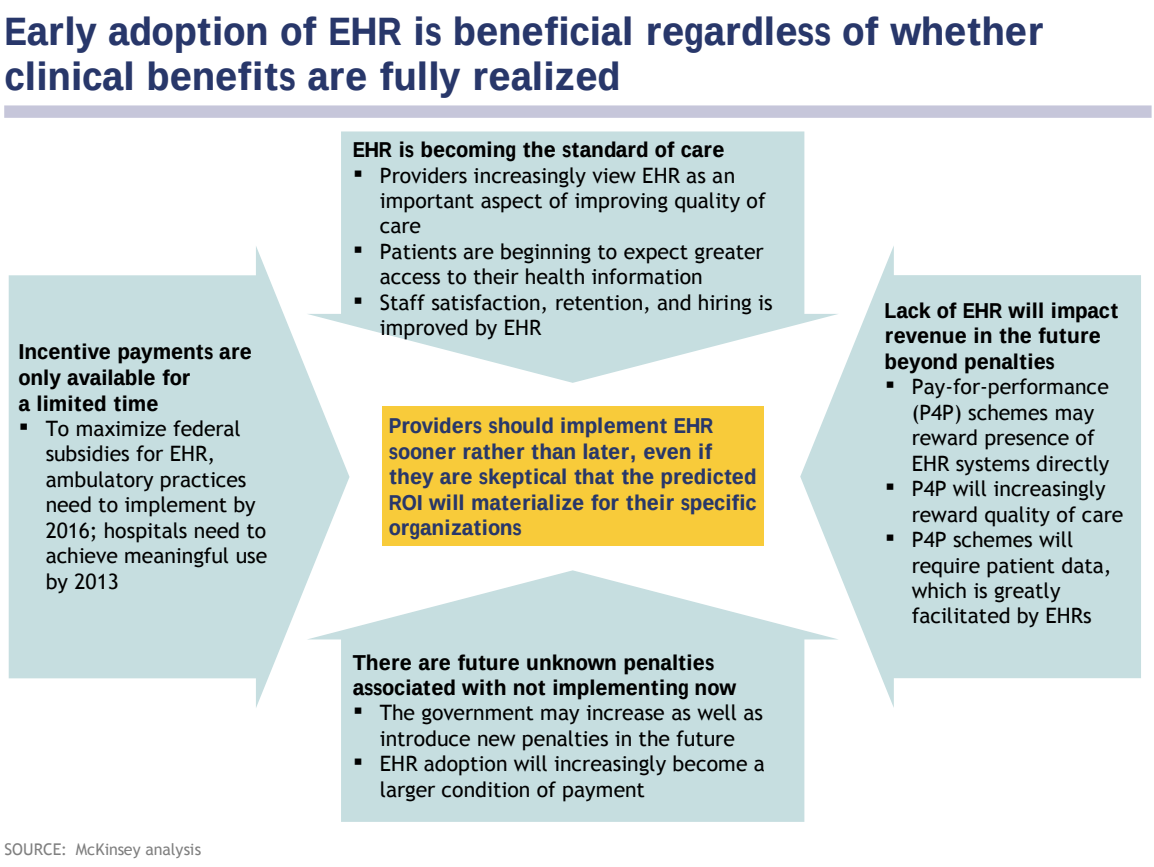
Notable findings from the ROI analysis include:

- Off-site models offer significant cost reductions (60-70%) compared to historically predominant client-site software, but still generate negative cash flows and substantial productivity losses in early years of adoption--factors that curb small providers' enthusiasm for EHRs.
- Medi-Cal incentive funding would greatly improve the financial ROI for adoption among eligible providers, leading to a breakeven point generally 1-3 years earlier than a situation without incentive payments. In general, most providers adopting off-site models can expect to break even within 2-3 years if they implement early enough to maximize incentive funding.
- Large private clinics are better positioned than smaller private practices to support adoption given their greater scale, flexibility, technical sophistication, and available logistical support. However, their preference for client-site models will extend the time required to reach the break-even point (typically 4-5 years).
- Federally-qualified health centers fail to realize the maximal financial benefit of EHRs given their dependence on prospective payment systems. However, their emphasis on care quality and the creation of consortiums/networks are helping to spur adoption in this segment.
- Discounting (e.g., via group purchasing) and innovative financing options can help hasten the break-even point and/or even out cash flows to the benefit of providers.
- Unlike outpatient providers, hospitals' need for complex client-site models leads to significantly higher costs for EHR adoption. Hospitals can expect to spend ~$30,000-$50,000 per bed in initial start-up costs and ongoing annual costs of $8,000-$10,000 per bed. Hospitals adopting highly customized or sophisticated systems may experience costs that exceed these amounts

- Medicare penalties for failure to adopt are substantial: a 'typical' hospital could expect cumulative penalties exceeding $2.5 million by 2018, in addition to foregoing $6.6 million in average cumulative incentive payments had the hospital implemented in 2011.

Over time, providers should be made aware of how the shift toward EHR will fundamentally change the ROI calculation over time. As EHRs become the standard of care and as financial incentives/ penalties are more commonly linked to information technology, the majority of providers will likely find that the benefits of adoption, when done along a timeframe that allows them to take advantage of available incentive payments, will outweigh any benefits of an extended or indefinite delay (Figure 5).

Figure 5: Benefits of Early Adoption



VI Implications for State's Incentive Plan

The State must focus on those levers that can help address key provider concerns in order to maximize participation in the Medi-Cal EHR Incentive Program. Such levers include an education and information campaign, provision of technical and advisory support, and financial incentives, in part (but not fully) provided by the Medi-Cal incentives themselves. A starter list of programs/ initiatives that could be considered in the strategic campaign include:

- Education/ information campaign: Promotional campaign targeted to providers, hospitals, and patients, covering facts related to both ARRA/ HITECH as well as EHR adoption itself (e.g., costs and benefits of adoption, vendor selection, EHR planning and implementation), etc.
- Technical/ advisory support: Planning and implementation consulting support, dissemination of best practices, support in EHR vendor selection, workflow redesign/ training, etc.
- Financial incentives: ARRA incentives, EHR loan funds, alternative financing arrangements, etc.

It will be critical for the State to understand the impact of these and other initiatives in maximizing adoption among priority provider segments; understand the scope of services currently or intended to be offered by other stakeholders (e.g., regional extension centers, managed care plans, trade associations, vendors); and prioritize where it is critical for the State to both influence and fill gaps in the existing landscape. Finally, it is essential that the State engage patients to ensure their needs and interests are addressed.

From a policy perspective, the State must consider a number of issues, including how to design a reliable and timely payment process, timing of program initiation, distribution of payments, and potential modification of meaningful use criteria. If meaningful use criteria are modified, as allowed by CMS, this must be clearly communicated with providers who, as described above, have expressed concern in this regard.

Further, the success of the Medi-Cal Incentive Program will depend on developing a detailed understanding of the state of and barriers to EHR adoption through use of a California-wide survey of likely-eligible outpatient providers and development of relationships with hospital leadership on these issues.

The State's support and guidance in vendor selection would help increase EHR adoption, especially among ambulatory practices. Ultimately the State must make an intentional decision regarding the extent to which it will attempt to influence the vendor landscape and the tools it will use or promote to spur adoption (e.g., group purchasing, ASP-hosting, selective information campaigns). In making this decision, it must carefully consider the role of the regional extension centers versus the role of the State and the optimal division of roles and responsibilities between the two entities with respect to the entire eligible provider cohort.