Testimony to NCHVS

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Background

Founded in 1945, Kaiser Permanente (KP) is a not-for-profit health-care organization headquartered in Oakland, California. KP serves 8.7 million members in nine states and the District of Columbia. Nationwide, KP employs approximately 159,000 technical, administrative and clerical staff, and 14,000 physicians representing all specialties.

KP began offering online health services in 1996. The site's health information and related tools are free and available to the public; however, sign-on is required for members to access secure portions of the site, such as appointment scheduling or ordering prescription refills.

The deployment of KP's electronic health record (EHR) began in 2004. Physicians can contact patients electronically; order consultations, laboratory and other diagnostic work; send prescriptions directly to the pharmacy; provide health literature; and set reminders for follow-ups. My Health Manager, KP's Personal Health Record (PHR), was fully deployed in 2007 and is linked to the EHR. Online health services available include the following: (1) PHR: My Health Manager is a shared record between the member and their physicians. It allows members to view parts of their medical record including laboratory results, immunizations, past office visits, prescriptions, allergies and health conditions. KP sends clinical information to members' online health records and provides updates to medications, allergies, and so on. (2) Clinical transactions: Members view, schedule or cancel appointments, and they can refill prescriptions for themselves and other family members. (3) Proxy access: Members can act on behalf of another family member (child or adult) to access online services. (4) Electronic Connectivity: Members use secure messaging to e-mail their doctors, ask questions of pharmacists, and contact member services. (5) Health and wellness: Members and the public may use health and drug encyclopedias, take a health assessment, get information about popular health topics and use health calculators. Tailored behavior change programs for smoking cessation, weight management, nutrition, insomnia, pain, depression and stress reduction enable members to actively engage in improving their health. (6) Account management tools: Members can use KP provided tools to manage their health benefits, estimate the cost of treatments and view medication formularies.

Adoption of online health services

Our definition of adoption includes two parts (1) the number of members who register to use the site's secure features and (2) members' actual usage of the site.

As of May 1, 2009, over 3 million KP members had obtained user IDs and passwords to access secure functionality on the site. Registrations began to increase rapidly in 2006, when expanded PHR functionality, including online test results and secure messaging with a doctor's office became widely available to the membership. Our data and

experience demonstrate that security and privacy concerns are not barriers to widespread consumer adoption of online health services, as long as appropriate measures are built into online capabilities from the start.

Demographic characteristics of site members. Over the lifespan of KP's member Web site, members who have access to the site's secure features have been consistently 60 percent female and 40 percent male. The range is thirteen years of age (the minimum age at which members may register to use the site's secure features) to ninety-five years of age. The mean is forty-eight, and the median forty-seven. Our data demonstrate that members across the age spectrum are adopting online health services rapidly.

Medicare population

More than half of our Medicare population is registered for kp.org and more than a third of that population has used the site more than once in an 18-month span.

- Total KP Medicare enrollees in December 2008: 909,090

- Total registered on kp.org: 429,927

- Average monthly unique users: 141,763

- Cumulative unique users (accessed more than once since June of 2007): 336,522

- Cumulative unique users of either prescription refill or view your prescriptions: 121,623

Act for a Family member

This approach extends the capabilities to other family members who may not use online services, such as frail elderly and children. It also allows adult children to participate in the care their parents receive.

1) Child Proxy access:

This is for parents of children under 12 or 13 (depending on state law). In most regions, access to all features on behalf of the child, including email to child's doctor. Auto access if the parents have the same address of record as that of the child; otherwise access to a password is mailed to the house. There also are processes in place for managing the challenges to appropriateness of access, such as child custody cases.

2) Adult-Adult Proxy access:

In this case an adult member gives permission for access. Access is authorized for others by groups of features. This approach is intended to support convenient access to services on behalf of members, who would otherwise be required to authorize proxy

access anew each time a new feature is available or at the individual feature level. Our experience indicates that balancing the trade offs of consumer convenience vs. access controls at the detailed feature level will be an ongoing challenge.

Usage

In a recent kp.org study, perceptions of usefulness and quality of online health tools were found to be significant predictors of members' actual use of kp.org online services (HealthAffairs March/April 2009, Vol. 20, No. 2).

Usage for Q1 2009:

- Total visits to kp.org: 14,507,713

- Visits to the consumer section of kp.org: 13,731,260

- Members with access to secure features: 3,000,041

- Percent of members with 2+ sign-ons: 49.7%

- Percent of web-using KP members 13+ years old: 52.9%

- Appointments booked online: 458,914

- E-mails sent to doctors and other providers: 1,926,610

- Lab test results viewed online: 5,078,442

- Prescription refills: 1,553,632

- Visits to Past Visit Information: 960,978

Integration of online health services with care delivery

My Health Manager on kp.org is linked directly to KP HealthConnect, KP's electronic health record. It provides patients with access to much of the same clinical record their doctor's use. My Health Manager is populated today with clinical data. Over time, KP will be adding administrative claims data for members to view. While it may be useful to understand episodes of care, administrative claims data is sometimes incomplete and inaccurate. This introduces risks when it is used in a clinical context for decision making, therefore it is not always actionable.

With secure e-mail messaging, patients can communicate with their doctors at any time, from anywhere. The message is sent to the clinician's inbox in the electronic health record. All KP physicians use KP HealthConnect and are able to send and receive secure and encrypted e-mail messages from members who have registered.

With a comprehensive longitudinal electronic health record and population care support tools, KP HealthConnect allows us to provide preventive and proactive care to our chronic care members. Data analyzed in three of our regions demonstrates that implementing an electronic health record reduces both primary and specialty care office visit rates by enabling the clinicians to resolve issues with fewer office visits. The data also indicates that providing access to a PHR linked directly to the electronic health record replaces both office visits and phone calls. Patients are also more likely to show up for clinic office visits when they book their appointments online. "Failed to keep" appointment rates for those booked online are up to 50% lower than those made by telephone.

Lab tests account for over half of all ordered procedures, and the results for clinical lab tests are available for patients to view on My Health Manager. Most lab results are available immediately to patients. The exceptions are that some test methods take time to produce results, also depending on applicable law in some regions there is a delay of a few days for some sensitive tests so the physician can see the results first, and there are some tests that can only be made available to the patient by the ordering physician.

Privacy and security

Kaiser Permanente maintains a privacy policy on the web site, outlining how data is collected and used. Member data is not shared with outside parties, and is only used for research purposes in aggregate form.

Kaiser Permanente's position is that all individually-identifiable health information should be subject to consistent rules when used for substantially-similar purposes. The business model of the entity sponsoring the record set does not matter, that is, the same information used for the same purposes should be subject to the same rules regardless of the HIPAA definition of a covered entity. If PHR data held by non-covered entities are ever to be trusted then consistent privacy and security rules will have to apply to them. Also there is a dimension of medical liability that must be considered whenever health records were under control of non-covered entities that operate under different rules, for example due to the potential for manipulation and falsification of records.

Ensuring Security through Registration

1) Online registration using name, address, date of birth and medical record number or through assisted registration in medical office buildings. In both cases, authentication of the member is done through KP's membership systems. Member then chooses whether to receive password via US Mail or through online single visit activation.

> a. out of band password is mailed to address of record
> b. single visit activation method (must pass 4 of 5 questions garnered from public databases through our vendor, RSA). The vast majority of registrations in 2009 were through single visit activation, supporting our view that online services need to be easy to use.

Data Breaches

KP has a formal incident management process to address critical privacy and security concerns. The purpose is to ensure investigation and remediation in the most appropriate and timely manner. In our experience managing online incidents over 10 years, not all concerns result in formal breaches of security or privacy. Given the integration of multiple internal and external vendor systems, the discovery process can take days and sometimes longer to determine exactly what data may have been inappropriately disclosed. Many incidents are not notifiable breaches. On a fairly regular basis, patients do not recognize their own data and claim a notifiable breach has occurred because their record belongs to another patient. Dysfunctional family relationships also result in inappropriate attempts to access others' data. In other cases when suspected breaches were reported, it was discovered only after investigation that records were divulged by third parties to whom consumers had authorized the release of information. As in these real-world examples, federal or state rules requiring disclosure of a data breach and/or notification of affected parties within short time periods is neither feasible nor advised given the myriad reasons behind a suspected breach, and because of the time required to perform the needed analysis of events. Even before state laws were in place; Kaiser Permanente's business practice was and is timely notification to members of inappropriate disclosure of their personal health information, once the discovery and validation of the breach is completed. In a related matter, creating a system that would allow members to routinely review everyone who has viewed their record would require a very substantial systems investment that will raise costs, which is also not advisable.

Consumer access to a copy of their online health record

KP is testing several ways to meet member requests for a copy of their personal health record. The process needs to be easy to use, secure and reliable. Consumers will need to have trust in the privacy and security of systems that are involved in data exchange.

In one region, we are testing thumb drives with pertinent health record information. These are available through an in person request at a medical center. Another method is to download summary data through a PDF from the web site. KP and Microsoft are testing a way for members to request a copy of their health summary be sent through a standard Continuity of Care Document (CCD) to Microsoft's HealthVault. This pilot will assess the success of having non-repudiation of origin for the longitudinal health summary from clinical record sources. Use of digital signatures on the CCD guarantees authenticity and accuracy of the electronic document back to its source. No current data exchange system can guarantee completeness of a record, however.

Evaluating the success of PHRs depends on what is expected of them, and expectations of the value and utility of PHRs varies widely. At one end of the spectrum are those who believe that PHRs can become fully independent longitudinal and authoritative sources of health care information that could be used by providers for care

decisions. At the other end of the spectrum are those who see PHRs as yet another gadget for highly motivated tech-savvy consumers to have an extra copy of selected data. In between are those who see the PHR as a mechanism for greater consumer engagement in their care and interaction with their care team. Our own view is that a PHR can engage consumers in their health care processes to a meaningful extent only if it has clinically-entered health data and if it includes key communications and transactional functionality, such as secure messaging with your entire care team, and online appointment scheduling, and online prescription refill orders. With these capabilities in place we have been able to measure our members' usage of the PHR in a number of ways.

There are a variety of PHR models and some will be more successful than others against measures of claims dollars saved, or provider cost avoidance, or consumer satisfaction, or improved health outcomes. Our experience leads us to believe it's more likely that PHRs that are a static record of claims data will have a lesser impact on health care costs than will PHRs that involve a shared experience between the patient and the provider and which have more interaction and transactional capability.

The source of data should always be clear, and there should be traceability of each data element to its source. Non-repudiation of origin should be a basic requirement and there should be digital signatures on the data to guarantee its accuracy from that source. If all PHRs operated under these rules, PHR account holders should be able to do what they wish with their PHRs. In other words, people may add to or change data but it is not acceptable to allow falsification of health records or to allow claims that data is clinically sourced when it was manually input by the patient or extracted from financial transactions.

I wish to thank the chair and members of the Committee for giving me the opportunity to address these issues with you here today. As you can see KP has a wealth of experience in this area and fulfilling our mission involves sharing this information to benefit our members and the communities we serve, as well as the nation as a whole. At this time I would like to answer any questions you may have.