Patient Portals in the Safety Net
Phase 1: Assessment and Planning

Patient Portal Series

A patient portal is an online tool that gives patients direct access to their electronically stored health information. It can streamline administrative functions and increase communication between patients and their care team. In launching their patient portals, health centers follow a path similar to the introduction of many other technologies:

1 Planning > **2** Implementation > **3** Optimization

This paper is the first in a series — organized by the phases of assessment and planning, implementation, and optimization, which are illustrated above — that documents the experiences, lessons learned, and tools used by three community health centers in their participation in the Patient Portal Initiative (PPI):

- Open Door Community Health Centers (Open Door), Humboldt and Del Norte Counties, California
- Shasta Community Health Center (Shasta), Redding, California
- West County Health Centers (West County), Sonoma County, California

These papers and the tools gathered on the initiative's website (www.chcf.org/patient-portals) are intended to serve as a resource for other safety-net providers to use and tailor to their specific needs. The experiences of the PPI grantees provide context and guidance for planning, launching, and optimizing a patient portal in a safety-net environment.
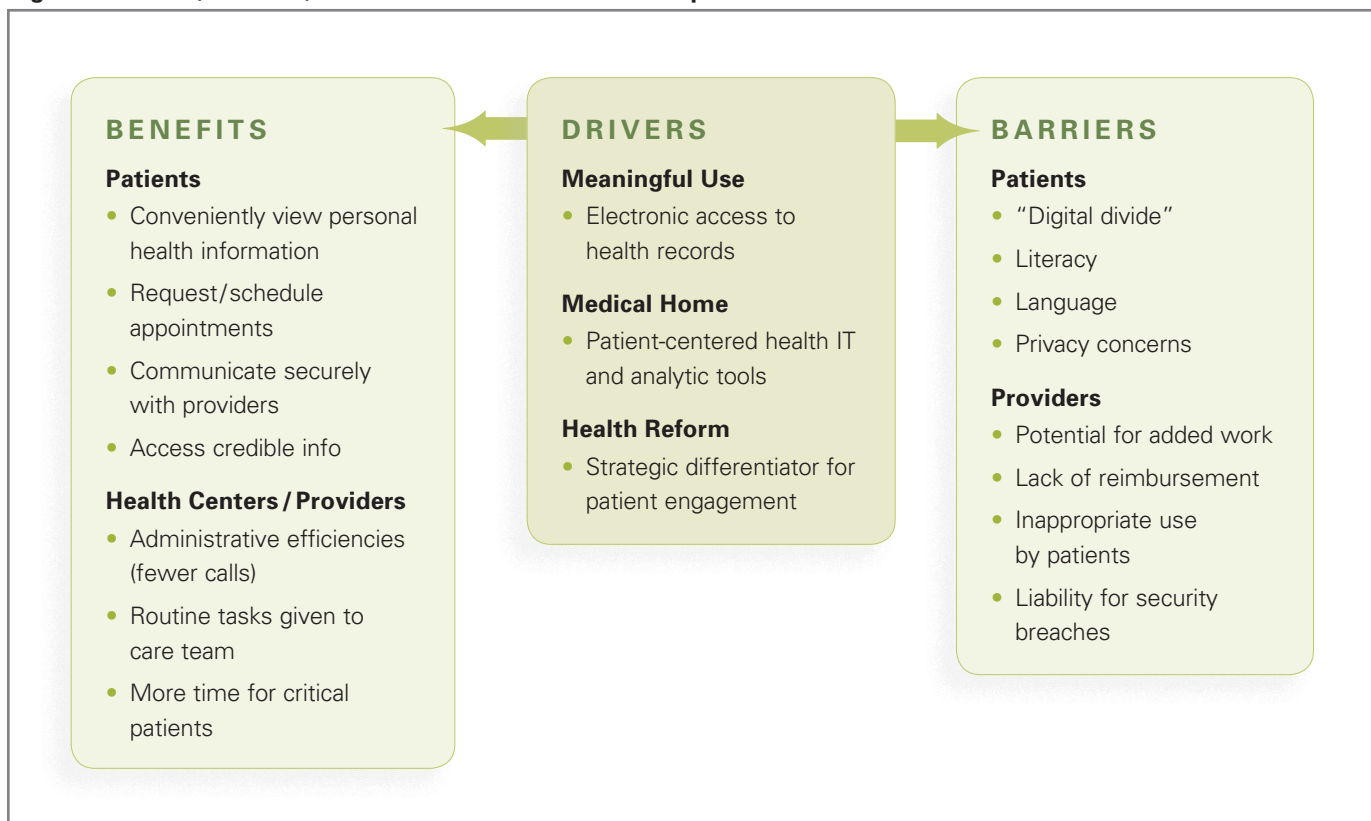
Introduction

The assessment and planning process for launching a patient portal consists of understanding the drivers, benefits, and barriers to portal implementation and analyzing these factors in the context of a specific health care delivery setting (see Figure 1 on page 2).

The planning process takes this strategic analysis and breaks it into tactical components that are actionable and measurable with clear accountability for each. Any project that involves implementing transformational and potentially disruptive technology will require thorough planning in order to be successful and mitigate risks.

By definition, health centers seeking to deploy a portal will have already gained valuable experience through their electronic health record (EHR) rollout; however, patient portal deployment introduces additional functional and support requirements for which the health centers may not be prepared. Important outcomes of the assessment and planning phase of a patient portal include:

- Establishing a unifying vision for the project

- Assessing and addressing the barriers to implementation

- Assessing the needs and wants of patients and care teams

LESSONS FROM THE FIELD

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Figure 1. Drivers, Benefits, and Barriers to Patient Portal Implementation

BENEFITS	DRIVERS	BARRIERS
Patients	**Meaningful Use**	**Patients**
• Conveniently view personal health information	• Electronic access to health records	• "Digital divide"
• Request/schedule appointments	**Medical Home**	• Literacy
• Communicate securely with providers	• Patient-centered health IT and analytic tools	• Language
• Access credible info	**Health Reform**	• Privacy concerns
Health Centers / Providers	• Strategic differentiator for patient engagement	**Providers**
• Administrative efficiencies (fewer calls)		• Potential for added work
• Routine tasks given to care team		• Lack of reimbursement
• More time for critical patients		• Inappropriate use by patients
		• Liability for security breaches

- Selecting a portal implementation team and a portal champion

- Defining success metrics to use in monitoring progress toward patient portal goals

Establishing a Vision for Portal Use

The current health care environment provides many incentives, or drivers, for using health information technology (IT) in general and the patient portal in particular. The requirements and objectives of federal incentive programs place an increasingly significant focus on patient engagement and patient access to their health information in electronic format throughout the three stages of "meaningful use."

Meaningful use is the set of requirements defined by the Centers for Medicare and Medicaid Services Incentive Programs that governs the use of EHRs and allows eligible providers and hospitals to earn incentive payments by meeting specific criteria in three stages.[1] Patient portal implementation is seen as a key tactic providers can use to meet these requirements.

Similarly, patient-centered medical home (PCMH) recognition requires the use of patient-centered health IT tools. A PCMH is a health care setting that facilitates partnerships between patients and their personal physicians and, when appropriate, the patient's family. Care is facilitated by registries, IT, and health information exchange to assure that patients receive the indicated care where and when they need it in a culturally and linguistically appropriate manner.[2] As the nation moves toward value-based payment rather than visit-based payment, the PCMH model is seen as a more cost-effective and higher quality care delivery model.

Furthermore, health centers may find that offering a patient portal is a strategic differentiator in their efforts to retain and attract patients who may be newly insured through the Affordable Care Act.

As Dr. Jason Cunningham, medical director of West County, said, "We absolutely need to figure out how to reduce barriers to meaningful access to a patient's trusted primary care team. If we don't, patients will continually seek other sources of advice or end up seeking care in the ER or urgent care." Similarly, Shasta CEO Dean Germano noted, "The patient portal is not just a task, it's a philosophy."

When developing and communicating a unifying vision for the patient portal, it is useful to focus on the potential benefits it brings to both patients and care teams. Patients enjoy the portal's convenience of instant access to health information. Features such as secure communication with their providers and care team and the ability to request appointments without making a phone call rank highly among patients. On the clinical side, more routine clinical tasks can be delegated to the care team, freeing providers' time for more critical patients. Administrative efficiencies can emerge from a reduction in call volume due to portal use.

For example, Charles Kitzman, Shasta CIO, indicated that a key motivator for his organization's portal implementation was to "make the phone ring less" and improve customer service. Shasta's struggle to meet its established performance standards in the face of high call volume routinely showed up as a problem area on patient satisfaction surveys.

Two videos — one featuring a patient's perspective, and the other featuring a provider's — can be used to help to promote a common understanding of portal benefits to facilitate organizational alignment and buy-in for the project. (Available at www.chcf.org/patient-portals.)

PPI grantees were asked to rank their motivation for portal use at several points during the initiative. Although these motivators changed slightly from the planning stage to the implementation stage, the top two — patient empowerment and improved service to patients — remained the same, as seen in Table 1.

Table 1. Key Motivators for Patient Portal Use 2010 vs. 2011

	FALL 2010	FALL 2011
1	Patient empowerment	Improved service to patients
2	Improved service to patients	Patient empowerment
3	Decreased cost of service	Patients have better access to health information
4	Patients have better access to health information	Meet meaningful use requirements
5	Meet meaningful use requirements	Decreased cost of service

Source: Grantee surveys.

Assessing and Addressing Barriers

Effective planning for a patient portal launch should include addressing the real or perceived barriers to access and use, from both a patient and care team perspective. Safety-net health centers face unique challenges and barriers to portal adoption by their patients.

Language, literacy, and technology access barriers — commonly called the "digital divide" — disproportionally affect community health center patients compared to the general population. A March 2010 study found that despite increasing Internet availability, racial/ethnic minority patients adopted a personal health record (PHR) less frequently than white patients, and patients with the lowest annual income adopted a PHR less often than those with higher incomes. Among those who have adopted a PHR, however, income does not have an effect on how much it is used.[3]

With the increasing use of smartphones, tablets, and other mobile devices, traditional desktop computers with Internet access are no longer the only way for patients to connect to their providers. A national health IT survey indicated that among adults who own smartphones, about 30% are interested in using mobile phone-based programs and applications to keep track of their health.[4] The pervasiveness of mobile computing opens up new possibilities for breaking through the digital divide.

Shasta reported that their experience with keeping up-to-date patient demographic data has shown that email addresses tend to be more stable and reliable than physical addresses. As a mode of contact, mobile phone numbers are perhaps most stable of all, with patients opting for the portability of cell phones over traditional home landlines, and keeping their phone numbers even when switching carriers.

"Patients are better at this than we thought. Writing an email is proving to be a more thorough and deliberate form of communication. Patients tend to supply the detail needed before sending the email, making follow-up or back and forth phone calls unnecessary. Both the sender and receiver of the message can process the information without distraction."

— CHARLES KITZMAN, SHASTA CIO
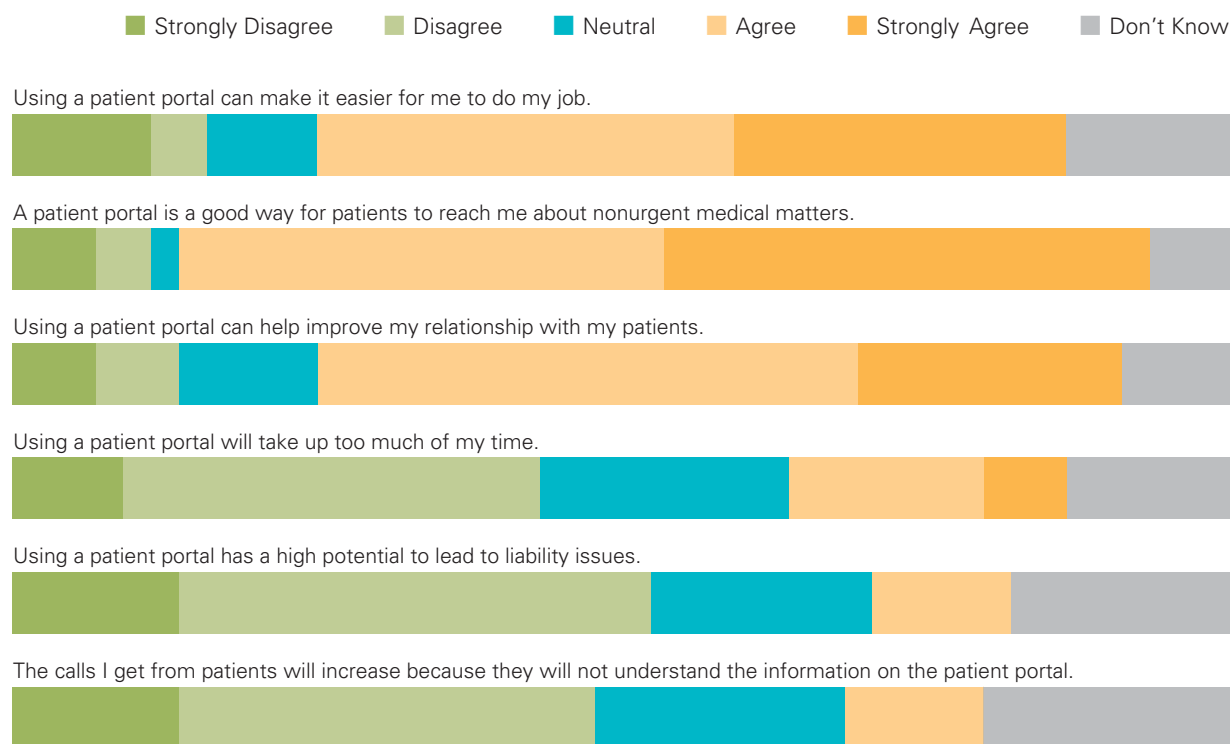
Obtaining Internal Provider and Staff Buy-In

PPI grantees learned that it is important to proactively address the common concerns that providers and staff may have about offering this technology to patients. For example, many providers fear there will be extra, non-billable work associated with clinical messages from patients and are concerned about the potential for inappropriate or excessive use by some patients. A midcourse survey was conducted with providers and staff to better understand their concerns and experiences with the patient portal.

In general, clinicians and staff across all three health centers surveyed had positive reactions to using the patient portal; a majority believed that the portal would make their jobs easier, would serve as an effective vehicle to communicate with their patients, and would improve their relationships with their patients. In addition, a majority of survey respondents disagreed that the portal would take too much time, could lead to liability issues, or could potentially increase the call volume from patients. A relatively high percentage of respondents (ranging from 5% to 20%), however, were still not sure or didn't know what impact the portal would have across these issues (see Figure 2 on page 5).

Many providers initially expressed concerns related to patient portal implementation; these concerns were eventually dispelled by taking the time to assess their attitudes and preconceptions, and then jointly determining a plan to address them in the portal rollout. Examples of how grantees eased provider concerns include:

- Open Door providers were given control over which patients were invited to use the portal during the initial rollout.

- Shasta registered nurses (RNs) received all incoming communications for resolution or filtering to prevent providers from being overwhelmed by the messages.

Figure 2. Clinician and Staff Opinions about Patient Portals

Legend: ■ Strongly Disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly Agree ■ Don't Know

Using a patient portal can make it easier for me to do my job.

A patient portal is a good way for patients to reach me about nonurgent medical matters.

Using a patient portal can help improve my relationship with my patients.

Using a patient portal will take up too much of my time.

Using a patient portal has a high potential to lead to liability issues.

The calls I get from patients will increase because they will not understand the information on the patient portal.

Source: Mid-project survey of providers and staff at West County, Shasta, and Open Door (data collected in October 2011).

■ West County patients used the portal to complete pre-visit surveys to help their provider understand their prioritized reasons for seeking an appointment. This helps the provider focus the visit and maximize their time.

Incorporating the Patient's Voice

At a learning community meeting of PPI grantees, Shasta CEO Dean Germano noted: "We've made some assumptions about the patients who use our portal, and we've always been wrong."

Several effective methods may be used for assessing the needs, desires, and preferences of patients both before deploying a patient portal and at regular points after the portal launch. PPI grantees used three primary methods for obtaining patient input:

1. **Patient surveys.** Surveys are useful tools for assessing patient interest in using a portal and also in educating patients about the features and benefits of a portal. Based on these survey results, there may be a "population of focus" that emerges to target for initial use, or the results may yield clues as to the features and functions that are most desirable. Well-designed surveys also can elicit patients' concerns that may act as barriers to use. Conducted on an ongoing basis, surveys can provide feedback on the usability and value of the portal, track the health center's performance in using the portal as a communication tool, and provide input on how to improve or expand portal offerings. A sample PPI patient survey can be found online at www.chcf.org/patient-portals/planning.

2. **Patient advisory groups.** Many health centers used established patient advisory groups as a mechanism to gain input before launching major initiatives. West County's patient advisory group provided feedback before and during the launch of the patient portal and offered valuable guidance for introducing new features for the portal. Engaging patients through patient advisory groups has been transformational for many health centers on topics ranging from portal access to patient self-management. Virtual patient advisory groups can provide feedback on communications and marketing materials, and other less time-sensitive matters.

The Institute for Patient- and Family-Centered Care's guide describes the value of patient advisory groups:

- An effective mechanism for receiving and responding to consumer input

- More efficient planning to ensure that services truly meet consumer needs and priorities

- Increased understanding and cooperation between patients and families and staff

- Promotion of respectful, effective partnerships between patients and families and professionals

The complete resource is available at www.chcf.org/patient-portals/planning.

3. **Key informants.** Key informants are specially selected patients that have agreed to beta test, or field test, the portal with their providers. They present an opportunity to gain the patient perspective and to pilot the functionality and workflow associated with a portal on a small scale. Key informants continue to provide valuable input over the course of portal implementation as new features and functions are offered.

Establishing a Portal Implementation Team

Establishing a multidisciplinary implementation team with clearly defined leadership and accountability structures is essential for successful health IT implementation. PPI grantees took different approaches to establishing leadership and patient portal implementation teams, including:

- Open Door used their established EHR team and selected an experienced EHR administrative supervisor as the team leader. Her role was to coordinate the portal implementation and meet with each EHR site specialist weekly and with physician champions monthly. When patient portal issues arose, she used their on-site EHR experience to resolve issues and move the portal project forward. She also periodically visited the sites and made presentations to providers and staff on matters relating to the patient portal. As the rollout progressed to all sites and providers, the portal leadership team was joined by an RN with deep experience in telemedicine to assist with clinical coordination and provider training.

- Shasta's CIO was selected as the project leader. The portal project team consisted of an RN coordinator, front office supervisor, visit coordinator, and chief medical informatics officer. Weekly meetings continue to be held with a subset of this group to address portal issues and examine use trends.

- West County's chief medical officer (CMO) was selected as the portal project leader. The CMO meets with the CEO and EHR manager on an as-needed basis. The agency's quality officer has also joined the team and is responsible for agency-wide rollout of the patient portal.

Health centers can leverage their existing health IT/EHR implementation structures for the implementation of the patient portal and to attend to essential project management functions, such as communication, scope, budget, timeline, and resource management.

Setting Goals, Benchmarks, and Performance Standards

The initiative's evaluator helped PPI grantees establish common and individualized success metrics, track these metrics over time, and analyze trends in use. Establishing these metrics in the planning stage can help to set an implementation road map and provide a mechanism to communicate progress to the entire organization. Data were collected and reported on a quarterly basis.

One challenge in establishing metric tracking is the often limited ability to obtain these data. Grantees found that either the vendor does not collect these data or, if part of a larger collaborative of organizations, data are not detailed for just one health center.

As PPI grantees made the patient portal available, whether as a limited or full-scale implementation, they tracked measures related to the specific services, features, and functions being used by health center patients and staff. See Table 2 for evaluation measures of portal enrollment and use.

In addition, each PPI grantee defined specific organizational metrics of interest. For example, Open Door tracked the average length of time spent on the portal site per visit and the number of hits to popular links on the portal site. Although the lack of analytics and reporting from their portal vendor continues to be a challenge, it was also an opportunity to advocate for these product enhancements for future software releases.

Table 2. Evaluation Measures to Monitor Patient Enrollment, Portal and Service Use

MEASURE	DESCRIPTION
Monitor Patient Enrollment and Portal Use	
Target number of patients	The goal for the number of patients who would ideally use the patient portal — number may change from one quarter to the next
Cumulative number of patients enrolled to date	Running total of the number of patients registered to use the portal
Population penetration	Cumulative number of patients enrolled to date divided by target number of patients
Number of active users	Number of enrollees who have signed on to the portal two or more times in the past six months
Percentage of users who are active users	Number of active users divided by cumulative number of patients enrolled to date
Number of super users*	Number of enrollees who have signed on to the portal four or more times in the past six months
Average number of times signed on to site*	Average number of times that an enrollee signed on to the site in the past six months
Monitor Patient Portal Service Use	
Number of emails sent to providers	Total number of emails sent to providers in the quarter
Number of times lab results requested	Total number of times lab tests are viewed in the quarter
Number of appointment request transactions	Total number of appointment requests made in the quarter
Number of medication refill requests	Total number of refill requests made in the quarter

*These measures were not obtainable from one or more of the portal applications used by PPI grantees.

Source: Tool developed by project evaluator Seth Emont for the initiative.

At the same time that portal use measures are defined, it is recommended that health centers also define initial performance metrics and standards that may be adjusted over time. For example, Shasta set a standard maximum response time to portal messages of 48 hours. Their actual response time is closer to 24 hours; however, they recognize the importance of setting — and often exceeding — expectations. "First impressions are critical," noted Shasta's CIO Kitzman. "To build trust in the portal, we try to answer messages as quickly as possible, which is over and above our documented policy of two business days."

Reviewing Tactical Considerations in the Planning Phase

Most PPI grantees found that their original assumptions and plans for patient portal implementation were constantly being challenged as they responded to vendor software availability, changing operational conditions, and lessons learned. Nonetheless, their initial plans helped to provide a springboard for the project. PPI grantees considered the following tactical questions:

Is there a target population of focus for initial deployment or will the portal be open to all patients who express interest?
For example, Shasta originally planned to target new mothers, patients with diabetes, and families of children with attention deficit hyperactivity disorder, reasoning that these patients would benefit most from the convenience of a patient portal.

How will the rollout of the patient portal be pilot tested? What implementation methodology will be used?
Each PPI grantee took a different approach to piloting and rollout. For example, West County limited the portal launch to one provider and five of his patients for a one-year period. At Open Door, the initial plan was to have seven providers across five physical sites use the portal with patients they selected, and then roll it out to all willing providers.

Which features and services should be offered? Should features be offered all at once or phased in?
Appointment requests, medication refill requests, and messages to providers are basic services that PPI grantees offered without issue. However, lab results were handled differently by each PPI grantee because none of the portal applications displayed the results along with normal ranges or an explanation of the significance of the numeric value.

How will minors be treated when offering a portal?
California's complex laws regarding minors' access to their health information and confidentiality around sensitive services need to be explored and interpreted into health center policy. None of the PPI grantees offered access to minors.

How will marketing, enrollment, training, and support for patients' use of the portal be handled?
Two PPI grantees used summer interns or volunteers for patient enrollment and training. Shasta eventually created and filled a portal coordinator position. West County hired a patient engagement coordinator. All grantees used the plan-do-study-act (PDSA) technique of making small and rapid tests of change to determine the most effective way to support and encourage portal use by patients.

Summary

Implementing a patient portal has the potential to streamline clinical operations, help health centers meet meaningful use and PCMH requirements, and engage patients as partners in their health care. Planning for portal implementation involves an assessment process to address the concerns and gather the ideas of staff, as well as incorporate the needs and desires of patients. Developing an initial road map and methodology for building awareness and rolling out the patient portal, along with performance standards and use metrics, will help to keep the portal project on track and aligned with a health center's strategic goals for patient engagement.

ENDNOTES

1. Office of the National Coordinator for Health Information Technology, EHR Incentives & Certification: What is Meaningful Use?, www.healthit.gov.

2. National Committee for Quality Assurance, Patient-Centered Medical Home, www.ncqa.org.

3. Cyrus K. Yamin et al., "The Digital Divide in Adoption and Use of a Personal Health Record," *Archives of Internal Medicine* 171, No. 6 (March 28, 2011): 568–574.

4. California HealthCare Foundation, "Consumers and Health Information Technology: A National Survey," April 2010, www.chcf.org.