

# Unlocking Patient Portals: Health Information Professionals Navigating Challenges and Shaping the Future

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## Abstract

Due to recent regulations and the COVID-19 pandemic, patient portals have increased in use and importance as a tool for both patients and providers. While patient portals have many benefits, the recent increase in use has resulted in additional complexities in managing these portals. Health information (HI) professionals are ideally suited to manage these tools. While past efforts may have focused on increasing portal use, current efforts must include ensuring patient access, data quality, portal policies and procedures, and more. This study was designed to explore the experiences and perspectives of a group of HI directors and patient portal managers who are deeply involved in portal use and management. The findings of this study are used to assess the patient portal management role that HI professionals currently play and could play in the future, develop guidelines for best practices, and determine educational needs for both higher and professional education.

**Key Words:** patient portals, data management, interoperability, patient engagement, 21<sup>st</sup> Century Cures Act, patient-provider communication, patient access

## Introduction

Ten years ago, the use of patient portals was rare; most patients and physicians were not communicating electronically. However, with the advent of the Health Information Technology for Economic and Clinical Health (HITECH) Act, Meaningful Use, and the Merit-based Incentive Payment System (MIPS), the availability and use of patient portals has increased dramatically in recent years.<sup>1,2,3</sup> These platforms do more than just store health records — they play an instrumental role in enhancing patients' participation in their healthcare and providing an efficient means to relay crucial health information to various medical stakeholders. Portals provide easy communication between patients and providers and allow patients access to important health information that they can use themselves or share with other providers. These multi-faceted tools provide not only patient health information but also a variety of tools to help patients better manage their health.

A decade ago, patient portals were in their early stages, with the basic abilities to share information and allow communication between healthcare providers and patients. HI professionals' focus on patient portals was minimal: to increase usage and help patients enroll in the portal. However, transformative policies like the HITECH Act, Meaningful Use, and MIPS prompted the widespread adoption of patient portals. By 2020, as HealthIT.gov reveals, almost 40 percent of Americans had interacted with a patient portal, marking a significant growth of 13 percent since 2014.<sup>3</sup> A recent ONC publication noted that this use increased even further during the COVID-19 pandemic as “the share of individuals nationwide who were offered and accessed their online medical records or patient portals more than doubled between 2014 and 2022”.<sup>4</sup> This trend is not confined to only the tech-inclined younger population. Data from the University of

Michigan's National Poll on Healthy Aging demonstrates that nearly 78 percent of those aged between 50 and 80 have engaged with at least one patient portal.<sup>5</sup>

The COVID-19 pandemic further underscored the relevance and usefulness of these portals.<sup>3</sup> Faced with the rising demand for virtual medical consultations and communication, patient portals became essential tools, bridging the physical divide, facilitating uninterrupted care, and providing digital touchpoints between patients and healthcare providers. This enabled patients to connect safely with their healthcare teams, access diagnostic results, request prescription updates, manage appointments, and participate in telehealth sessions seamlessly.

The 21st Century Cures Act marked a significant shift in health information regulations, particularly related to health information technology (IT) and patient access to electronic health records (EHRs).<sup>6</sup> It emphasized the patient's right to access their electronic health data. Consequently, patient portals became essential platforms, enabling patients to engage with their health records, manage appointments, communicate with healthcare providers, and review billing details. The Cures Act encouraged health providers and IT developers to create more user-friendly systems, facilitating easy patient interactions with their information. Furthermore, the push for more complete and timely electronic access led numerous healthcare institutions to refine or broaden their patient portal services.

While the adoption of patient portals has brought numerous benefits, recent trends and initiatives have intensified the complexities of managing these digital platforms. A particularly important challenge is the increase in patient-provider messaging. Secure communications between patients and providers escalated from 48 percent in 2017 to almost 60 percent in 2020.<sup>3</sup> The integration of secure messaging into patient portals is lauded as a breakthrough in healthcare communication, meeting contemporary patient demands for rapid, transparent access to their healthcare teams. This heightened emphasis on digital patient-provider communication is evident in MIPS, particularly where "providing patients electronic access to their health information" is a key objective.<sup>7</sup>

However, the increased messaging frequency within these portals has presented its own set of challenges. Healthcare providers report that they are inundated with messages, leading to extended work hours, uncompensated time, and, in some cases, burnout. The volume of these messages has, in some instances, resulted in "something closer to a clinical encounter".<sup>8</sup> This escalation prompted some leading health care systems to start charging patients for patient portal messages or e-visits. There are a number of considerations to billing for portal messaging. These include the potential inability of an EHR to create a billable encounter, the fact that the billing is only based on time spent, and the lack of coding guidelines.<sup>8</sup> In addition, if e-visit messaging is billed, the physician or nurse practitioner must be the respondent; nurses' or assistants' responses cannot be billed.<sup>9</sup>

While billing may seem like a practical solution to compensate for a clinician's time, its introduction has broader implications. A study completed at UCSF Health following the implementation of billing for e-visits showed that "a reduction in patient portal messaging (both threads and individual messages) was observed that may be attributable to awareness of the possibility of being billed."<sup>10</sup> Instituting such charges might discourage patients from using these

platforms, which, in turn, could diminish the overall efficacy of patient portals. The long-term impact on patient satisfaction, retention, and health outcomes remains a topic for further exploration.

Clearly, the use and importance of portals has increased dramatically in recent years. Due to these changes, HI professionals are positioned to play an increasingly pivotal role. While their past contributions were largely geared towards driving patient portal adoption, today, there is a need for supporting patient access to portals, ensuring data accuracy, establishing strong portal management protocols, meeting regulatory requirements, overseeing billing procedures, and gauging patient feedback.

It is not clear that HI professionals are consistently in management and oversight roles for patient portals. The literature in this area is sparse, with little guidance as to the role HI professionals play or should play in the oversight of portals. This study was developed to address this gap and determine the current role that HI professionals play in portal management, as well as to initiate the development of best HI practices for patient portals. This study utilized a case study design aimed to probe deeper into the current trends in patient portal and messaging utilization, highlight associated challenges, and draw attention to the increasingly significant role of HI professionals. Moreover, it was designed to evaluate the need for educational programs, continuing education, and policy development to guide the future of patient portal engagement and communication.

## **Methods**

### **Research Design and Participants**

This research adopted a qualitative case study methodology to explore the experiences and perspectives of its participants. A total of 11 participants were recruited, all of whom held positions in their respective facilities either as HI directors or patient portal managers. These professionals originated from two specific states: Illinois and Alabama.

This qualitative case study was not designed to provide widely generalizable data. However, it was designed to provide initial insight for the following questions:

1. What is the current role that HI professionals play in patient portal management?
2. What are the current trends and challenges in patient portal management?
3. What is the need for education for HI professionals and others involved in patient portal management?
4. What is the need for policy development for patient portal management?

Participants were selected through a convenience sampling method due to the practical benefits of easy availability and accessibility. As HI professionals in the field, the researchers used state professional association lists, to which they had easy access, to identify potential participants, ensuring they were active professionals in the field who were working with portals. By selecting participants from this list, the study aimed to gather in-depth insights, challenges, and best practices related to patient portal management from those with firsthand experience. While the

majority of participants were HI professionals, the results are felt to be pertinent to any professionals serving as patient portal managers.

### **Ethical Considerations**

Prior to the collection of any data, the research study and the interview questionnaire were submitted to the Illinois State University Institutional Review Board (IRB) for review. The IRB found the study to be exempt from IRB review.

### **Recruitment and Data Collection**

The participants were interviewed to gain insights into:

1. Current patient portal usage and policies;
2. Existing and future portal message billing practices;
3. Current challenges associated with patient portals; and
4. Needs concerning education, training, and policy development related to patient portals.

The interview process was based on a structured questionnaire comprised of 22 predefined questions, with the majority being open-ended. In order to address the above issues, the researchers developed survey questions designed to elicit information regarding the respondent's facility, the respondent's role in patient portal management, the facility's current patient portal management policies and procedures, and the facility's current messaging billing practices. In addition, the researchers included questions regarding respondent's challenges, the need for policies and procedures, and other issues the respondent felt were pertinent. The questionnaire was pilot tested by four HI professionals; three in Illinois and one in Alabama. Following the pilot test, no changes were recommended or required. The questionnaire can be found in Appendix A. The participant interviews were conducted through Zoom meetings or via telephone calls.

### **Data Analysis**

Qualitative data were obtained through in-depth interviews. This data was thoroughly analyzed on two levels: individual case studies to understand unique scenarios and perspectives, and aggregate analysis to identify common themes and patterns across participants. The data was analyzed using the constant comparative method. The interviews were transcribed and data were then coded to identify themes and categories. Data were further analyzed to determine an in-depth understanding of the relationships between themes and categories and to summarize the data and over-arching themes. This was done both within and between individual interview data in order to analyze both individual case studies and aggregate information.

### **Limitations**

The results may not be generalizable based on the small sample size of 11 participants. The convenience sampling methodology and the fact that participants were from only two states could also reduce the generalizability of the findings.

### **Results**

## Participant Overview

A total of 11 participants were interviewed to gain insights into their involvement and experiences with patient portals and their associated management. The demographic breakdown of the participants showed a majority holding positions as HI directors or managers. Other roles included office manager, patient portal representative, and patient liaison. This aligned with the target group as the goal was to interview individuals in these roles. All but one of the participants worked in a hospital or health system; one worked in an outpatient private office.

## Involvement with Patient Portals

In examining their roles in relation to patient portals, it was found that six of the participants were deeply involved, either having direct responsibilities associated with patient portals or overseeing front line patient portal employees. Four served in a patient portal management support role. One participant stated that their role was “TBD (to be determined)” as specific patient portal management duties had not yet been clarified. All but one participant collaborated with their IT department or outside IT provider in the use and development of patient portals. All participants’ facilities’ patient portals were either offered through their EHR or through a system contracted with their EHR. Participants’ facilities in Illinois were most likely to use Epic, whereas participants’ facilities in Alabama were more likely to use Cerner. Other EHRs used were OncoEMR, Paragon, Allscripts, and Meditech.

## EHR Systems and Patient Portal Platforms

All patient portals were provided either directly through the facilities’ EHRs or through a system contracted with the EHR. When analyzing the EHR systems used, regional preferences were evident.

## Data and Services Available on Patient Portals

Facilities provided a variety of data in their patient portals as can be seen below. In addition, there were a variety of patient services provided in portals. These can be seen in Table 1.

Table 1: Types of Data and Services Available within Patient Portals

<b>Data Type</b>	<b>Services</b>
Appointments – past and future	Access to Health Reference Library
Clinical data	Make/Change/Cancel Appointments
Correspondence	Payment submission
Demographic information	Prescription refill requests
Financial information	Preventative care reminders
Immunizations	Secure messaging with provider
Links to other facility’s data	
Medications	
Patient history	
Test results	

Some participants stated their portals included “everything except nursing,” “a complete record (that) can be downloaded in one site,” or “all data except ‘sensitive’ data.” It should be noted that some participants stated that more data is now included in their patient portals following the implementation of the Cures Act; in some cases, patient portal data now includes nursing notes. It was also noted that not all portals included billing information and billing/payment functionality. Some facilities utilized a billing platform separate from the patient portal.

All facilities had at least some data automatically and immediately pushed to the patient portal from the EHR. There was some variability in types of data that may have a delayed release in being made available to patients. These delayed times were tied to requirements for providers to sign off or approve data before it was released to the portal. There were a variety of policies in regard to this. While most facilities did not require provider sign-off or release of data, three of the respondents stated that there was some requirement in place for provider review and release. However, in two of these three cases, data was automatically pushed to the portal after a set period of time, which ranged from 36 to 72 hours. “Sensitive data” was frequently not released until the provider signed off on the release. Two participants noted that they have experienced some issues with the speed at which results are pushed to the patient portal. They both stated that their facilities had experiences in which ER patients received their lab or radiology results through the portal, and then, knowing the results, left the ER before the provider was able to talk with them about their results. These facilities have contemplated slowing the pushing of results to the portal in the ER setting.

### **Document Handling**

When asked about scanned documents and whether these are pushed to the patient portal, the results were mixed. Four of the respondents’ facilities pushed scanned records into the patient portal. Three of these four facilities pushed the scanned documents to the patient portal automatically and immediately. Each of these three facilities had experienced issues with scanned documents being scanned into the wrong patient chart and released to the wrong patient portal. None of these facilities had experienced HIPAA violation because of the scanning error as the errors were caught prior to patient viewing. One site, however, noted that they have implemented a new system with AI which has decreased the error rate. All respondents were aware of the potential for erroneously scanned records to become a HIPAA violation and data breach.

### **Communication**

Participants were next asked about patient-provider messaging. When asked which staff members answer patient portal messages, four stated that nurses screen and/or answer messages. Six sites stated that centralized system staff or patient portal staff/patient liaisons screen and/or answer messages. One site stated that doctors screen and answer all of their own messages. Most sites had nursing or other staff work the patient message inbox and push messages that required a physician response to the providers. This information is pertinent as related to the recent trend of billing for patient messaging. None of the participants’ facilities were billing for portal messaging at the time of the interviews.

## Challenges in Portal Management

Participants provided a wide variety of responses regarding challenges of patient portal use and management. After review and analysis, it was found that these fell into three main categories. These categories and challenges can be seen in Table 2.

**Table 2: Types of Patient Portal Management Challenges**

<b>Timing Issues</b>	<b>Patient</b>	<b>Other</b>
Other hospital in town releases information faster	Need for more education for patients (both use and content); patients interpret data wrong or Google information	Patients complain about lack of results from other facilities (i.e., MyChart at one facility should have all MyChart info from all facilities)
ER patients get results then leave before seeing provider	Need to create emails for patient access (i.e., no email, couple shares email)	Patients upset about content (i.e., “patient refuses treatment”)
Patients try to enroll before they receive invite	Complaints about parent limited access for ages 12-17	Issues with copy/paste in notes (i.e., diagnosis from 2015)
Staff remembering to reply to messages in timely manner	Inappropriate parent/proxy access	Dependent on patient to maintain privacy/security
Providers/staff slow in answering messages	Patients’ technical challenges take time and attention	Maintaining current provider list for messaging
	Patients email with problems but don’t include ID info	Ensuring no information blocking
	Numerous password/login reset requests	Low patient portal usage
	Patients get text that results are ready and go to physical facility for copy of results	Increase in amendment requests
	Managing proxy requests	Scanned documents going into the wrong portal – HIPAA violation

## Policies and Procedures for Patient Portal Use and Management

Participants stated that their facilities had a variety of policies and procedures regarding patient portal use and management. The policies and procedures that were in place among the participants’ facilities varied based on setting, inpatient vs outpatient, as well as by facility. The majority of the facilities relied on the policies and procedures provided by the EHR provider, a few had facility specific basic documents, one had very in-depth policies and procedures, and two were developing further documentation. Policies and procedures fell into two main categories: basic use, and management and regulatory issues. Some of the basic use policies and procedures covered enrollment, time frame for information release, use at bedside, parent/child access regulations, responsibilities by department or position, proxy use and proxy authorization forms, and documentation included in the portal. Management and regulatory policies and

procedures covered guidelines for specific management of different issues, revocation of patient access due to misuse, code of ethics for portal use, inappropriate language in messages, and proxy removal. While most sites had policies and procedures for basic use, very few sites had more in-depth policies and procedures for managing the portal and ensuring regulatory compliance.

**Patient Engagement and Relationship in Portal Use**

Finally, participants were asked to add any other important feedback or information regarding patient portal use and management. These end comments seemed to focus more on patient engagement and relationship issues. These comments are seen in Table 3.

**Table 3: Additional Comments Regarding Patient Portal Use or Management**

Providers like portals as they decrease patient calls.
Portals are good for billing/payment.
Press-Ganey surveys could be added to portals.
Portals result in a culture change since patients have more information.
Portals should be user friendly for patients and providers.
Working with patients on portals is a new role requiring a positive attitude and desire to serve the customer.

**Discussion**

It is clear that HI professionals who participated in this study are currently taking on many roles in the management of patient portals. Participants are intricately involved in ensuring quality patient information in the portal, ensuring privacy and security of portal information, ensuring patient accessibility, and improving integration with other health information systems. It is noted that billing for patient messaging was not being done in any of the participant’s facilities at the time of the study, therefore, they were not involved in this aspect of patient portal management.

The participants in this study mentioned a variety of challenges that they are experiencing with patient portal use and management. In many instances, a challenge faced by one professional may have been addressed by another. The researchers, therefore, compiled a list of best practices based on participant comments and expertise, as well as documentation in the literature. These can be found in Table 4.

**Table 4: Patient Portal Management Best Practices**

Adjust timing of results to avoid problems with patient misunderstanding or cancelling of interactions with providers (i.e., release results after provider review, especially in the ER setting, allow time for providers to discuss results with patient for certain tests/circumstances).
Engage providers in review of timing of results to enable the best balance for providers and patients.
Ensure compliance with 21 <sup>st</sup> Century Cures Act – if information is not included in the patient portal ensure that patients understand it is still available to them through other means.
Provide education to nurses regarding the fact that patients may see their documentation.



Develop policies and procedures for not only basic use of patient portals but more complex management of patient portals and potential issues that may arise.
Provide ongoing patient education on patient portal use and health literacy.
Advocate for patients to help meet patient needs and ease of use.
Train staff in consumer facing skills and equip them with the skills to aid patients in portal use.
Watch for provider burn-out and increases in provider uncompensated time due to patient messaging.
Prepare for potential billing for complex patient messaging encounters. If billing is initiated ensure knowledge of regulations and develop policies and procedures.
If billing is initiated, design and implement data analyses to evaluate the effect of billing for patient messaging to ensure appropriate patient usage and to monitor for changes in quality of care.

This list clearly points to skills that fall within the HI professionals' domain. HI professionals have a unique understanding of data management, provider engagement, and patient facing aspects of patient portal management. These professionals are well placed to manage these areas and use these guidelines to improve patient portal efficiency and effectiveness for both patients and providers. In addition, HI professionals are ideally suited to use their knowledge and be involved in discussions about patient portal design weaknesses and to work with patient portal vendors to improve design.

With the recent growth in the use of patient portals, HI professionals are being asked to take on more duties related to patient portal management. Both HI students and professionals can benefit from education in the management of patient portals. The AHIMA Council for Excellence in Education™ 2018 Health Information Management Baccalaureate Degree Curriculum Guidance (2022 edition)<sup>11</sup> includes multiple suggestions for integrating education regarding patient portal management throughout the curriculum competencies. This study of current HI professional involvement with patient portal management reinforces the need for new graduates with patient portal management knowledge and skills. In addition, the rapid growth of patient portal use may have left HI professionals with little time to master portal management skills, therefore prompting the need for continuing education offerings in portal management and best practices.

### **Limitations**

While this study was limited to a small sample size with participants from only two states, the data gathered is valuable in that it provides insight into current patient portal management and associated challenges. Further study in this area could provide additional insight into patient portal management best practices. For example, this study found that one facility is using AI to decrease scanning errors. Further research into such new technologies and processes can assist others in providing high quality patient portal data. As patient portal usage continues to increase and healthcare systems expand their patient portal offerings, additional research will be needed to provide further insight into best practices and sharing of successes.

### **Conclusion**

This in-depth study was designed to evaluate current uses of patient portals and messaging, current challenges surrounding patient portal management, and responses to these challenges, including planned billing for messaging. The results of this study provided insight into these issues as well as additional information on the role that HI professionals currently are playing and could play in the future, guidelines for best practices, and educational needs at the higher education and professional levels.

The recent increase in patient portal use and the need for new skills in managing these portals has placed new responsibilities on HI professionals. As portal use continues to increase and portals become more sophisticated, HI professionals will be called upon to take on even more new roles. Ongoing review and study of these roles and the associated managerial needs will allow HI professionals to grow with portal use and development and lead them to further improve patient portals which will result in a more positive portal experience and improved patient outcomes.

## Support

There was no financial support or grant for this study. The authors report there are no conflicts of interest.

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## Appendix A

### Interview Questionnaire:

1. What is your position?
2. What type of facility to you work in?
3. What is your role/level of involvement in patient portals?
4. Do you work with IT in the use/development of patient portals/data?
5. What EHR do you use?
6. What data is included in your patient portal?
7. How is that data pulled into the portal from your EHR?
8. How do results of tests, exams, etc. appear in your portal?
9. How quickly do results, exam summaries, etc. appear in your portal?
10. Does a practitioner have to approve the release of the above information to the portal?
11. Do you scan results in to the EHR that then go into the patient portal?
12. How quickly do these scanned results appear in the patient portal?
13. Do you have any issues with scanned images going into the wrong patient chart, being released immediately, and resulting in HIPAA violations?
14. Who answers patient portal messages?
15. How do your physician’s approach portal messages?
16. Do you bill for portal messaging?
17. If so, how are these billed (specifics, which types of messages, coding, etc.)?
18. Are patients notified that they may be billed for messaging?
19. What has the patient response been to the potential for billing?
20. What are your/your practice’s challenges regarding patient portals?
21. What policies and procedures do you have regarding patient portal use/practice?
22. What other issues do you feel are important regarding patient portal use/patient response/practitioner response, etc.

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