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Current Practices in Electronic Capture of Patient Reported Outcomes for Measurement-Based Care and the use of Patient Portals to Support Behavioral Health

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Abstract

There is a recent convergence of three trends that are transforming behavioral health care: 1) patient engagement and activation; 2) electronic capture of patient-reported outcomes integrated directly into the patients' electronic health record to be used for measurement-based care; and 3) patient-facing health information technology, centering around patient portals, that empowered patients by providing them access to parts of their medical record. Though each component of this model is currently available; they have yet to achieve widespread standard of care.

This paper will discuss general considerations to be explored when implementing electronic capture of patient-reported outcomes and multifunctional patient portals in the context of a general behavioral health clinic. First, it presents strategies for implementing electronic data capture of standard behavioral health measures including the process for selecting instruments, setting technical algorithms for standard patient selection, psychometric considerations, and workflow analysis. Electronic data capture can occur through electronic patient portals, about which there is extensive debate within behavioral health. This paper reviews recent research on allowing patients access to their mental health notes. It also presents some original research on providers' views of note access and secure messaging. Finally, the paper makes recommendations for both future research and clinical practice. The field would benefit from expanding beyond the single focus on note reading and should explore the potential of patient portals as multicomponent Patient

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Centered Health Information Technology Homes. These homes can serve as an electronic bridge between clinic and home to help patients achieve their health and wellness goals. The overarching aim of this paper is to provide a vision of how this home might work -as well as its impact on clinical care for people suffering mental disorders.

Keywords

Patient Portals; Patient Reported Outcomes; Behavioral Health; Measurement based care; Patient engagement; Personal Health Records

Introduction

Mr. Lewis visits his local primary care provider for an annual check-up and to discuss a recent increase in fatigue and difficulty concentrating. Prior to the appointment, the nurse asks Mr. Lewis to complete some questionnaires using an electronic tablet while Mr. Lewis is sitting in the waiting room. This clinic has built an algorithm into its electronic health record (EHR) to ensure that, once a year, patients are screened for depression using the 9-item Patient Health Questionnaire¹ (PHQ-9) administered electronically. The results of Mr. Lewis' electronic assessment are made available in real time within the provider's EHR. During the medical visit, the provider tells Mr. Lewis that the questionnaire indicates he may be suffering from depression. After conducting further assessment, the provider recommends that Mr. Lewis start an antidepressant and Mr. Lewis agrees. However, he is reluctant to do so, because he is uncertain that his fatigue and poor concentration are due to depression.

After Mr. Lewis returns home, he uses his computer to log into his patient portal which provides him electronic access to his questionnaire responses and to his provider's progress note for this visit. Patient portals are secure online websites that give patients convenient, 24-hour access to personal health information from anywhere with an Internet connection². In reviewing how he responded to the specific items on the depression measure and reading his provider's note explaining the rationale for making this diagnosis, Mr. Lewis comes to understand why his provider is treating him for depression. In addition, the patient portal contains a problem list where each problem includes a hyperlink that redirects the patient to information about the illness, including its symptoms, common treatments, and expected course. In reviewing these materials, Mr. Lewis starts to recognize other symptoms he has been experiencing and concludes depression may be the accurate diagnosis. He then decides to initiate his antidepressant medication.

In the second week of treatment Mr. Lewis starts to experience an increase in headaches and nausea. He has also developed an odd rash on his neck. He sends a secure message to his provider using the portal. He and his provider correspond back and forth electronically and Mr. Lewis learns that such side effects are common, but should subside. The provider sends a message to arrange a brief video visit, using a link embedded within the portal, so the provider can briefly view the rash. After doing so, the provider recommends that Mr. Lewis schedule an appointment if the rash persists for three to four more days.

Mr. Lewis returns to this clinic four times in the six months after initiating antidepressant treatment, and each time he completes questionnaires electronically using the tablet, including one about side effect burden. All results are made available to the provider in real time, to the patient through the portal, and are automatically included in the progress note for each visit. During his six-month follow-up visit, Mr. Lewis and his provider review all previous questionnaire results presented in graph form in order to examine trends over time. Jointly, they agree that Mr. Lewis has only partially responded to the antidepressant, but he continues to have unacceptable side effect burden. The primary care provider, submits an electronic consult to a psychiatrist within the same healthcare system, requesting a recommendation for a new medication. The psychiatrist refers the primary care provider to a shared decision-making tool for antidepressants, and identifies 5 possible choices for a new medication. He also recommends the provider and Mr. Lewis consider psychotherapy as an option. Mr. Lewis and his provider review this shared decision making tool which includes infographics about side effects associated with each class of antidepressants. Mr. Lewis opts to try a new antidepressant with a different side effect profile, but with comparable or superior efficacy. They also discuss whether or not Mr. Lewis would benefit from psychotherapy. Mr. Lewis is open to psychotherapy, but the wait-list at the local clinic is three months. In light of this, the primary care provider directs Mr. Lewis to a link within the portal that provides access to an evidence-based fully self-guided online Cognitive Behavioral Therapy (CBT) program³. Mr. Lewis continues on his new medication while independently completing the online psychotherapy course. Follow-up visits reveal Mr. Lewis has achieved a full remission of his depressive symptoms with reduced side effect burden. Mr. Lewis and his provider decide to continue with this integrated treatment choice.

The scenario described above illustrates the recent convergence of three trends that are transforming behavioral health care and health care in general: 1) patient engagement and activation; 2) electronic capture of patient-reported outcomes integrated directly into the patients' electronic health record (EHR) to be used for measurement-based care; and 3) patient-facing health information technology, centering around patient portals, which empowers patients by providing them access to parts of their medical record. Though each component of this scenario is currently available, electronic data capture (EDC), patient portals, shared decision making tools, self-guided online Cognitive Behavioral Therapy; - they have yet to achieve widespread standard of care.

This paper will discuss general considerations and decisions to be explored when implementing electronic capture of patient-reported outcomes, patient access to mental health visit notes, and patient portals in the context of a general behavioral health clinic. It is based on the authors' implementation and evaluation of these components as well as patient activation interventions⁴⁻⁸. This is not intended to be a step-by-step technical guide to develop the comprehensive platform described in the scenario above and such resources are available elsewhere⁹. Rather, this article provides a discussion of implementation issues specific to behavioral health that have hindered adoption and prevented realization of the full potential of EHRs combined with patient portals.

Strategies for integrating electronic collection of patient-reported outcomes into measurement-based care

In the United States, the Health Information for Economic and Clinical Health (HITECH) Act as part of the American Recovery and Reinvestment Act of 2009, included financial incentives to promote widespread adoption of EHRs. Implementation of “mature” fully certified EHRs was guided by the Office of the National Coordinator for Health Information Technology’s Meaningful Use Criteria which outlined specific functions and features required for an organization and its individual providers to receive considerable financial incentives. For example, to meet Meaningful Use II Criteria, organizations implementing an EHR were required to provide patients a patient portal with electronic access to parts of their medical records, that also allowed patients to view, download, and transmit their EHR to outside providers. Administrators, clinicians, and information technologists were often critical of the implementation of Meaningful Use Criteria, such as the complex attestation process, or increased demand on providers’ time. However, this policy is responsible for the nationwide adoption of health information technologies that have the potential to revolutionize healthcare.

Most established EHR platforms support the collection of patient-reported outcomes, using tablets or kiosks made available after the patient has checked in and prior to the medical visit. Some also make these assessments available to patients days before the medical visit through the patient portal. The aim of electronic capture of patient-reported outcomes is to have standard assessments of clinical targets that the patient and provider can review together when making decisions about care, measurement-based care. Some of these assessments are required as part of the Medicare Access and CHIP Reauthorization Act of 2015 and Physician Quality Reporting System metrics such as administration of the PHQ-9, a screening measure for depression^{10–14}. Over time, these assessments may also be used to inform organizational and national population health strategies by summing treatment effectiveness over entire patient populations.

There are several important decisions made when implementing the clinical processes surrounding collection of patient-reported outcomes and their integration within clinical workflow and patient portals. The following lessons learned can inform a more successful use of electronic patient-reported outcome capture. These recommendations are based on the lead authors’ experiences conducting research on patient portals, within the United States Department of Veterans Affairs, as well as within a large academic medical center, the University of Iowa Department of Psychiatry. In addition, the University of Iowa is participating in the National Network of Depression Centers (NNDC) which has a multi-site Mood Outcomes Program. The NNDC Mood Outcomes Program is conducting standardized mood disorder assessments electronically at multiple mood disorder specialty clinics nationwide.

Some Clinical Considerations Regarding Electronic Capture of Patient-reported Outcomes

1) Selecting the Electronic Measures: Just because you can collect the data, doesn't mean you should.

The first step in implementing electronic capture of patient-reported outcomes in a clinic is selecting the target clinical outcomes and the measures to assess them. Clinicians and researchers alike see the ways in which systematic electronic administration of standard measures can inform clinical care, and the potential for this data to inform quality improvement or research exploration. However, these aims must be tempered by consideration of patient burden, and the degree to which the patient benefits directly from completing an assessment. This requires consensus between stakeholders in selecting assessments that optimize clinical insight while minimizing respondent burden, --a consensus that can often be difficult to achieve.

If consensus is difficult to achieve, clinics may have a designated standard set of assessments for all patients, but allow providers to individually assign additional assessments based on clinical issues unique to a patient. Most EHRs have a feature to permit the use of this ad hoc assignment. For example, a clinic may administer the PHQ-9 to all patients at the initial visit, and at all follow-up visits for patients with a previous chart diagnosis of depression. However, if a specific patient starts to develop obsessive compulsive (OCD) symptoms comorbid with the depression, the clinician can assign a standard OCD measure in addition to the PHQ-9. Given the heterogeneity of many outpatient psychiatry clinics, implementing a standard assessment protocol combined with a system allowing clinicians to tailor assignments to specific patient needs may be the most agile system to inform clinical care.

A provider may also want to assess domains that inform treatment decisions, yet are not based on a specific medical condition. For example, within psychiatry, standard assessments of side-effect burden, sleep quality, and overall functioning will directly inform treatment. These standard measures, such as the WHO Disability Assessment Schedule¹⁵ or the Pittsburgh Sleep Quality Index¹⁶, can reflect patients general health across conditions and medical treatments. As such, clinicians treating the same patient, but practicing within distinct specialties (e.g. Family Medicine, Cardiology, Psychiatry) can review patient trajectories on these measures to determine the overall effectiveness of a patient's medical care.

2) Developing the Electronic Measures: Treat standard patient self-report measures like standard physiologic measures.

There are a range of standard measures implemented in medical care such as the PHQ-9¹, or the CAGE¹⁷ (substance use screening) questionnaire. These measures have established psychometric properties associated with the specific wording of items and administration instructions. These psychometric properties are largely maintained through electronic administration^{18,19}. Unfortunately, standard psychological measures are often deployed by information technology staff who are unfamiliar with psychometrics and inadvertently change wording, target time frame, or response choices. This is comparable to deploying a

blood pressure cuff, and altering the calibration so readings are not accurate. It is essential to administer the published validated version of a patient report measure so the clinical interpretation is accurate and decisions based thereupon are relevant. This includes adherence to the specific language and administration instructions of the published measure. A clinician with psychometric training should review a measure encoded in an EHR before it goes live to ensure it accurately reflects the standard measure.

3) Assignment Rules: How often is too often?

Organizations can specify ‘assignment rules’ which are then encoded within the EHR platform to signal when patients should be asked to complete pre-assigned measures. For example, a psychiatric clinic may decide that they would like all patients to complete a standard measure of depression, suicidality, and alcohol and substance use prior to all intake evaluations. A primary care clinic may decide that all ongoing patients should receive a PHQ-9 depression screening once a year. Clinic wishes can be encoded into the electronic health platform so that the patient’s medical record flags the receptionist at check-in to provide the patient a tablet at a target visit. Most typically, assignment rules specify the type of visit (e.g. initial, follow-up) and/or a target diagnostic group (all patients with ICD-10 codes of 32.* for depression) and/or a target time frame (annual screening with PHQ-9 and the CAGE). In developing assignment rules, clinics need to consider the optimal frequency of assessments. Patients may be amenable to an assessment before every psychiatric follow-up when they occur 6- weeks to 6-months apart. However, patients in psychotherapy may find weekly assessments excessive.

4) Integrating into Clinical Workflow: Taking the time to do it right.

Several studies have examined the impact of collecting patient-reported outcomes on quality and effectiveness of clinical care. Krageloh et al.²⁰ conducted a systematic review and found that collecting assessments in and of itself is not a guarantee of improved care. The only studies to demonstrate clear positive impact on outcomes were those where the results of the assessments were made available to both patients and providers and there was a systematic workflow for them to review the results together in making decisions about treatment. Though this may seem like an obvious step, as evidenced in the Krageloh et al. review, some clinics do conduct assessments but have not taken the additional step of full integration, with providers reviewing results and discussing with their patients.

A common workflow is for patients to complete the assessments after checking in, but before seeing the provider. More mature EHRs will allow the provider to see patient responses in real time and the survey results to automatically populate the visit note. This workflow requires the patient arrive in advance of the scheduled visit to allow completion of the assessments. Given the time pressures within clinics, it is possible that patients do not complete the assessments before the provider arrives. They can then either complete them in discussion with the provider or after the visit. However, completing the assessments after the visit obviously precludes provider and patient review of the results, though they may inform future visits.

As stated earlier, providers can assign assessments within the patient portal 24 to 48 hours prior to the visit to avoid time issues while in the clinic. Making assessments available through the portal may raise concerns about assessing suicidality, such as item 9 on the PHQ-9, when there cannot be an immediate clinical response. To address this, language can be included requesting the patient call a crisis line if needed, or simply administering measures that don't assess suicidality. Some have opted to use the 8-item PHQ which omits the question about suicidal ideation. This practice is questionable as asking all but the most critical question in behavioral health is akin to assessing cardiac symptoms but refusing to ask about chest pain because of liability concerns. Each clinic has to determine their comfort with asynchronous assessment of suicidal ideation as well as specifying a protocol for handling positive responses.

Both of the examples provided and the recommendations above are relatively simplistic as compared to the potential of large scale collection of patient-reported outcomes combined with additional patient medical information encoded within the EHR. Several collaboratives, including the National Network of Depression Centers, Group Health Cooperative²¹, and Partners Healthcare Research Patient Data Registry²² use large scale data collection to inform "big data" analyses to improve point-of-care decision making as well as etiologic understanding of psychiatric disorders. Barak-Corran et al.²² used longitudinal EHR data to predict suicidal behavior using data spanning over 15 years, including more than a million patients. They developed a predictive model with 33–45% sensitivity, and 90–95% specificity. More important, their model identified suicidal behavior predictors, such as fractures, wounds, and infections; in addition to the usual predictors, such as substance use and psychiatric disorders. Once EDC and analysis becomes more widespread, more complex yet accurate prediction models can be applied.

Patient Portals as Patient Centered Health Information Technology Homes

The Office of the National Coordinator for Health Information Technology defines patient portals as, "secure online websites that give patients convenient, 24-hour access to personal health information from anywhere with an Internet connection"². Typically, patient portals allow patients to view a current medication list, recent laboratory results, a problem list, allergies, and sometimes actual visit notes- the providers narrative description of what occurred during the appointment. Patient portals often include features to support secure messaging whereby patients and providers can exchange secure electronic messages. Secure messaging is superior to 'regular' email or telephone because it is more secure and it allows for asynchronous communications- communication where both parties do not have to be present at the same time. This eliminates time consuming phone tag.

Patient portals serve as an electronic bridge between patient and provider, home and clinic. In the chronic disease model, patients are increasingly responsible for positive health outcomes through self-management of their illness^{23,24}. Patient portals provide critical support between medical visits for patient engagement in their treatment plan and active collaboration with their health providers.

Increasingly, technical developments are expanding the capabilities of patient portals, including embedding links to enable videoconferencing via portals and using portals to collect patient-reported outcomes as described above. Portals could also include some of the self-guided online psychotherapy programs, which have demonstrated effectiveness, particularly if coupled with intermittent clinical contact³. The value of including videoconferencing and self-guided therapy links within the portal is that the enhanced technical security of portals is also applied to the videoconferencing technology. It also improves usability if patients can access all ways of interacting with a healthcare system through a single site.

In 2017, Fraccaro et al.²⁵ conducted a systematic literature review and meta-analysis to determine actual adoption rates of portals. They estimate an overall mean adoption rate of 52% (95% Confidence Interval 42 and 62%). At 52%, this estimate can suggest the glass is either half full or half empty. Research supports both improved outcomes and clear evidence of user satisfaction. Patients report that electronic access to their health information helps them feel more involved in their treatment, better able to follow provider recommendations, and better able to engage in self-management behaviors, particularly for chronic diseases^{6-8,26,27}. In a sample of veterans using My HealthVet, the Department of Veterans Affairs patient portal, 80% endorsed that their portal helps them to take their medications as prescribed and 92% indicated using the portal helps them to understand their conditions better and better remember their plan of care⁶. Zhou et al.²⁸ compared portal users and non-users among diabetic patients receiving care at Kaiser Permanente while controlling for premorbid illness severity and patient characteristics. Portal users performed better on both process and outcome measures such as HbA1c screening and blood pressure control.

The OpenNotes project^{26,27} explores patient and provider experience of sharing medical notes via a patient portal. This group compared both patient and provider experience of notes and revealed that providers were more concerned about patient misunderstanding and confusion than is warranted based on patient report. Moreover, providers underestimate patient experience of benefit from portals in terms of being prepared for visits, or understanding of health conditions. The OpenNotes project reveals patients ability to understand the intent of portals and to use them appropriately in the broad context of their entire health care.

Patient access to their own health information also allows them to participate in coordinating their care because they can share information downloaded from portals between providers practicing within different health care systems. This is part of the express intent of Meaningful Use requirements that patients can download and transmit an electronic health summary²⁹. Some portals provide patients the ability to send a continuity of care document from their portal to other health care systems, in the same way that providers are conducting electronic health information exchange. Federal partners in the United States, including Medicare, the Department of Veterans Affairs (VHA), the Department of Defense, and the Office of the National Coordinator for Health Information Technology have developed and promoted Blue Button as a cross platform symbol representing patient ability to electronically access their health information and download a standardized summary of recent healthcare, which they may share with trusted family members or providers³⁰. For

example, veterans seen at VHA frequently also visit providers outside this system and information sharing between VHA and community providers is often lacking^{7,31}. In two related projects, Klein et al.⁵ and Turvey et al.⁸ trained veterans to use Blue Button within My HealthVet to download a standard continuity of care document and share it with community providers. This yielded high veteran and community provider satisfaction, provider report of improved medication reconciliation, as well as a reduction of unnecessary duplicate laboratories.

Though Fraccaro et al.'s²⁵ estimate of a 52% adoption rate on average means health care systems cannot implement a quality improvement initiative that relies solely on patient portals, their electronic nature means their potential is capable of large scale impact. Within VHA, My HealthVet has been available to veterans since 2004 and features have been added continuously over the past decade. In 2018, MHV provided veterans the ability to download actual Dicom images of recent radiology studies. My HealthVet currently has over 4.7 million registered users. In February of 2019 alone, 970,000 unique MHV registrants logged into MHV, 505,000 refilled a prescription, 391,000 viewed their appointment calendar, 258,000 sent a secure message, and 154,000 used the Blue Button feature³². This reveals the large scale adoption by users in the context of a large nationwide healthcare system.

Patient Portals and Behavioral Health: Barriers to Adoption

The potential power of portals is enormous, yet for patients suffering from mental health disorders, the widespread implementation has been hindered by concerns about patient access to their mental health information. Mental health providers are concerned that patient access to notes would impact the therapeutic alliance and that they, the providers, would be less candid in documenting visits. Dobscha et al.³³ building on the OpenNotes project, interviewed mental health providers about making mental health notes available in VHA's patient portal. Though these clinicians agreed making notes available would help patients, 49% indicated they would be pleased if patient access to mental health notes was discontinued, and 63% stated they would purposely be less candid in their notes, knowing their patients could read them. In Sweden, OpenNotes is practiced nationally, yet allowing mental health patients to see their notes is decided upon regionally. Petersson and Erlingstodtir^{34,35} conducted a pre-post survey of Swedish psychiatrists in Region Skane which is one of the first of a small number of regions in Sweden opting to make mental health notes available. Comparable to the Delbanco et al. findings, these authors report that both expected benefits and feared risks were less than anticipated once clinicians actually had experience with patient access to mental health notes.

The OpenNotes research focuses primarily on providing patient access to their general medical and mental health information. However, patient portals have a range of functions warranting exploration to determine how best to harness this technology. Portals also support electronic secure messaging, prescription refill, appointment scheduling, and access to laboratory or pathology results. Evaluation of patient portals in mental health care needs to explore all these features.

The lead author (CLT) recently conducted an online survey with 80 mental health providers practicing in a range of organizations nationwide in the United States. The aim of the survey was to explore clinicians experiences with patient access to mental health notes specifically and the use of secure messaging in mental health care. Though the majority of these providers (95%) worked at organizations that support patient portals, 67% reported their organization allows access to non-mental health notes, while only 38% reported their organization allows access to mental health notes.

Differential access to medical information may address some providers' concerns discussed earlier^{33,35}, it conveys the message that mental health care is different from the rest of medical care, a stance that perpetuates the stigma of mental health care. At the same time, implementation of open notes within mental health should be clinically informed and address major concerns by all stakeholders. In our open ended assessments of provider perspectives, a range of opinions supporting and detracting from patient access to mental health notes reveal some of the key clinical issues.

Perhaps one of the largest issues is the additional workload without compensation associated with secure messaging with one provider sharing:

“This has ridiculously increased our non-compensated time. We have to watch the wording so carefully because there is no nuance in written language. I think the time and anxiety around the endless e-messaging will ultimately be the major driver of when I decide to retire- right now I'm tending to think I'll do it as soon as I can.”

While uncompensated workload is a concern, the efficiency of secure messaging should be appealing to payers who could provide incentive for secure messaging. To date, VHA provides workload credit for secure messaging and the Centers for Medicare and Medicaid are currently considering compensation models³⁶. Moreover, other providers survey viewed secure messaging in a more positive light. For example provider stated:

“Most of my patients are very pleased with the ability to use secure messaging to reach me, and I love the fact that their (and my) messages go into the chart when they are made via secure messaging. This is much easier than documenting a phone call or pasting an email message into the chart. There is documented evidence that I have responded to their queries and they to mine.”

Many use messaging to efficiently communicate without playing phone tag and the automatic inclusion in the EHR also improves efficiency.

Another major concern is the degree to which providers can be truly candid in medical documentation with open notes. One provider stated:

“It's not a great idea to have patients have full access to the narrative of their notes. I have known providers to not add diagnoses to their notes or to change their behavioral observations sections out of fear of their patients (e.g., those with significant disturbances and/or personality disorders).”

This concern raises an important issue around the multiple functions of the EHR. The health record serves as a historical record, a communication tool between providers and, in the

advent of patient portals, a communication tool with patients. The concern expressed above reveals how patient access to notes may limit the effectiveness of the EHR as a provider-to-provider communication tool. In addition to concerns about patients with poor insight into their illness, providers may also want to communicate privately about suspicions of violent behavior risk, physical or sexual abuse, or substance use disorders. Currently available EHR platforms realize this clinical need and now provide features allowing for time-limited clinician to clinician electronic communication that is not included in the data fields available through the patient portal.

Providers surveyed in the AHRQ study also highlighted the importance of conveying the appropriate scope of messages to patients.

“I work for the VA and patients use secure messaging quite a bit. I do a fair amount of educating regarding what is appropriate and I have a low threshold for telling patients if something is too complex to manage over secure messaging but we can have a phone appointment.”

This provider stresses the need for structure and communication around patient portals and secure messaging usage. Like any new technology, portals are neither inherently harmful nor beneficial. Their potential lies in the ability of the provider to collaborate with the patient on using the tool to meet the mutually agreed upon goals of treatment.

Implementation of Patient Portals: Putting the Horse before the Cart

Within the United States, the implementation of EHRs and patient portals occurred due to the HITECH and Meaningful Use incentives. They became widespread in response to national level policy. Implementation was often haphazard without specific clinical recommendations or policies to guide clinical adoption. In retrospect, the cart was put before the horse. As one example, in our interviews with providers about their experiences with patient portals in mental health care, many reported they first learned patients could read their visit notes from the patients themselves during the medical visit -not from clinic leadership. However, despite this haphazard beginning, today we have enough experience to present recommendations to improve the overall integration of these technologies into mental health care.

The investigators exploring OpenNotes in the context of mental health care argue for releasing notes, but make clear recommendations about providing clinical context for this practice. With VHA, Pisciotto et al.³⁷ recommend writing notes that maintain the therapeutic relationship, communicating with patients about their notes, and utilizing clinical notes as a patient resource to enhance care. Dobscha et al.³⁸ have developed and validated an online educational program for mental health clinicians conveying best practices in enhanced care through patient portals and open notes. This training includes recommendations about navigating complex clinical scenarios and addresses common concerns about OpenNotes. Participation in the course resulted in clinician reduction in worry about negative consequences of open notes and improvement in perceived ability to communicate with and educate patients about access to their health information.

More research is needed on optimal design and implementation of this patient facing technology. To date, much of the research has focused specifically on patient access to the visit note, yet patient portals support a wide range of functions, many with critical interactive features such as appointment scheduling and prescription refill -all of which can directly benefit mental health patients. Operations within the VHA have developed an account activity log for 163 unique activities available to all patients through My HealthVet. Between its inception in 2004 and February 2019, veterans surpassed the one billionth mark for total activities completed. Notably, the most frequent activities were prescription refill and laboratory results review, not reading visit notes.

Conclusion

This paper presents the potential of electronic capture of patient reported outcomes for measurement based care within a multifunctional patient portal. As patients have a right to their full medical record, continuing to hinder electronic access to mental health notes seems shortsighted –especially in light of available training programs to promote optimal implementation of mental health open notes. Moreover, it will delay progression to a comprehensive patient centered health information technology home able to support fuller patient engagement both in clinic and at home – a tool currently available to patients with other medical conditions, such as cardiac illness or diabetes. The discussion about patient portals in mental health also needs to expand beyond the focus on access to provider notes. Portals support a wide range of functions and each can be harnessed to improve the lives of our patients. In light of the increasing public health burden of psychiatric disorders coupled with a growing provider shortage, the behavioral health field cannot afford to leave such a valuable tool on the table.

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KEY POINTS

Electronic health records are now capable of collecting patient reported outcomes electronically to support measurement based care.

Integrating multiple features within patient portals to support patient engagement can greatly enhance mental health treatment.

Implementation of patient portals in behavioral health settings requires specific considerations including discussing the scope of how the portal can be used by patients.

Exploration of OpenNotes within psychiatry should expand beyond discussion of patients reading notes, and address the clinical potential of secure messaging, measurement-based care, and telemedicine –features now integrated into patient portals.

SYNOPSIS

Electronic health records combined with tethered patient portals now support a range of functions including electronic data capture of patient reported outcomes, trend reporting on clinical targets, secure messaging, and patient-mediated health information exchange. The applications of these features require special consideration in psychiatric and behavioral health settings. Nonetheless, their potential to engage patients suffering from disorders where passivity and withdrawal are endemic to their mental health condition, is great. This manuscript presents the growing research base on these topics, including discussion of key issues and recommendations for optimal implementation of patient portals in behavioral health settings.