

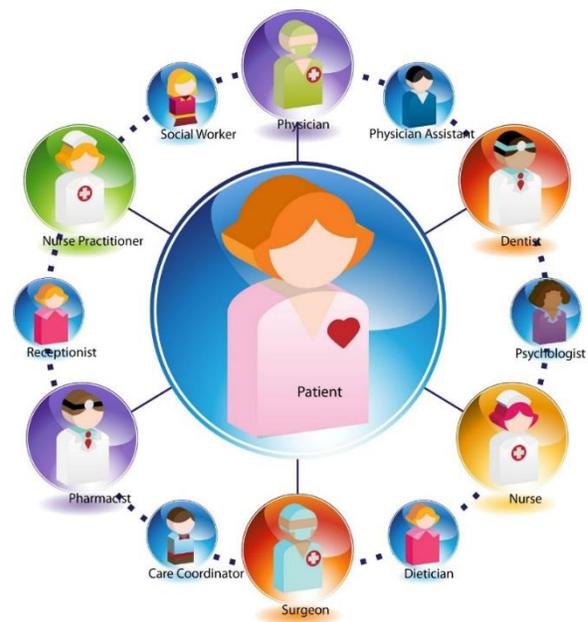
# Technology Tactics to Make Patient Engagement Easier: Improving the Health of Patients with Hypertension & Diabetes

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*This article is part of a series devoted to hypertension and diabetes in Ohio and the prevalence of these chronic conditions. It explores the importance and use of technology for patient engagement as an essential key towards improving outcomes of patients with these conditions.*

It used to be that patients would show up at the doctor's office, do what the doctor said, never look at their own medical records, and rarely question decisions made about their health. But numerous studies today show that patients who are actively involved in their health care have better outcomes and experience lower costs. Lecturing patients about potential future health issues or worsening conditions does not provoke or inspire patients to become engaged. Instead, care teams should make information relatable and personal to engage patients to become partners in their own care. You probably already have taken steps in this direction in your own practice, so let's look at what you can do to focus on engaging your patients and improving their care.

Patient engagement occurs when patients' knowledge, ability and willingness to oversee their own care aligns with the provider or clinician's interventions and treatment. Patients can then participate in shared decision making so they better understand their conditions and collaborate with clinicians to take the best steps forward that will promote positive behaviors, such as exercising and getting preventive care. This concept also expands beyond the physician-patient relationship to include the entire care team, and even the community, in the partnership necessary for full patient engagement. A care team might include any of the members in the care team graphic to the right. The patient is at the center with various members of the care team involved, depending upon his or her condition.

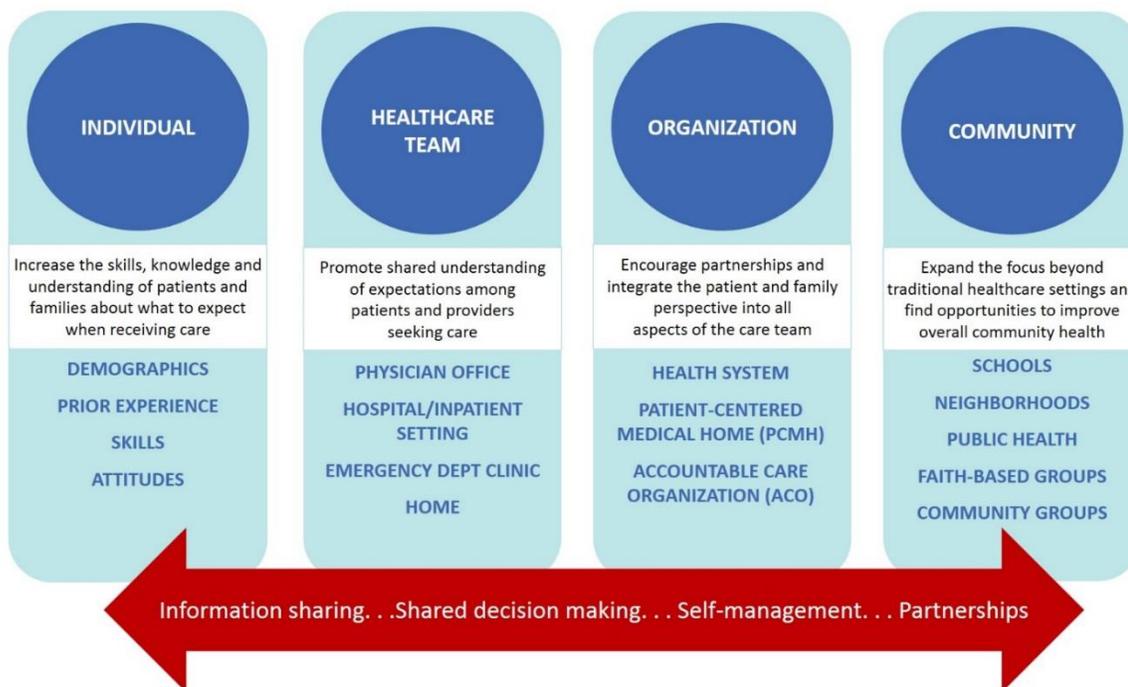


Research identifies three levels of patient engagement:

1. Assisting patients with truly understanding their health and conditions
2. Providing tools to assist patients with managing their chronic conditions
3. Increasing the interactions between the patient and members of their care team

Just as patients need to take more responsibility for their own outcomes, you as providers need to supply the tools and education for this to occur. Existing and emerging technologies can play a role in patient engagement, yet no single technology is the magic bullet. Organizations and providers should recognize that true patient engagement is built on understanding the patient's specific personal needs, such as cultural differences, then adjusting the approach and toolset used to keep a patient engaged between encounters.

You probably already involve patients and their family in discussions if a serious condition develops that's life-threatening. However, the real goal of patient engagement is to encourage shared decision making on an ongoing basis. The patient, their family or caretakers and the physician become a team who together consider treatment options and weigh risks to develop a care plan. For example, we know that patients with uncontrolled diabetes are much more likely to better manage their condition at home if they're actively engaged. Patient engagement relies on a number of factors depending upon the individual – they can include a relationship between the patient and the care team, ongoing patient education, partnerships with non-clinical organizations, and the proper use of available technology to keep patients engaged in their own wellness.



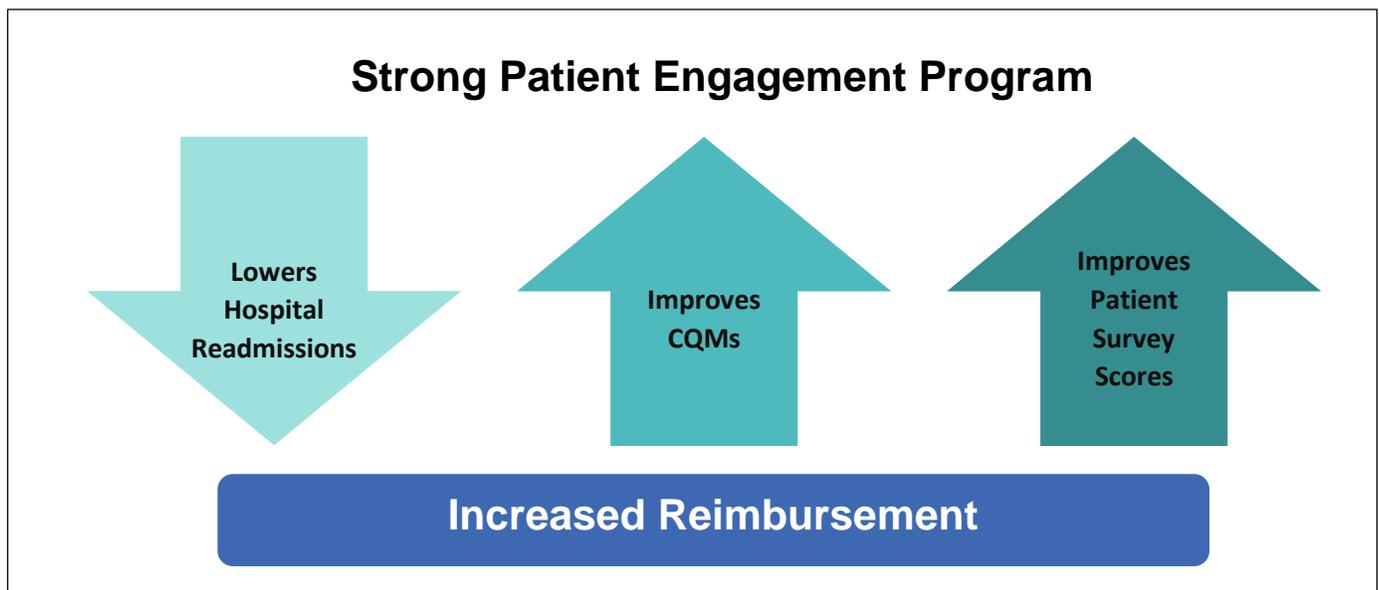
Framework spanning a continuum that includes the patient, healthcare team, the organization and the larger community.<sup>1</sup>

<sup>1</sup> HIMSS. (2014, August 12). The State of Patient Engagement and Health IT. Retrieved June 28, 2016. from <http://www.himss.org/state-patient-engagement-health-it?ItemNumber=32950>

## Why is Patient Engagement Important?

Many patients don't have the medical knowledge to truly understand their medical conditions and yet, they're the critical members of their care team because most aspects of care occur in the home. So, it's up to you as clinicians to assist them with health literacy, which is the ability to obtain, process and understand health conditions to make decisions, especially when patients experience complicated, chronic conditions. Factors such as medication adherence and lifestyle choices have an equal, if not greater, impact on outcomes as care provided by a physician or in a hospital. *Patients with the least comprehension who are not actively engaged in their own health care have costs up to 21% higher than fully engaged patients*<sup>2</sup>. A study published in the *Journal of Healthcare Information Management* states that 75% of healthcare costs are due to chronic conditions, such as hypertension and diabetes.<sup>3</sup>

Continued interaction with patients, even when driven by technology, provides additional opportunities to educate the patient, build a base of knowledge of known conditions and encourage continued compliance. Patient engagement can also assist with managing expectations, improving the patient experience and improving overall wellness. The goals of patient engagement align with those of the new payment reform models – to focus on wellness and prevention as a means of lowering the cost of healthcare. In fact, a strong patient engagement program has the potential to lower hospital readmissions, improve clinical quality measures (CQMs) and improve patient survey scores, leading to increased reimbursement with the shift to value-based care.



<sup>2</sup> James, J. (2013, February 14). *Patient Engagement*. Health Affairs Health Policy Brief.

<sup>3</sup> Stempniak, M. (2014, June 10). *Technology is the key to patient engagement at the individual level*. Retrieved June 29, 2014, from <http://www.hhnmag.com/articles/4167-technology-is-the-key-to-patient-engagement-at-the-individual-level>.

## Technology for Patient Engagement

The Meaningful Use EHR Incentive program created the need to develop primary technologies available today: the EHR, patient portal and secure messaging. The patient portal and secure messaging exists in nearly every practice, whereas hospitals also have patient portals but lack the secure messaging functionality. The advancing and changing requirements of Meaningful Use and new programs – such as Chronic Care Management (CCM), Transitional Care Management, Accountable Care Organizations (ACO), Patient Centered Medical Homes (PCMH) and other payment reform programs – have limited the resources necessary to perform new workflow redesigns and to explore the potential benefits of the patient portal and secure message. As such, patient engagement through these technologies hasn't been fully explored by most.

The EHR is often overlooked as a tool for patient engagement, yet it serves as the foundation for true patient information. The system houses all patient data, can provide the reports and feedback necessary to individualize patient engagement, and identifies specific education for the patient's conditions and medications. The EHR must be configured appropriately to allow a rich data set to flow to the patient portal in a timely manner. There is a great deal of discussion, both at the national level and within many health systems, regarding the breadth of data that should be shared with patients. Most organizations share lab results, radiology results, medications, problems, allergies and clinical summaries. However, very few organizations share physician notes, which is the focus of a great deal of dialogue.

Although some organizations are still struggling with current patient engagement technology, the next generation of tech tools is already on the horizon. This next generation is once again being driven by the Meaningful Use Stage 3 requirement that hospitals and physicians allow Application Programming Interface (API) access to patient clinical data residing in the EHR. This API access will allow third-party developers to create any number of applications for everything from allowing a patient to consolidate their data from disparate patient portals to targeted smartphone-based applications for specific conditions. These APIs have the potential to dramatically increase true patient engagement by providing simple-to-use, condition-specific smartphone-based applications that can push explicit data items of interest to the EHR and alert the care team.



**For example, a hypertensive patient could receive an app for blood pressure management with a phone-connected blood-pressure cuff.**

A diabetic patient who is in need of assistance with controlling his or her glucose levels could be prescribed an app on an iPhone designed specifically for diabetes management and a glucose test unit that connects to the phone.

This app could then push the glucose reading back to the EHR and, if out of the desired range, alert a care coordinator to reach out to the patient.

The phone-connected glucose readers are available now but are without the connection back to the care team.



### [Tactics for Using Technology for Patient Engagement](#)

Though the foundational technology to support patient engagement exists today, some organizations struggle to incorporate the needed workflows and education to realize a return on investment. Healthcare has also struggled to catch up with the basic expectations that patients place on other sectors such as banking, retail and travel with respect to the ability to engage with their information and to make transactions using technology. A number of national workgroups and associations emphasize the importance of and provide recommendations for the use of patient portals, secure messaging, patient education and other related technologies for patient engagement.



#### ***The basic keys to success are:***

- ***The user interface must be simple and intuitive;***
- ***The effort required to use the system or to share data must be minimal; and***
- ***Basic functions that are commonplace from sectors outside of healthcare must be provided.***

The ability for patients to securely and readily access their health information serves as the backbone for national efforts to increase awareness, engage the entire family and provide truly patient-centered care. The EHR provides the foundation for these efforts where the patient portal serves as the front door. Your organization should market the patient portal along with providing education and assistance necessary to support patients with the portal. Resources should be made available to work with patients to create the needed accounts and provide a high level overview of the portal.

Often a family member or friend serves as the primary caregiver for a patient, as it is estimated that 93 million friends and family members look after sick loved ones<sup>4</sup>. Unfortunately, providers often don't encourage these caregivers to use the portal because of a misunderstanding of HIPAA restrictions. Inability to access the portal can give caregivers added responsibility of understanding the extent of the patient's condition, and remembering the detailed medication instructions and other aspects of care. Much of this information is easily available in the portal. Access to the patient portal for caregivers can be provided while adhering to HIPAA requirements, although additional documentation may be necessary.

Patients or their caregiver are more likely to access a portal if it provides basic functions - outside of the ability to access clinical data - such as appointment reminders, bill payment, and medication refill requests. These basic functions, if utilized properly, can drive patients to the portal, which is an opportunity to engage patients in their own care. Once in the portal, they may view their clinical data, access problem-specific patient education or message their provider. As a provider, you need to ensure that your patient portal provides condition-specific education that is easily accessible and multi-media, meaning that the education is provided as easy-to-read documents and educational videos. When patients receive clear and simple information regarding their health conditions, they build health literacy, which then empowers patients to become active participants in improving their own care. Once a patient understands how to control his or her hypertension and can comprehend the potential negative outcomes, that individual will then become the primary partner in the care team.

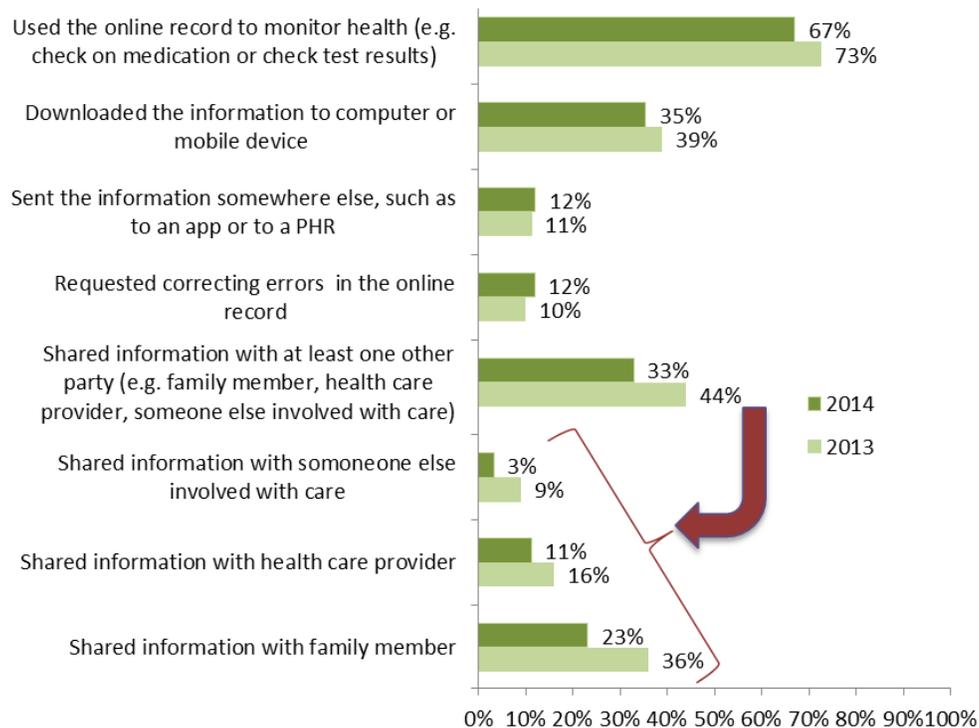
Some portals provide a means of collecting information from the patient that then is sent to the EHR for the care team to access. This functionality ranges from pre-screening questionnaires to collection of specific data items, such as glucose and blood pressure readings. *However, most organizations have not enabled this functionality due to the already overwhelming amount of patient data that is available and the potential increased risk if something is overlooked.*

Meaningful Use Stage 3 requires the ability for the EHR to receive patient-generated data so it may be beneficial for organizations to enable this functionality now so the related workflows and data management will be more mature before the requirement is imposed.

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<sup>4</sup> Brian Eastwood, "How Healthcare Can Fix Patient Engagement", *CIO Magazine*, June 27, 2014.

## How patient portals are used by those who access their medical records<sup>5</sup>.



The ability for a patient to send a secure message to you can build trust and encourage continued use of the portal, which can positively impact patient satisfaction, care plan adherence and readmissions. Historically, the use of secure messaging has been used sparingly. This functionality can allow patients, at their leisure, to ask a question that was forgotten during the patient visit or to obtain clarification on a medication or treatment plan at any time. You and your care team can then respond as time allows during your busy day. Most patient portals and EHRs allow for the secure message to be routed to a care team member who can provide the response that can then be forwarded directly to the physician, if appropriate. Secure messaging has been found to directly improve outcomes and is associated with a 2% - 6.5% improvement in HEDIS health measures like glycemic, blood pressure and cholesterol screening and control<sup>6</sup>.

There are a number of other non-portal based technologies that can be used for patient engagement. However, it is important that when evaluating any technology that may be clinically valuable that providers ensure their patients find it stimulating or exciting, which will then get them more interested and likely to adhere to care plans.

<sup>5</sup> Patel, V., Barker, W., Siminerio, E. (2015, October). *Trends in Consumer Access and Use of Electronic Health Information*. ONC Data Brief 30.

<sup>6</sup> Guerin Gue, D. (2016, July 6). *Patient Portals: For Patient and Provider Satisfaction, Move Beyond MU Rules*. Retrieved July 10, 2016, from <http://www.4medapproved.com/hitanswers/patient-portals-patient-provider-satisfaction-move-beyond-mu-rules/>

A great example of this technology comes from a study in the *Journal of Healthcare Information Management* about a pilot that used point-of-care kiosks. This kiosk presented a series of questions to the patient during the check-in process to gauge the level of understanding of their conditions and care plan. The care team was alerted where comprehension was lacking so that it could be addressed during the visit. This pilot found that 42% of patients did not have the information necessary to manage or adhere to their medications<sup>7</sup>.

Another example of technology for patient engagement is the use of touch screen devices in waiting rooms and patient rooms. These devices generally focus on patient education, but can include functionality to gather information from patients, present a survey and engage a potentially bored patient in the waiting room. Offering condition-specific education, other organizational information or an educational game turns what would be wasted time for a visitor into an informative and productive time with lots of useful information. These devices can support other patient engagement technologies by providing the patient with information on accessing and using the patient portal and secure messaging.

## Conclusion

Nearly every article and study on patient engagement comes to the same two conclusions:

1. Patients' outcomes are much improved when fully engaged in their own care.
2. Technology is a critical tool in patient engagement.

For you as a physician and clinician, a successful patient engagement program requires that barriers be removed or mitigated, including time constraints of the physician and care team, insufficient staff training and limitations of the EHR and patient portal. Organizations and practices need to set aside resources and time for true innovation with technology without fear of failure, perhaps with small pilot programs on a significant population, like diabetic and hypertensive patients.

*Once a practice has mastered patient engagement and the underlying technology*



*then the staff can engage entire populations as part of your practice's population health initiatives.*



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