Improving Clinical Workflow & Patient Engagement Through Interactive Technology

Elo White Paper

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1. Introduction: Improving Clinical Workflows & Patient Engagement

Clinicians see increasing complexity in the routine processes and technologies they are asked to use in caring for their patients. Patients, on their side, feel far less connected to their care as technology builds walls between them and their care teams. Of physicians surveyed, 61% said their greatest need is improving routine processes in the clinical practice.[1] To make routine processes easier and help patients feel more connected, technologies like artificial intelligence, machine learning, decision support systems and extensions to electronic health records are increasingly designed to support clinicians in diagnosing their patients' symptoms, developing care plans and delivering the outcomes their patients seek. However, the density of information can be overwhelming for clinicians.

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EMR technology sophistication enables capturing more information, but many clinicians feel EMR implementations have overgrown the original intent of digitization. In theory, EMRs should have allowed easier access to data that instructs on patient condition and treatment efficacy. Instead, digital overload has caused clinician fatigue and a general negative association of EMR solutions.

Today's EMR user interfaces are generally complex with multiple tabs and requirements for data inputs above and beyond what clinicians feel should be required. This data-heavy approach may leave clinicians feeling overburdened and patients feeling confused, overwhelmed and disconnected from the plan for improved health. Arguably the exact opposite of the technology's intent. To combat this, EMR solutions require new thinking, streamlining and automating. Many EMR companies are applying new technologies to increase usefulness and decrease complexity in the EMR workflow.

A survey by the American Medical Association Physician Masterfile sampled 870 U.S. practicing physicians and found that higher physician perceived EMR usability was associated with higher levels of perceived positive outcomes (improved patient care) and lower levels of perceived negative outcomes (worse patient interactions and work-life integration). [2]

At the same time, clinicians have become burdened by the use of technology at and near the patient's bedside. The overreliance on electronic health records during patient consults creates a physical and emotional barrier for the patient, which a vast number of clinicians prefer to see changed.

Jeff Riggins, health IT expert and digital media consultant at Drury University, sums up the issues with current EMRs nicely:

"Sadly, most EMR software is terribly inadequate. They were built on obsolete platforms with little thought dedicated to user experience. Most EMR packages started as billing systems slowly adding clinical components to gain market share. The design phase was largely overlooked as the functionality of the system was all the government had created guidelines for. This is why physicians complain they have to click 30 times to give a patient a sleeping pill." [3]

The aggregation, analysis and testing of data electronically gathered or written into the medical record for all conditions certainly make a positive impact on outcomes through treatment plans more specifically designed for each patient. Nobody disagrees on the

impact data can have on the care process. But studies show that the emotional connection to an outcome plays a critical role in its success. That is why clinicians today are looking for ways to bridge the gap between the technology and the connection to their patient.

This is where the implementation of interactive technology can make a significant impact on processes used daily by clinicians and patients during their visit or stay within the healthcare facility. Leveraging interactive touchpoints at different intervals in the care process simplifies and speeds workflows giving time back to the clinician. This same technology enables more efficient communication between patient and provider. It becomes a platform through which providers may share data, inform on care plans, and address questions and concerns to help the patient feeling better connected to their healthcare.

2. Driving Clinical Workflow Efficiencies

Delivery of care is a constant challenge for clinicians because of the reliance on technology in all types of workflows. Widespread adoption of EMRs over the past 20 years has significantly changed the way clinicians provide care with tremendous advances in safety, but often at a detriment to patient experience.

Consider medication administration. Advances in technology for this core nursing workflow have improved safety. The adoption of automated technologies like barcode scanning ensures the patient receives the right medication at the right time. This can be quite critical, because technology now creates an additional layer of protection for the nurse and patient prior to administration. But at what cost does this come to the patient's experience and nurse's ability to interact?

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"[E]ven though up to 96% of hospitals and 86% of physician offices have adopted them, we still don't have EHRs that can rise to the information challenges that clinicians face every day …" [4] That begs the question of what next. How do we take a core workflow and improve it further? Where can we deliver efficiency for the nurse to free them to engage the patient in communication or with additional care that may be needed? How might we augment the process with additional technology that allows the nurse to focus more on the patient and less on the screen, keyboard, mouse and barcode scanner?

John Glaser, former CIO of Partners Healthcare and Executive in Residence at Harvard Business School, sums up the opportunity ahead for EMR software providers and clinicians in reimagining how the EMR can benefit users and patients alike:

"[T]he electronic health record must transition from an emphasis on a person's medical record to an emphasis on a person's plan for health and from a focus on supporting clinical transactions to a focus on delivering information to the provider and the patient." [5]

This is where the adoption of touchscreen technology can create significant efficiencies. Whether documenting vitals or capturing a pain rating during an administration, the use of touchscreen technology pairs easily with the workflow steps clinicians utilize for every patient, every shift.

Furthermore, nursing staff using a touchscreen can now free themselves from the medical cart while creating an engagement point with the patient. Shifting the screen to orient toward the patient allows the nurse to still administer and document medications safely but creates an interaction with the patient involving them in their care. Information can now be shared directly with the patient rather than being hidden from the view of the patient.

3. Engaging the Patient in Their Journey

The use of touchscreens does not stop with clinical use, as they become critical in the context of patient engagement. Today, healthcare providers leverage touchscreens for simple processes like patient check-in

where a patient can process all their registration steps with payment prior to engaging with a hospital representative.

It gets more complex as the patient enters their care journey. More and more, the conversation turns toward how patients should participate more in their care to create the best outcome possible both physically and emotionally. A recent study of registered nurses' experiences with patient participation found that partnering with patients was enacted when nurses listened to and engaged with patients and when they relinquished some responsibility and shared powered with the patients. [6]

This added responsibility—and opportunity—is causing healthcare providers to rethink their patient engagement strategies. How can the hospital accommodate this growing interest from patients and patient family members to better participate in their care? Technology is at the core of this rethink.

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Software providers are actively developing tools, views, data sets and content that can be made available securely to the patient. The idea of an interactive patient hub or console in the room enables clinicians to engage in meaningful conversations on findings, status and treatment plans backed by images, results and medication profiles that draw the patient into their care.

This patient room of the future is designed to be patient-centric while providing clinicians the tools they need to be efficient in managing positive outcomes. This is in stark contrast to today's static patient room where whiteboards, cumbersome medical carts and basic infrastructure make it difficult to create engagement with and for patients. EMR software companies are listening to overwhelmingly negative user feedback and complaints of clinician burnout and future development is focused on using technology to make routine

processes easier and automated, freeing up clinician time and attention for patient interaction.

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This concept extends beyond the traditional hospital walls into clinics, practices and the long-term care ecosystem where interaction with patients and residents would benefit from more interaction and engagement in healthcare delivery.

4. Coordinating Across the Care Team

Beyond the opportunity for the patient room exists the opportunity to continue driving efficiency across the care team while enhancing the patient experience. Healthcare providers recognize the need to facilitate better care team collaboration on behalf of the patient and one another.

This leads organizations to evaluate how, where and

when these collaboration opportunities should be fostered. The nursing station is quickly becoming the hub for these activities, and interactive touchscreens are how these activities can be viewed and managed.

Touchscreen hubs at nursing stations and within surgical services can create efficiencies for care teams delivering better patient experiences.

Multiple scenarios demonstrate the effectiveness of enhanced coordination among care teams. For example, a patient may be nearing discharge but require a dietician consult due to medications to be taken post-discharge. A patient can become frustrated as time passes waiting on the dietician. A patient room may need to be turned over for another scheduled patient. This is where interactive collaboration tools located at the nursing station can enable nurses to stay on top of their patient's journey. A nurse can utilize the touchscreen to pull the patient schedule and send a message to remind the dietician of the patient consult.

Patient alignment at shift change is another example of where nurses and patients benefit from enhanced collaboration. The touchscreen hub at the nursing station becomes the foundation for where patient staffing

assignments get discussed, and those next steps in the patient journey are transitioned from one shift to the next. This leaves the nurse feeling empowered about patient status, but also ensures the patient receives prompt attention to their care needs. In a systemic review published in the Journal of Patent-Centered Research and Reviews, 57% of the studies identified a statistically significant improvement in patient satisfaction associated with team-based care. Patient satisfaction scores were greater with teams that had more than two professions

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Surgical services can be very similar in terms of collaboration and planning for surgeries. The various care team members from surgeon to anesthetist to nursing staff can leverage an interactive touchscreen hub to coordinate surgery status and availability for next patient. This process flow is key to efficiency and utilization for the hospital, but equally important to patient experience, as it can alleviate the stress of waiting through streamlined communication and collaboration.

These touchscreen hubs strategically deployed at nursing stations and within surgical services can create efficiencies for care teams while delivering a better patient experience through the course of their visit or stay.

5. Delivering the Best Outcomes

The mission for healthcare providers is not simple. At the core, it is about diagnosing correctly as quickly as possible, identifying the right treatment plan and engaging the patient during the course of their treatment. This approach aligns with The Joint Commission National Patient Safety Goal that

organizations "encourage patients' active involvement in their own care as a patient safety strategy".[8]

As pointed out in a National Institute of Health Journal article, "Patient engagement forms the core of Institute for Healthcare Improvement's (IHI) framework for safe, reliable, and effective care."[8] The authors go on to state, "Moreover, patient engagement is also one of the strategies to achieve the IHI triple aim of

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improved health outcomes ..."[8] Arming clinicians and patients with all the right tools enables that mission. That is the focus of technology adoption across the healthcare ecosystem.

Conclusion

Touch technology for clinicians has the opportunity to significantly improve workflow processes at the patient bedside. It streamlines process steps while allowing the clinician to more easily engage the patient.

A patient room of the future brings interactivity to the physician, nurse and patient. This establishes a new model for delivering information on the patient journey.

Enhancing collaboration throughout the shift and into the next shift speeds the patient journey while simultaneously optimizing hospital operations. This collaboration can be delivered with large-format touchscreens strategically deployed at nursing stations, in PACUs and throughout the surgical ward. It is the combination of all these approaches utilizing touchscreen technology that supports the mission.

Hospitals and health systems need a core strategy that delivers interactive touch technology throughout the hospitals to enhance clinical workflow while establishing an engagement platform for patients to steadily participate in their care journey.

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