

A Match Made in Healthcare:

Marrying Nursing and Technology to Improve Patient Care

As healthcare organizations strive to enhance care quality while simultaneously reducing costs, they may turn to technology for help in achieving both goals. Designed correctly, technology can streamline workflow, boost efficiency, reliably support evidence-based care, and foster communication among healthcare providers and patients.

Conversely, poorly designed technology can impede patient care, presenting roadblocks to efficiency and even causing errors or unintended consequences. When technology is cumbersome to use, unreliable or disrupts workflow, clinicians often avoid it, work around it or use it incorrectly, which opens up the opportunity for medical error.

Healthcare organizations cannot afford to implement technology without being confident that it will solve problems and not create them, especially as organizations continue to face shrinking revenue margins. Without a full appreciation of the potential impacts of a specific solution, organizations may spend significant dollars implementing a system that does not elevate care, and in the end may cause more harm than good.

Garnering Multiple Perspectives

The best way to ensure that technology helps rather than hinders is to consider both the clinical and IT perspectives during decision-making. This may involve consulting nurses, technology professionals and nursing informaticists.

Nurses are often the critical lynchpin of patient care because they are the closest to the patient and also interact with all members of the care team, including physicians, technicians and specialists. Because of this, they have a bird's eye view of care delivery and are conscious of what obstacles frequently get in the way. However, nurses may not be as familiar with how technology can support and improve clinical care or how it can seamlessly fit into their current workflow. A nurse's day is filled with multiple priorities, and understanding the full capabilities of a particular technology may not make the top of the to-do list. They know how to use the

technology, but they don't always know the nuances of how it functions and aggregates information like someone from the IT department would.

Just as nurses embody the clinical perspective, no one knows more about technology than the IT department. These individuals are well versed in the pros and cons of their facility's hardware and software and how these tools function day to day. They appreciate the nuances of different technologies and can see, in general, how a specific application could fit within a healthcare organization. However, IT professionals may not be aware of all the clinical ramifications of a hardware or software solution, or understand the best ways to incorporate it into clinical care.

To bridge the gaps between nursing and IT, an organization may want to rely on a nursing informaticist—an individual who has both a clinical and technology background. Typically, nursing informaticists have many years of clinical experience and either on-the-job or more formalized training in information technology. Although they usually focus on how to leverage data to improve clinical care, their role goes beyond data analytics to encompass workflow analysis and improvement as well.

The ability of nursing informaticists to see both the technological and clinical points of view makes them a logical choice to weigh in on the workflow advantages and disadvantages that accompany various automated solutions. They act as a conduit between clinical and technological perspectives, assisting the IT department in understanding nursing concerns while simultaneously educating nurses on the intricacies and workflow benefits of new technology and the vital patient data it provides. They are uniquely positioned to understand how to analyze and leverage data in a meaningful way, and they can communicate how this information can be used by both departments to improve patient care.

To glean fully the nursing, IT and nursing informatics perspectives, organizations should think about creating an advisory team that brings together these diverse viewpoints. This group can serve many purposes. For example, it can review clinical processes throughout an

organization and search for new opportunities to use technology. It can also vet potential new products and identify ways that existing technology could be used more effectively. Once an organization selects a specific solution, the team could consult on implementation plans and lend guidance to the design of training and education programs. Because this group encompasses multiple viewpoints, it can ensure an organization embeds technology in a way that meets the needs of clinicians while fully taking advantage of technological advancements. To ensure the team stays focused and remains productive, a nursing informaticist may be a logical team leader.

CareLink: An Example of Multiple Perspectives at Work

Strong collaboration between clinical and IT professionals can yield hardware and software that benefits nursing workflow and patient care. Mobile nursing stations, such as Capsa Healthcare's CareLink™, are just one example of the result of effective nursing-IT collaboration. CareLink has unique features that foster interactive communication and maximize the time available for patient care—both high priorities for nursing staff. By organically fitting into workflow, it can even prevent errors and enhance patient safety.

As part of the design process, Capsa Healthcare consulted a team of nurses, IT professionals and nursing informaticists to understand the goals and needs of each group. Keeping both the clinical and technological priorities in mind, a comprehensive patient care tool emerged. Following are some specific ways CareLink addresses both clinical and technology needs:

Facilitating communication across departments.

The CareLink cart includes an on-board computer, which offers a secure connection between nursing staff and other departments, such as IT, housekeeping, radiology and so on. This embedded computer facilitates direct messaging across the organization. For example, a nurse can use the onboard computer to easily contact housekeeping to let them know a room is ready for cleaning, speeding room turnover and patient flow. Likewise, a nurse can reach out to pathology to see if critical tests results are ready without having to leave the patient bedside or interrupt workflow. By receiving the results faster, the nurse can respond more quickly, yielding better and more immediate care for patients. This also decreases the amount of time it takes to get data entered into the system, and thus entire patient populations can be evaluated in a timelier manner.

Although this direct messaging feature has obvious patient care benefits, it can also impact patient satisfaction. Consider the example of the nurse who needs to send a message to housekeeping about a room that is ready for cleaning. She may take out her cell

phone and text the housekeeping department about the room. While the nurse is doing the right thing, the patient thinks the nurse is sending a personal text and gets the impression the nurse is not completely focused on her work. The action reflects negatively on both the nurse and the healthcare organization. If the nurse had a CareLink cart, she could send a message directly from the cart using the onboard computer. In this case, the patient may not even notice the nurse sending the message, and if he or she does notice, would not think the nurse was conducting personal business.

Limiting distractions. Carts with messaging feature can also be designed to limit nursing distractions—an issue healthcare organizations regularly face. CareLink, for example, permits a sender to triage a message before sending it, alerting the recipient to the level of urgency. The recipient then knows immediately whether to stop working and look at the message contents or to continue working and check the message at a later time.

Take the example of an infant abduction alert, the nursing supervisor can send a priority message to all CareLink carts and the onboard computer screen will begin flashing pink. The cart user will know they need to pay immediate attention to this message. Conversely, if a nursing manager wants to send a message to all nurses about upcoming vacation schedules, she can send the message with a low priority. Nurses then know they can continue working and wait until they are away from the patient's bedside to check the message. Senders can also set a time limit on the message so it only stays on the computer for a limited period, preventing outdated messages from clogging the system.

Bringing the EHR to the bedside. The CareLink cart houses a laptop that links to a LCD monitor, allowing nurses to access, view and interact with their organization's electronic health record (EHR) at the patient bedside. This prevents nurses from having to leave the patient to document care or medication administration; instead, documentation activities naturally integrate into their workflow.

Having the EHR at the bedside improves documentation and limits the opportunity for errors. Consider the example of the nurse who gets interrupted before she can document care in the EHR located at the nursing station. This interruption may distract her from fully documenting patient care activities right away. With immediate access to the EHR, documentation activities can be completed more quickly and the negative impact of interruptions is limited.

There is an informatics benefit to having the EHR at the bedside as well. When critical care information is documented in the EHR, a clinician can use that

information to identify opportunities for improvement in patient care or to enhance population management. Entering patient information at the bedside allows for more opportunities for the real-time improvement of population management efforts.

Furthering efficiency. In addition to a comprehensive messaging feature, the onboard computer also offers easily accessible resources that can enhance efficiency. For example, the computer houses a calculator to help figure medication calculations. This feature is a prime example of nursing needs that were not immediately apparent to IT staff. From a technology point of view, the calculator on a carts laptop could be used to figure calculations, so a calculator on the onboard computer was not overly necessary. However, nurses noticed that in order to use the calculator on the laptop, they would need to close the EHR window and open the calculator—taking critical time away from patient care and creating a risk for calculation errors. To address these concerns, CareLink includes a calculator in the onboard computer that a nurse can keep up and open at all times. This not only avoids the need to flip screens, it also saves time and can support the accuracy of medication delivery and documentation.

Streamlining software management. The nursing perspective was not the only one Capsa Healthcare kept in mind when designing its CareLink technology. To address IT staff needs, Capsa Healthcare designed the cart for wireless software management. This way an organization's IT department can easily make upgrades, reset PIN codes and monitor utilization data remotely. They do not need to bring the equipment back to the IT department to make changes. This enables smooth upgrades that do not disrupt clinical workflow.

Technology is constantly evolving and providing a way to enable direct software upgrades—similar to updating an app on a smartphone—allows the IT department to keep equipment current without having to replace the entire cart.

Taking Full Advantage of the Possibilities

As the nursing informatics field continues to grow and address clinical data and workflow needs, an organization will need to find sustainable solutions that bring value over the long term. New technologies are emerging every day that are designed to streamline and strengthen patient care. To fully take advantage of these opportunities, an organization must have a thoughtful approach to embedding technology into its day-to-day operations. Such an approach must weigh both nursing and IT perspectives to ensure an organization realizes the most benefits from technology in terms of nursing workflow and patient care.

For more information contact us at 800.437.6633 or email info@capsahealthcare