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A Nurse's Guide to Enhancing Clinical Technologies

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ONE OF THE MOST EXCITING aspects of health care technology is that it is always in a state of change. A lack of change may in fact be indicative of poor design or the lack of a continuous quality improvement mindset. Everyone can relate to the challenges that change can bring, particularly in health care environments where changes can lead to safety issues, inefficiencies, or both. Perianesthesia nurses should be a key voice in both the type and implementation of changes to clinical technologies. To be a positive part of these changes, they must be ready to carefully construct their message and consider their audience in any step of the change proposal process. Appealing to the right audiences in the right ways is something nurses already have in their skillset as they work with patients, families, and multiple members of the health care team. Applying their communication and negotiation skills, perianesthesia nurses can proactively shape their workplace and the technology in it. Nurses are wise to remember that they are the largest group of users of electronic health records (EHRs) and other types of clinical technologies.[1] As a result, they must be an overwhelming voice in requests for enhancements and upgrades to these systems.

Complaints Versus Critical Feedback

Think for a moment about situations in the perianesthesia setting where nurses have a less than desirable way of getting something done. Over time, they might simply adjust or accept the less than desirable solution. Resignation and acceptance may even lead nurses to defend a clunky or slow process simply because they may fear that a new solution might be even worse. Others may have a different and sometimes maladaptive response, which is to get frustrated and complain about something that may not be working. Venting and frustration are a natural part of being in a work environment where change occurs without staff input or where changes bring dissatisfaction, inefficiency, or negative patient experiences.

The key difference between being a change agent and simply venting about what might not be working is having ideas for making improvements. Positivity, curiosity, and critical analysis can move complaining toward a resolution pathway. Deeper investigation and understanding are the key first steps toward forming a concrete proposal. A comprehensive approach also has a much better chance for serious consideration by colleagues and administrators. Being a part of then formulating a list of true nursing needs can bring a sense of empowerment rather than victimization or a passive-aggressive acceptance of the status quo. Concerns and problems with technology are not different from any other type of workplace frustration and should be approached with the same level of systematic inquiry and a quality improvement lens.

The rise of minimally invasive procedures is a great case study when discussing how a change in surgical approaches can trickle down to documentation headaches for nurses. Minimally invasive procedures quickly rose to prominence and were a huge advancement in terms of reduced postoperative pain and an outpatient option in cases that historically required several days of hospitalization. For perianesthesia nurses, there were new assessments and interventions because of factors such as new types of dressings and changes to

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the types of postoperative complications that were more common for these procedures. A corresponding shift in the type and ways in which nurses could document against these cases was not always as rapid. A lack of appropriate documentation choices in EHRs resulted in greater quantities of electronically invisible free-text notes and a frustration with the increased amount of time it was taking to add these new assessment findings. Nurses were not always able to verbalize the root of the problem or pathways to resolution.

Making a Case for Change

The scenario aforementioned has historically played out repeatedly as new technologies, procedures, medications, and interventions have emerged. How often were these changes made with a timely alteration to the EHR to allow for timely, accurate, and efficient documentation of the changes to nursing practice? Making a case for change should begin ideally with a proactive consideration of how a change may alter nursing practice and whether or not there is a clinical documentation impact. For changes that are already in place, a similar change investigation and presentation process can be followed, but a proactive approach is always desired over a reactive one. The case for change should always include a root cause analysis (similar to what is done for sentinel events); identification of potential needs and requirements; and then a comprehensive look at the value that meeting those needs can bring through multiple lenses, including financial, patient/family satisfaction, and nurse usability. From there, the nurse needs to own articulation of their findings at each step and to tailor presentation of that information to a variety of key stakeholders.

Root Cause

Nurses are inherently great detectives when it comes to trying to understand the source of clinical phenomenon that their patients experience. Nurses have their own set of diagnoses that can be applied to their care, all of which are built on strong "cases" of signs and symptoms that support that diagnosis. Nurses can apply the same approach to the types of issues and opportunities that might arise with health care technology. Nurses should apply the same inductive and deductive approaches that they use in understanding their patient's concerns to add rigor to their inquiry. Being aware of what colleagues might be experiencing and watching for trends of delays in discharge or alterations to practice are just the beginning of finding lines of evidence to examine.

There are many signs, other than frustration and complaining, that may indicate opportunities for technology improvements. Typical areas for improved documentation or information access are predictable and may include duplicate documentation, lack of the right information in a given workflow, the need to access multiple systems, and excessive clicks or navigation. A great example of early workflow problems with EHRs was a lack of connection between ordering systems and medication documentation. A provider might have handwritten an order or even entered electronic orders, but to document the items electronically required several checks or manual entry. The kinds of cross checks for allergies, formularies, safe dosing, or special administration instructions were more novelty than the norm. Vigilance in spotting these kinds of red flags, safety risks, and inefficiencies can mitigate frustration and creates a space for nurses to bring forth change requests.

Basic inefficiencies are not the only reasons why nurses may bring forth system change requests. EHRs have historically been given a lukewarm reception[2,3] because of a lack of strong design that considered a nurse's workflow, best evidence, and best practices. Aside from vendor issues, institutional forces may influence nursing practice as well. Nurses are rarely immune to the ways in which shifts to policy and personnel alter how their work is carried out and documented. Practice shifts such as new medications, care support technologies, and procedure types shift not only documentation but also the information needed to deliver care. Systems that limit quick updates that can accommodate changes, such as those that came with the change to minimally invasive procedures, may quickly be perceived as more hindrance than help. They can also be a primary source of the kind of complaining and frustration that rarely improve a nurse's satisfaction with the technologies that are supposed to support their care.

Needs and Requirements

Nurses are often eager to move quickly from the root cause toward identifying potential solutions. Nurses are not technology professionals, so it can often be difficult for a nurse to explain a scenario or concern in a way that might make sense to technology professionals or even conceive of possible technology solutions. It is important that nurses shift from asking about potential solutions to expressing their needs as high-level requirement statements. For example, nurses who may have been struggling with documentation related to minimally invasive procedures might have expressed their need as having the word "steri-strips" added to their list of dressing types in a dropdown list. By collaborating with technology partners such as nursing informaticists, systems analysts, or quality improvement specialists, additional options might emerge such as automated documentation or even a specialized flowsheet just for those types of procedures. Being able to articulate the need and the core problem is often far more important than immediately jumping to potential solutions. A clear sense of the problem, both its scope and severity, must be continuously revisited to avoid collecting a list of needs and requirements that may not be directly addressing the true issue.

Satisfaction Case

The building of multiple types of qualitative and quantitative cases should follow the root cause analysis and expression of needs and requirements. It is extremely rare that any system, technology or otherwise, is completely optimized. Nurse and patient satisfaction are both powerful considerations when building a case for the type of change that can emerge from the root cause analysis and meeting of nurse needs. Strong clinical system usability (ease of use and intuitive screens and functions) can improve a nurse's satisfaction with that clinical system.[4] Good systems make nurses happy, and happy nurses are productive nurses who keep their patients and their families happy.

Anecdotally, nurses have reported that technology is literally and figuratively a barrier to care and their desire to have true presence with patients and their families. A recent study by Misto et al[5] finally was able to capture the concerns of how technology often leaves nurses with their backs to patients or with a monitor in between them and the patient. When a system enhancement or improvement reduces documentation time or provides faster access to data, patients will inevitably benefit from the nurse's ability to place greater focus on their needs. Patient satisfaction with the care experience is a huge part of how hospitals stay competitive and determine how well they are serving their customers. Nurses seeking to build a case for change should always make clear the potential impacts it will have on the patient experience and the potential positive impact to satisfaction scores. For example, in a busy preoperative environment, even a few minutes can have a substantial impact on the patient and family experiences. The nurses on the unit might state a requirement for an automated anxiolytic ordering process and anticipate that 2 minutes of documentation time would be saved through this system enhancement. Those 2 minutes can be time in which the nurse might educate the patient and family, provide emotional support, and reduce the time it takes to deliver the anxiolytic itself.

Financial Case

A financial case can also be a critical ingredient to a case for change. What makes a financial case even more powerful is the potential multiplier effect that may not initially seem intuitive. Imagine that a nurse can reduce the number of clicks needed to complete a particular workflow process. Reducing those steps saves a nurse an average of 30 seconds. That might not seem like much of a savings for a single nurse in a single patient encounter. That kind of savings, though, may be something that every nurse can benefit from in every care encounter. A savings of 30 seconds can quickly be reenvisioned as a much larger financial win. Consider a hypothetical care unit staffed by thirty nurses who see a total of one hundred postoperative patients in a day. Over a period of 6 months to a year, a 30–second efficiency gain for a large staff and a large number of patients can have a decent cost savings. By multiplying all the variables involved, particularly the valuable time of the nurse, the true cost savings can be uncovered. For example:

Time savings = 30 s/encounter

Patient encounters = 100/d

Working days in a year = 260

Mean national hourly nursing salary = $50.00/h.

By thinking on a bigger scale and multiplying the impact over time, a hypothetical scenario like the one aforementioned could result in an annual savings of almost $11,000. Any savings must be offset by the cost of the software development, testing, and implementation. Typically for smaller changes, especially over a longer period of time and for a bigger efficiency gain, enhancements can easily be cost neutral or result in an overall savings. This kind of financial savings does not factor in additional multipliers such as greater quality of care, which can result in speedier discharges or reduced negative outcomes because of more focus on the patient and less focus on the documentation.

Intangible Cases

The efficiencies in the financial case and changes to evaluation scores for satisfaction cases are amenable to quantitative measurement. There are additionally intangible, qualitative cases, notably the expansion and clarification of what constitutes nursing professional practice and how to better understand the impact of nursing care on patient outcomes. Building a digital case for this will continue to be a critical task for the profession in proving that nursing care is more than just a lumped line item on a patient's bill. Furthermore, digital documentation can promote expanded research as to how the type and quantity of interventions best meet the needs of patients. Nurses have a responsibility to provide a clear digital trail of their application of the nursing process and to be able to articulate enhancements and system changes that are needed to support that work.[6]

The introduction of EHRs into clinical environments has continued to transform the ways in which health care providers and patients interact with technology. The opportunity to personalize care and meet the patient where they are at in terms of their recovery, educational needs and quality of life are unprecedented by way of genomics, online delivery of content, and expanded home patient monitoring. How that technology is used and how it changes practice can be either something nurses shape or that nurses simply complain about. Despite being intangible, it is no less important that the nursing profession is looked to as a key voice of proactive and positive technology changes.

Presenting the Case

Getting a change message out may be an exercise in patience and perseverance. Many organizations will have both formal and informal opportunities for system enhancements to be presented. At smaller organizations, there may be a small number of gatekeepers or influencers. These influencers can help to navigate the potential politics of seeking change and should be consulted early in the process. When a case for change does begin to make its way to practice committees or review groups, nurses need to be ready to present the situation, their recommendations, and the value to be realized by addressing their concerns. The ability to present a case as a 30–second elevator speech as well as to formally present a proposal is not something all nurses are comfortable with or have practice in delivering. There are several resources nurses should tap into in order to have a refined summary statement (written and verbal) and a more formal presentation with more detailed facts and figures. Some key potential supporters include nurse managers, educators, and quality improvement specialists in particular. They are used to preparing similar types of change proposals and should be sought out to ensure that great ideas are not lost because of rusty or limited presentation skills.

The building of strong quantitative and qualitative cases for change not only helps in building a nurse or care team's confidence in delivering that message, but also demonstrates a greater sense of importance to those who evaluate the requests. Nurses have to do this kind of persuasive advocacy for their patients daily and should be doing the same for themselves and their colleagues. Nurses are progressively more technologically savvy as personal technology becomes a normal part of daily life from banking to buying groceries. Nurses should have high expectations of how clinical document systems can and should better serve their information needs. As one of the largest user groups of EHRs and clinical systems, they

must be empowered to shape current and future functionality. By skipping the wasted energy of complaining and instead adopting comprehensive quantitative and qualitative approaches to presenting solutions, they can raise their professional status and practice even further.

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Calendar of Events

October 19, 2019. The Illinois Society of PeriAnesthesia Nurses (ILSPAN) invites you to join them for the 2019 ILSPAN Fall Conference in Peoria, IL, at the Parliament room at Methodist College of UnityPoint Health, 7600 N Academic Drive, Peoria, IL 61615. The conference objective is to discuss clinical priorities for the perianesthesia nurse. More information is coming soon. For more conference information contact Liz White, BSN, RN, CAPA at elizabeth.white@unitypoint.org or 309-208-6932.