Legal Risks Correlated with Technology: An Informatics Nurse Specialist View

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This article aims to highlight nursing practice problems correlated with technology that have resulted in legal action against nursing and to discuss how nurses and nurse leaders can improve patient safety and reduce risks of malpractice claims against nurses.

Nursing and Technology in Nursing Practice

According to an annual Gallup poll (Walker, 2024), since 2002, nurses have been recognized as "the most trusted profession in the United States" (para, 1). As of a 2022 Nursing Workforce Study, nurses make up the largest segment of healthcare workers, with over 5 million individuals holding a registered nurse license. Eighty-nine percent of nurses work in direct patient care (Smiley et al., 2023).

The use of technology has exploded over the last three decades. The healthcare sector alone has seen dramatic growth in the use of information technology since the passing of the Health Information Technology for Economic and Clinical Health (HITECH) Act and healthcare access issues arising during the SARS CoV-2 pandemic. A few examples of tools that have become ubiquitous to practice include vital sign monitoring machines, medication dispensing cabinets, large volume infusion pumps, standardized electronic reference systems, bedside diagnostic tools, virtual monitoring, and telehealth. One tool that often dominates time and attention is electronic health records (EHR). EHRs encompass a multitude of activities, such as clinical documentation, order management, results review and analysis, clinical decision support (CDS), and barcode scanning of patients, staff, medications, specimens, blood products, and supplies. These tools have similar goals: to improve quality, safety, efficiency, costs, and satisfaction.

Many studies and surveys have credited technology for preventing errors when used correctly. For example, computerized provider order entry (CPOE) has revolutionized ordering by ensuring standardized, legible, and complete orders. Clinical decision support (CDS) sys-

tems enhance safety by checking for contraindications (drug-drug, drug-allergy), or omissions of practices to prevent missed preventative care (prophylactic anticoagulation therapy). Barcode scanning has prevented errors by checking patients and provider orders against medications and blood products or specimen collection and other procedures to be performed (Shah et al., 2016).

Many experts have touted that when processes are well defined, technology is designed to support the process, and clinicians know and adhere to the workflows, patient safety improves (Wallace & Zimmer, 2014). "Every system is perfectly designed to get the result that it does". (IHI Multimedia team, 2015)

Litigation Against Nursing; System and Practice Issues

In 2017, a registered nurse (RN), RaDonda Vaught, made mistakes that resulted in a grave error. She immediately reported what happened and accepted responsibility (Lusk et al., 2022.) The patient died. Ms. Vaught lost her job and nursing license. Despite protests from the patient's family and many individuals and professional organizations, this nurse was criminally prosecuted. In March of 2022, she was found guilty of two felony counts: gross neglect of an impaired adult and negligent homicide. Root cause analysis of the incidence found several system issues within the hospital's medication administration protocols and the reliance on technology to prevent errors (Lusk et al., 2022):

- There was no barcode scanning system in the imaging department which could have detected the wrong medication that had been obtained for

administration.
- The medication dispensing cabinet
  - allowed nurses to obtain a paralytic anesthetic typically administered by a physician. Best practice configurations were not in place to prevent errors.
  - was found to have a high incidence of medication over-riding. Integration between the EHR and the cabinet had flaws, resulting in "alert fatigue." Nurses were "conditioned" to work around warnings.

The technological considerations in this lawsuit and analysis of other malpractice cases involving nursing have played a crucial role in the broader discussion on "system design" in healthcare settings. In September of 2022, a team from Coverys risk management published an analysis of over 4600 medical malpractice cases occurring between 2018 and 2021 called "A Dose of Insight: A Nurse's Crucial Role in Patient Safety" (Hakim, et al, 2022). This analysis found:

- Eight hundred and fifty (18%) cases directly involved nurses in the emergency department, inpatient, post-acute, dialysis centers, and surgical settings.
- Most events occur in the inpatient setting in an inpatient room.
- Twenty-six percent of the cases involving nurses resulted in indemnity payment.

- Nursing events with indemnity averaged $600k, costing 13% more than non-nursing events.
- The top four areas of "nursing vulnerability" were: patient monitoring, patient falls, medications, and pressure injuries.

All areas had underlying *communication*, *culture*, and *system failures*. Technology was discussed in several examples as "a safety net." Safety net works best when designed to support a defined process and individuals accountable for the workflow know and follow the process. The authors stated, "no innovation can take the place of nursing observation, assessment, and timely actions." (Hakim et al., 2022, p. 21)

What can Nurses and Nurse Leaders Do to Improve and Reduce Risks?

1. *Involve nurses*: Recognize and value nursing observations, experiences, and critical inputs. Allocate time and guarantee opportunities for nurses to participate and influence design and decisions of the processes and technologies in their work.
2. *Establish and maintain a "Just Culture" environment*. Encourage, honor, and protect incident reporting. Focus on understanding and addressing the root cause of problems. Allocate and protect time to develop effective processes and design technology to augment or automate those processes. Provide and utilize education to demonstrate competence and understanding of how to report and address system issues proactively.
3. *Communication and teamwork*. Prioritize ongoing strategies and tactics that improve teamwork and effective communication between nurses and all members of the team. Use standardized communication tools demonstrated to improve understanding and minimize adverse outcomes. Developing functional multidisciplinary teams inclusive of patients and caregivers results in supportive cohesive units.
4. *Perform regular and frequent evaluations that detect and help correct defects:* supplies, equipment, and other vital resources. Assess and address opportunities to minimize distractions, reduce alert fatigue, and "getting into automatic mode."

Nurses are a critical part of the care team. Technological tools can be a game changer if designed to support a well-designed process and utilized by a competent clinician. Nurse leaders have a responsibility to direct care development and delivery that is safe for patients and nurses. ■

References online:
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