## Technology Trends in Nursing: A Benefit or a Burden?

The nursing profession has certainly come a long way since the days of searching for medication cards and writing progress notes by hand. Technology has completely changed the way nurses interact with patients and document their efforts, but is all the new technology really helping nurses? Some say increased technology requirements may improve patient care, but they are also a burden to overworked nursing professionals who must meet the demands of patients, visitors, physicians, and nursing supervisors.

### A Review of Technology in Nursing

Allan Hoffman, a technology jobs expert from Monster.com, says six different types of technology have changed the way nurses do their jobs: electronic health records, clinical information systems, drug delivery systems, PDAs, computers and mobile computing systems, and high-tech medical devices. Electronic health records allow for better communication between healthcare providers and protect patients by issuing alerts to notify staff members of potential drug interactions or other conflicts. Clinical information systems take electronic health records one step further by making patient records, laboratory records, and other data accessible to nurses, physicians, and other healthcare providers.

Automated drug-delivery systems ensure that patients receive the correct medications. The dispensing machines and bar codes included in these systems also help ensure that patients get the correct medication dosages. Personal digital assistants, commonly called PDAs, have applications that allow nurses perform dosage calculations, research the signs and symptoms of illnesses, and find needed information during their shifts. Tablets, mobile computing units, and wall-mounted computers allow nurses to access patient records without leaving the bedside. Finally, ventilators and other medical devices now have systems designed to prevent errors and alert nurses to impending problems.

### Errors Slow Progress

There's no doubt that all of these advances have improved patient care. With the use of electronic health record systems and bedside computers, nurses do not have to search for charts or struggle to decipher the handwriting of doctors. These systems also make it easier for nurses to access laboratory results and communicate with staff members in different departments. All of these things reduce the potential for errors and give nurses more time to interact with patients. Unfortunately, technology issues slow nurses down and make it more difficult to provide quality care. Some nurses are also concerned that all of the typing and barcode scanning takes away from the quality of their interactions with patients. When these systems do not work properly, nurses must spend time troubleshooting and contacting IT professionals to resolve the problems.

Electronic health record systems are particularly vulnerable to unexpected crashes. In 2012, the University of Pittsburgh Medical Center experienced a system crash that lasted for six hours. Although an alternate database made it possible to access patient records during the system outage, nurses and other healthcare providers still felt the effects of the crash. Milt Freudenheim

of "The New York Times" reported that the Mayo Clinic has also had difficulty getting its three electronic health record systems to work together.

**Technology Issues Affect Patient Care**

The problems associated with electronic health records and other technology also affect the quality of patient care. The decentralization of patient data makes it difficult to locate information quickly, increasing wait times and taking up valuable time that could be better spent providing hands-on nursing care.

Alarm fatigue is another possible consequence of electronic health record systems, and it is one that puts patients at risk. EHR systems produce so many notifications and alarms that it is easy to miss one that is meant to alert you to a potential allergic reaction or drug interaction. Some argue that software companies simply design these systems around client specifications, so it may be that healthcare facilities are at fault for any errors that occur. Regardless of who causes these errors, they affect the way nurses do their jobs.

As advances in technology continue to change the way you care for patients, integrating technology into the nursing profession will be one of the most important considerations for healthcare facilities and schools of nursing.