Is Technology Really Improving Quality and Safety of Care?
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INTRODUCTION

Technology has helped the medical field make great strides to improve quality and safety of care given to patients in the clinical setting. Healthcare technology can be defined as "the application of organized knowledge and skills in the form of devices, medicines, vaccines, procedures and systems developed to solve a health problem and improve quality of lives" ("What is," 2015, para. 1).

Many areas which influence patient care have been influenced by technology, specifically communication between health care professionals (doctors, nurses, pharmacists, lab technicians, etc.) and patient mobility. The two patient care that have seen the most impact are medication administration and patient medical records. It is necessary to understand that basic human nature permits a margin for error. With technology it is possible to reduce the occurrence of these errors to almost nothing.

SIGNIFICANCE

- "CPOE could eliminate 200,000 adverse drug events and save about $1 billion per year if installed in all hospitals" (Hillestad et al., 2005, p. 1105)

- "The National Academy of Medicine estimates that more than 50 million medication errors occur in the U.S. each year, and about 6.5% of these errors are clinically significant." The most common causes of these errors have been identified as being, medication names looking or sounding alike, and a lack of concentration due to interruptions (Marappa & Mallika, 2020, p. 43). Healthcare technology reduces the chances for those errors with the help of barcode scanning and online ordering.

- With the implementation of technology, more specifically- video monitoring of high fall risk patients, a 35% reduction in the number of falls was seen in just one hospital (Votruba et al., 2016)

POSITION STATEMENT

Health technology increases the quality and safety of care in the clinical setting by minimizing the potential for errors in ordering and administrating medications, improving communication between all healthcare professionals, making quality care and mobility of patients easier to obtain by nursing staff, and reducing the risk of hospital acquired pressure ulcers.

SUPPORT FOR POSITION

- "Implementation of barcode medication administration- electronic medication administration record, BCMA-eMAR, in two hospitals was associated with significant increases in total medication accuracy rates… and did not introduce new types of error into the medication administration process" (Seibert et al., 2014, p. 209).

- The computerized physician order entry (CPOE) system allows for physicians to enter medication orders on the computer while having access to patient information at the same time. CPOE has the ability to alert the ordering physician, after they enter their intended medication, if that drug has any interactions with other drugs that the patient is on, or if it is contraindicated with their lab results (Hillestad et al., 2005)

- "The ability to record patient information in real time can improve the accuracy" (Dewsbury, 2019, p. 607).

- With the introduction of technology to the healthcare world, clinicians have been reporting that they are enjoying their job more, that they are still spending adequate amounts of time with patients, and that they feel safer providing care (Seeley, 2009).

Perfecting the Art of Medication Administration. June 26, 2018

IMPLICATIONS FOR PRACTICE

- Using technology like the barcode medication administration system and electronic medication administration record help decrease a nurses margin for error. Once nurses have been educated on how to use the systems correctly, safety of care is tremendously improved in the sense of decreasing medication errors. (Seibert et al., 2014)

- Nursing staff are able to look up medications and other information on disease processes in order to more effectively and clearly educate the patient on their health status. Technology also provides the opportunity for nurses to accurately monitor a patients progress during treatment for chronic diseases or conditions. (Dewsbury, 2019)

- The use of technology in the medical setting simplifies decision making and provides the patient and healthcare professionals with more information. Technology use can create a less stressful work environment for nurses and allow them to be more productive and offer a better quality of care to their patients. (Dewsbury, 2019)

CONCLUSION

Technology has become a vital part of patient care in the clinical setting by easing the process of quality care and making it more efficient. There are countless ways in which technology has come to advance all aspects of the medical field but, these improvements would be diminished if individuals do not know how to use it correctly. This creates the need for education among all healthcare professionals on how to correctly and effectively use the new systems. Without technology, health care professionals would be completely in the dark when caring for patients and the human life expectancy would not be what it is today.

Health Technology Assessment. August 30, 2019

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