MOBILE ELECTRONIC DEVICE USE IN THE EMERGENCY SETTING

Description

Nurses’ use of mobile electronic devices at the bedside is quickly gaining momentum.\(^1\) The rapid growth of technology in health care is providing nurses and other health care professionals access to current evidence-based information on demand. These handheld devices combine mobile phone or other wireless functionality with access to the Internet, medical software applications, clinical reference guides, clinical calculators, clinical guidelines, medical dictionaries and diagnostic tools, and more.\(^1-5\) Prior to the availability of mobile electronic devices, nurses spent valuable time searching for hard copy reference manuals and textbooks or waiting for a computer to become available to obtain necessary information.\(^2,3\) According to recent surveys, up to 71% of nurses currently use a mobile electronic device in their work setting.\(^6,7\)

The rate of new medications challenges health care professionals to remain current with important drug information. Recognizing this safety issue, the Institute of Medicine (IOM) endorsed the use of point-of-care technical resources for all health care providers to reduce risk and prevent medication errors.\(^8\) Drug references are among the most accessed mobile apps used by health care providers.\(^1-3\)

Many barriers to the use of mobile electronic devices at the bedside are organization-dependent and include financial resources, network compatibility, device battery life, information technology (IT) support and infection control issues.\(^2,5,6\) Additional concerns include the potential risk of violating patient privacy\(^3\) and the challenge of safeguarding patients from potential injury or even death.\(^9-11\) At least one report mentions a risk to patient satisfaction, because patients may interpret nurses’ use of devices as recreational.

When nurses have the ability to access evidence-based clinical information at the point of care, errors may be reduced resulting in increased patient safety.\(^2,6\) Improvements in nursing productivity and time efficiency have also been demonstrated.\(^2,6\)

ENA Position

It is the position of the Emergency Nurses Association that:

1. Emergency nurses’ access of mobile electronic point-of-care, evidence-based clinical knowledge can provide information essential to their practice.

2. Emergency nurses’ use of mobile electronic devices has the potential to increase patient safety and emergency practice efficiency.
3. Emergency nurses acknowledge that patient safety is paramount and develop awareness to the potential limitations within mobile information programs and the impact on patient safety when accessing and using mobile medical information that is not from a content-validated source. 

4. Emergency nurses participate in the development of organizational guidelines or policies regarding the use of mobile electronic devices at the point of care.

5. Emergency nurses work collaboratively with leadership and advocate for use of personal electronic devices to access content-validated mobile medical apps in patient care settings when mobile electronic devices are not provided by the facility.

6. Emergency nurses champion for the provision of easily accessible, current and evidence-based electronic tools, available at the bedside, for reference or as an adjunct to their clinical practice.

7. Emergency nurses adhere to their organization’s personal electronic device policy when using mobile electronic devices in the patient care setting.

8. Emergency nurses practice appropriate infection control measures, following institutional guidelines, when using a mobile electronic device at the point of care.

9. Emergency nurses receive education regarding the appropriate use of these devices and the accessibility of valid, evidence-based resources.

10. Where mobile electronic devices are used in a patient care setting, emergency nurses request that methods to maintain security and integrity of protected health information (PHI) are addressed in organizational policies and/or procedures.

Background

Efforts to implement a program of mobile electronic device use to enhance patient care and safety in the emergency department will be most successful when the benefits outweigh the risks. Successful implementation of such a program depends on addressing multiple issues, including:

- Patient privacy: Some mobile medical apps allow for remote consultation or diagnosis via pictures taken with a device’s camera feature. When used for this purpose, there is potential risk of violating patient privacy. Additionally, the use of personally-owned devices is discouraged for this purpose, unless PHI can be kept secure with data encryption.

- Protection of health information: Hospitals and other health care facilities have a legal obligation to keep a patient’s PHI confidential. However, in the presence of social media such as Facebook, Twitter, and YouTube, misuse of a mobile device’s camera and other features by health care workers is a security and privacy threat to patients, organizations and the workers themselves.
• Patient safety: The U.S. Food and Drug Administration drafted regulatory guidance in July 2011 on apps that met specific medical device criteria.\textsuperscript{9–11} However, the agency reports that not all mobile medical apps will fall under this regulation. Those covered include those that (1) are accessories to a regulated medical device; (2) convert a mobile platform (smartphone, tablet, etc.) into a regulated device by using display screens or sensors; and (3) allow for patient-specific information to be entered, which generates a formula or algorithm that is used to get a result that affects diagnosis or treatment decisions.\textsuperscript{9–11}

• Regulation of content validity: Due to the potential for inaccurate content or software defects in mobile medical apps, some recommendations call for a formal review process to evaluate content prior to app utilization by health care providers.\textsuperscript{3,9,12} Additional recommendations call for software developers to include health care professionals in all aspects of medical software development before they become available for use.\textsuperscript{9}

• Infection control issue: Perhaps easily overlooked is the fact that mobile electronic devices can be carriers of bacteria. Development and enforcement of guidelines and protocols for appropriate cleaning of equipment as well as emphasis on hand hygiene may help to reduce risk of spreading infection via a mobile electronic device.\textsuperscript{5,7,12}

• Education: Vital to a successful implementation is the provision of education and guidance in device use and access of appropriate apps, communicating pertinent policies and ensuring dedicated technical support.\textsuperscript{2,12,15,18}

• Health care facility cost of providing mobile electronic devices: A benefit of the health care facility owning and providing mobile electronic devices is the authority and ability to regulate the device and data, to track and secure information and to provide theft/loss protection and to remotely shutdown a device if necessary.\textsuperscript{5,15,18}

References


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