Nursing Care Technology and Patient Safety
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The general public believes that technology will improve health care efficiency, quality, safety, and cost. However, few people consider that these same technologies may also introduce errors and adverse events. Hospitals and health care organizations are under relatively little pressure to implement safety practices. Regulators and accreditors are pushing health care organizations to adopt various “safe practices” or to avoid particular adverse events that are considered wholly or largely preventable.

In this article, the literature and research findings regarding the nursing care technology and patient safety. This subject was analyzed, the importance of the issues was discussed and the suggestions for implementation were proposed.

Patient safety has received increased attention in recent years, patient care technology has become increasingly complex, transforming the way nursing care is conceptualized and delivered. Over time, the nurses’ unaided senses have replaced with technology designed to detect physical changes in patient conditions. Before extensive application of technology, nurses relied heavily on their senses of sight, touch, smell, and hearing to monitor patient status and to detect changes. Patient care technologies of interest to nurses range from relatively simple devices, such as catheters and syringes, to highly complex devices, such as barcode medication administration systems and electronic health records.

While nursing care technology holds much promise, the benefits of a specific technology may not be realized due to four common pitfalls:
1. poor technology design that does not adhere to human factors and ergonomic principles,
2. poor technology interface with the patient or environment,
3. inadequate plan for implementing a new technology into practice,
4. inadequate maintenance plan.

Technologies used by nurses offer the means for preventing errors and adverse events (e.g., medication errors, communications, delays in treatment, and adverse events such as failure to rescue, nosocomial infections, pressure ulcers, falls, and complications of immobility).

Implementation of new technologies offers nurses yet another avenue for ensuring safe and efficient use of technology. While technology has the potential to improve care, it is not without risks. Technology has been described as both part of the problem and part of the solution for safer health care, and some nursing educators warned of the introduction of yet-to-be errors after the adoption of new technologies. Selecting the wrong equipment and technology can be costly and expose the patient to errors and ethical issues.

Nurses providing direct patient care can ensure that the technologies they use meet international quality and safety standards and technical specifications needed to perform in the clinical environment in which they are used. Being informed consumers and users of technology in nursing care means that nurses be involved in the selection of new equipment, receive the proper training for its use, and monitor equipment safety and the effect of technology on patients and families on an ongoing basis. Therefore, nurses should be sensitive to developing and changing products with technology and develop themselves.

References