

Smart-phones: Enhance Nursing Care and Patient Education

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Abstract: Today's huge hospital-based systems allow to nurses are always on the go moving from one room to another, caring for patients, coordinating care plans and ensuring patients have the resources they need to get and stay healthy. Gratefully, technology in nursing profession goals to benefit these greatly mobile healthcare professionals focuses on patients more efficiently. Smart-phones, tablets and wearables are mobile nurse technology; they can transform how hospital-based nurses deliver bedside care. By smart-phones nurses contact with health information and to communicate with other team, and they can use these mobile solutions from any setting, at any time, to provide directly fast care. Communication and decision-making among health care team included nurses are the main dilemma in the clinical setting and frequently cause medical errors, for many patients, but they can be preventable by using smart-phones as a calculator for drug dose. The use of Smartphone by nurses to write the patient problem recognized unreliable themes that are associated with practical use, and future use. Mobile has a good effect on patients check, changing nursing shifts, and social agendas. Nurses can use mobile in educating patients/family at the point of care, which need to a suitable screen size, especially for elder people, and can print out the available needed material.

Keywords: Smart-phones, Mobile technology, Nursing Care, Patient Education.

1. INTRODUCTION

The smartphone, is a device that proposals a simply and open access to the information and communication. The healthcare personals as nurses use smartphone in different field of their practices such as health care records, nursing care, education for patient and training and time management. Other many options as audio, video, text, email communication, calendars, lists, contacts, journals, calculators, pictures, weather updates, medical applications and extra [1].

Smart-phones as a mobile technology used for cellular communication. Mobile device has gone from being no more than a simple two-way pager to being a mobile phone, GPS navigation device, an embedded web browser and instant messaging client, and a handheld game console. Many experts argue that the future of computer technology rests in mobile computing with wireless networking [2&3].

1.1. International association support smart-phones using for nurses:

1.1.1. International associations as American Association of Colleges of Nursing support use of smart phones in nursing practices supported to enhance nurses clinical practices through they demonstrate skills in using patient care technologies, information systems, and communication devices that help them in providing safe nursing practice". Furthermore, technologies information systems which found in smart phones became very important in nursing practice, a survival skillful tool for the profession. The nurses essential have technology abilities skills of the entry-level; they must know how to use the nursing-specific software such as computerized documentation [4&5].

1.1.2. Additionally United States National Library of Medicine offers program help nurses in use of smart phones as PubMed on Tap, accessible for all functional organizations, which permits one to access related and up-to-date research and clinical information at the bedside nursing care for patient. This program services like information data base where one can regain information on a subject by only entering in a single key word. Otherwise availability of a free version of this application, PubMed on Tap Lite, includes all the features of the complete version excluding it limits the number of saved articles to ten [1&6].

1.2. Statistical report about using of smart phones by nurses:

In 2017health survey by Wolters Kluwer documented that , there is no astonishment that the use of smart phones or mobile technology became widespread in nursing profession, he showed that 65% of nurses are using mobile devices for professional indications at work at minimum 30 min per day, however 20% of nurses use them for 2 hours or more [7].

1.3. Smart phones enhance nursing care:

Healthcare team included nurses in different hospital unities need to quick, correct communication, as in critical events. The aim of fast communication among healthcare employees is patient safety in an effort to diminish medical errors. Smartphone- based technology is one of modern communication technologies, which improve healthcare personnel communication, workflow, and the providing care in health facilities [8].



Mobile-technology-in-nursing-improves-quality-of-care-at-hospitals Adopted from [8].



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1.3. 1. Advantages of smartphone use by nurses in patient care setting:

1. Enhanced interprofessionally communication: Two-way communication by smart-phone allowed faster communication of simple messages as nurses did not need to wait for return calls, which led to less interruption in patient care, if compared to using traditional methods of communication, such as pagers. Using smartphones by nurses in patient care had an additional outcome of ensuring accountability of practice between nurses and other health team as information that was referred and received could be stored [9&10].

2. Information Access at the Point of Care: Other benefit of using smart-phone in clinical practice as medication parameters, patient education, and wound care. Additionally bedside nurses use smartphones’ mobile application feature to access clinical information in patient care competently and rapidly by using smartphones [11&12].

3. Time management: Using of smartphones as part of nursing practice can improve time management, enhanced productivity and workflow. The nurses save time as there was less need for nurses to actually extent the cable phone to return the call as well as having fewer disruptions to patient care. Smartphones managed interruptions during nursing care for patient, so nurses will have more time to care for their patients; these have resulted in improved patient outcome, satisfaction and reduce the rate of adverse events such as falls [13, 14&15].

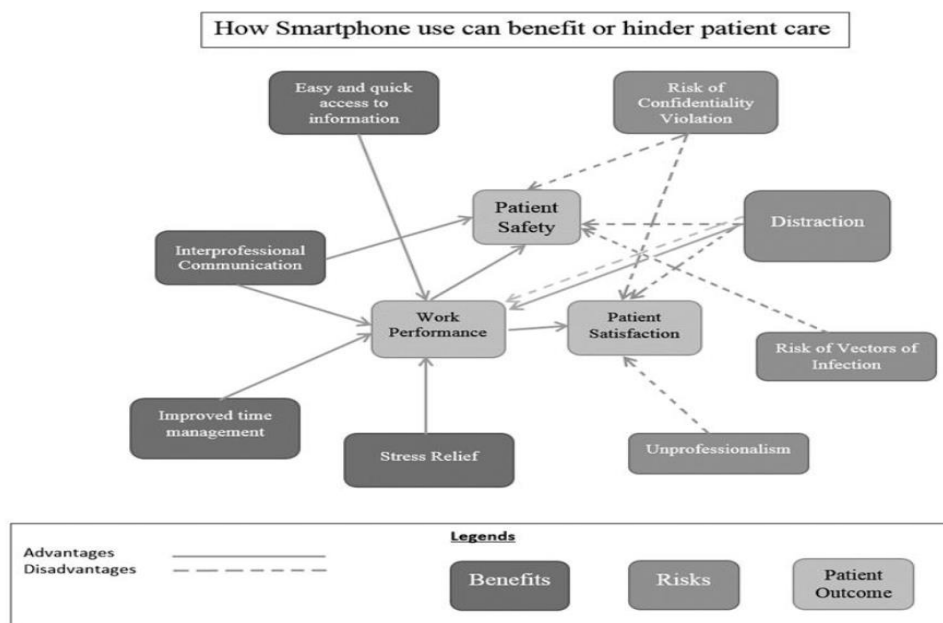
4. Stress relief: When nurses use smartphone in personal non-work aims and social actions may lead to relief of some their stress status by social and emotional support. The levels of nurses stress reduction and if the benefits outweigh the risks [16, 17&18].

1.3.2. Disadvantages of smartphone use by nurses in patient care setting:

1. Distraction: If nurses use smartphones during their practice, it has distracted them while caring for their patients. There is a potential hazard to patients when nurses are distracted by smartphones during patient care. However, this distraction had an effect on the patient outcome, specifically; there was relationship between nurses’ distraction by smartphone use and providing patient care [17&18].

2. Smartphones as potential vectors of infection: The use of smart-phones in clinically areas of hospital can increase the possibility of transmission of health care associated infections. Smart- phones possibly will serve as reservoirs of microorganisms that could be definitely transmitted from the mobile phones to the nurse's hands and so ease the transmission of bacterial isolates from one patient to another in different hospital areas. Moreover, there are not any guidelines for decontamination techniques of mobile phones that meet hospital standards. Also the phones have the microorganisms, which playing a possible role in spreading infections to the outside public [19].

3. Appearance of unprofessionalism: Nurses considered smartphones as advantageous tools for patient care; they were doubtful to use smartphones in front of patients and families, fearing they would appear unprofessional. Furthermore, some nurses did not carry smartphones to patients’ rooms as they were concerned they might be interrupted during care and appear unprofessional receiving incoming phone calls. The nurses’ insight to use smartphones as seeming unprofessional would be an obstacle to their adaptation to a new system of better communication methods and information foundation [20].



Concept map illustrating how each major theme related to nurse’s smartphone use can impact nursing and patient outcomes [21].

1.4. Smart-phones enhance patient education:

Nursing care is multifaceted and often needs specialized information and skill in case of patients' education about their diseases. Nursing team need to localizing resources to help them in difficult health problems is often stimulating for the same purposes. So smartphone applications support healthcare employees as nurses because smartphones permit suitable way to specialized information in fields as continuing education activities for patients [11].

Smart-phones memory had stored knowledge and images about all diseases and prognosis by these images can illustrate by enlarge them on the screen without dilapidation these pictures, so some nurses consider smartphones as an effective educational resource method and depend on them in patients' education. The nurses should select the best clarified websites applications about the patients' disease condition and direct them to read more the disease as, prevention of complication, side effect of medication, diet therapy supported for this disease, to ensure meet the standards required for providing quality of needed care [22].

Nurses carry the responsibility in directing their clients and patients about tools that can enhance their health, wellness and also diseases. Smart phones had a variety of applications are accessible as managing chronic disease, diet, exercise and lifestyle choices. For example, most of the mobile operating systems have an application for managing exercise and diet: iFitness™ and My Fitness Pal is applications specific to iPhone OS® and Cardio Trainer + Racing require Google Android OS. Ascendo Fitness™ and Total Fitness operate on Blackberry while Mobile Personal Trainer and Personal Trainer for Activity work on Symbian® OS [6].

If nurses permitting patients to engage in a two-way communication using smartphones, nurses can connect with other HCPs quickly, use their smartphones to communicate with others at any setting in the ward and easily access important contact information such as the patient's physician via the contact list on the phone. Similarly, a direct two-way communication between the nurse and the patient permits higher deepness of material to be shared between them, such as the reason for requesting assistance as well the level of urgency [9, 10&13].

2. CONCLUSION

The healthcare personals as nurses use smartphone in different field of their practices such as health care records, nursing care, education for patient and training and time management. Nurses carry the responsibility in directing their clients and patients about tools that can enhance their health, wellness and also diseases. Similarly, a direct two-way communication between the nurse and the patient permits higher deepness of material to be shared between them, such as the reason for requesting assistance as well the level of urgency.

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