The Use of Clinical Systems to Improve Outcomes and Efficiencies

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Today, the effective and efficient use of information technology in the field of health is increasing. In this respect, it has become necessary for nurses, which are the most significant component of the health workforce, to follow technological developments carefully. The use of information systems guides the nurse in all areas, from documentation of health records associated with patient care to an analysis of data. Nurses can provide individualized nursing care by using informatics and perform healthier functions such as education and counselling. In this way, nursing care quality and health service quality are increased, and significant contributions are made to professional professionalization. In recent years, studies on education and practice related to nursing informatics are rising all over the world.

 Graves and Corcoran define nursing informatics as a combine nursing science, information science, and computer science that help to manage and process nursing data, information, and knowledge (Graves and Corcoran, 1989). “The goal of nursing informatics is to improve the health of individuals, families, communities and the public by optimizing information management and exchange”(Tong, Liu, Lu, & Li,2019). .

 Nursing information technology is to promote nursing methods by using modern information technology and relying on information platforms, network environments, artificial intelligence and Internet technologies to design intelligent nursing information systems. The improvement of and changing of nursing concept will help to reduce unnecessary labor costs. It will save human resources and material resources to achieve the best care efficiency, comprehensively improve the level of nursing management and quality of nursing services.

The changes in the medical service system not only have internal changes, but also are influenced by external drivers, including the following reasons: the aging of the population, more chronic diseases caused by bad living habits, increasing demand for medical services, and growing Health care expenditure, shortage of medical service personnel, easy travel and global travel, and advances in information exchange technology. (Piscotty ,Kalisch, & Gracey‐Thomas, 2015).

 The nurses serving in the position closest to the healthy/sick individual are deciding on issues such as determining the needs of the individual, choosing the materials for care, and time management. While performing these functions, nurses constitute the occupational group that makes the most use of information technologies. With the use of information technologies, nursing care will be positively affected in many areas, from education and counselling to research, from providing legal documents to the supervision of care, and the quality of care will increase. Together with the increase in the quality of nursing care, the quality of health services will increase.

 Information technologies in nursing are used in many areas from education to management, research and care practices. Personnel planning in nursing management, productivity measures, research & IT is frequently used in risk management and evidence-based applications. Recording the care and treatment of the individual, monitoring the changes in the patient status, following the care results statistically and sharing the results with the other health care workers are the main benefits of information technologies in nursing care applications.

 The use of the Internet, web-based applications, e-mail applications, computer-assisted distance education systems and media tools provide significant benefits to nurses in research and education. The main advantages of information technologies in nursing care applications are the statistical monitoring of care results and sharing the results with other health care professionals. The use of Internet, web-based applications, e-mail applications, computer-assisted distance education systems and media tools provide significant benefits to nurses in research and education. The main advantages of information technologies in nursing care applications are the statistical monitoring of care results and sharing the results with other health care professionals. The use of the Internet, web-based applications, e-mail applications, computer-assisted distance education systems and media tools provide significant benefits to nurses in research and education.

Sipes, Hunter, McGonigle, West, Hill, & Hebda, (2017). Research, new methods and innovations in healthcare information management and information technology need to add in the health care system. The informatics in nursing uses the computer technology to manage the data and information derived from any task or procedure inherent to the nursing in the activities that are proper for the fulfilment of its functions".( Sipes, Hunter, McGonigle, West, Hill, & Hebda, 2017).

Nursing informatics is a crucial tool to support daily practice, facilitating and leading to a higher degree of efficiency.

The use of ICTs in the field of health has been able to perform a better functioning for the service of society as in activities of collection, handling, processing, transformation and communication of information with the patient or user, hence the importance of knowledge and use of ICT for the profession, as they can help improve these processes, and provide a better service to society with greater speed and efficiency of high quality.

The previous researches covered both the presentation of information technology supporting individual health, the presentation of national health databases under development, and the study of Big Data. One of the main topics was policies to promote the quality, communication, coverage and accessibility of health information in society. The solutions included various mobile devices, further utilization of existing information technology and communication solutions between different information systems. For example, the use of cloud services for both health information management and international research is increasing worldwide.

 Research by McCormick, K., & Saba, V. (2015). presented ways to improve health information management, data re-use, analysis and research. These tools include, for example, the development and harmonization of terminology in the field and various methods of data mining. Data mining makes it possible to demonstrate the effectiveness of care and develop new tools to support decision-making, including in nursing. In future the importance of the quality in nursing information and record-keeping will be further emphasized to further refine the data in the extraction and analysis of large data masses. (McCormick & Saba, 2015).

 Patient safety methods ensures safe healthcare services which were also at the heart of congressional issues. The plans aim to promote the quality of care through information technology and to utilize information technology to reduce errors in nursing. Practices to develop knowledge, education, leadership and professional development in nursing information management and information technology were also important topics at the congress.

Bowles, Dykes, & Demiris, (2015) presented drew attention to the various problems with the use of health information systems, which appear to be internationally similar. Among other issues discussed at the congress were the impact of human factors and the availability of information systems, the health system workflow and process efficiency, and the adoption of technology on health care. The debate covered a variety of approaches to promoting the meaningful use of information technology in health care. It also highlighted privacy and security issues, as well as the importance of multi-professional development and evaluation of information systems. (Bowles, Dykes, & Demiris, 2015)

Internationally, the development of healthcare information management and information technology seems to be moving more and more towards an individual-centered approach, whereby the health care client takes greater responsibility for their health. This, however, requires smoother access to health information and the individual's ability to edit their information. In many countries, the goal for the future is for everyone to have access to their electronic health information.

Research in healthcare information management and information technology is bringing a lot of new tools to make life easier for individuals and healthcare professionals alike. The focus is now on proactive, inclusive and personalized service solutions. Although many things are quite useful for us, internationally, Finland is not at the forefront of development in all areas. It would be essential for us as nursing professionals, experts and researchers to find enthusiasm and interest in healthcare information management and information technology as well.

Due to the age of technology, nurses have to follow the technique carefully and use it effectively in their applications. Nursing informatics; nursing education, practices, management, research, in short, is present in all areas of nursing. With the effective use of information systems in nursing, deficiencies and inaccuracies in the care and treatment of the individual can be detected in a short time and prevented situations which may have severe consequences are provided. The use of technology in nursing practices based on humanistic and holistic philosophy is an indispensable element.

To use technology effectively, nurses should acquire sufficient knowledge and skills in technology literacy. For the development of nursing informatics in our country, it is vital to open and disseminate graduate programs, to organize certificate programs and to make necessary studies to ensure the applicability of informatics in nursing care. Also, a nursing module should be included in hospital automation systems, and nurses should use this module actively in their applications. Advances in nursing informatics and widespread practice will help to increase nursing care quality and professional professionalization.

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