## Editorial

# Telenursing in Clinical Practise and Education

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The science of technology has offered humanity a multitude of applications, in many aspects of life, including social, professional and personal life. It has allowed people to communicate with each other in an audio-visual way, even if they are in distant places. Information and communications technology (ICT) is now applied not only from experts but also from everyone, covered childhood to elderly adults, through high speed internet access, computers, smartphones, and tablets. The new technological applications have also entered the healthcare field and are increasingly used in the provision of care (Dorsey and Topol, 2016).

The COVID-19 pandemic lockdown has led us to the use of some new and some already existing systems of ICT in the field of public administration, professional business, communication, commercial, education and health care. Countries policies are responsible to decrease and eliminate the spread of virus, by testing and treating patients and taking strict measures, such as putting citizens in quarantine, limiting movements or activities, lockdown schools and cancelling community-wide mass gatherings**,** sporting events and concerts (WHO, 2020). Most of us have been familiarized with working and studying from home, via electronic platforms, through email and video conferencing since March 2020. Many public services, which remained closed for COVID-19 prevention, are now available online and most of the students have trained and practised to distance learning methods. Although telehealth, which is used as a broader concept, refers to healthy population and bases on the access to care, lately has expanded to almost all health care services. "Tele" is a prefix meaning "at a distance", and when combined with a term like health, medicine, nursing, has the following meaning: the delivery and management of health care at a distance using the ICT. Telehealth systems were developed to meet increasing needs that may have more specifically forms. Telemedicine is health care services from distance using ICT for exchange valuable information on diagnosis, treatment, disease prevention, continuous training, research and education, but also for upgrading society's health services. Telenursing refers to nursing services using new technology applications to enhance care whenever a physical distance exists between patient and nurse, or between any number of nurses. (WHO, 2009) Telecare is another term for providing distance care and is divided to three generations. Since early 1980, technological applications have allowed the elderly and disabled people to call a call center or a family member, for help via a portable device with personal alarm systems. This period of telecare has introduced as the first generation telecare. A series of upgrades, including the use of drop, smoke and temperature sensors allowing automatic call for health care services, has brought the second generation telecare. In case of an emergency, these telecare systems are based on infrastructure of personal alarm systems with additional teleconference services. Nowadays, the third generation telecare is occurred, which is based on new emerging ICT with the ability to identify potential user problems before even these occur and intervene precautionary. Such systems use sophisticated monitoring methods and identifying types of behavior developing personalized and predictive healthcare. Other aspects of telehealth systems are telecounselling, telediagnosis, and telemonitoring. Moreover, health teleducation is defined as the distance education of patients, health professionals or health care students. Accessing a medical database from distance could be considered also a telehealth application. The telehealth care is not limited to medicine and nursing, but includes also other health care fields such as psychology, pharmacy, and radiology. These disciplines also provide care-using ICT and are accordingly called telepsychology, telepharmacy, teleradiology (Tuckson, Edmunds and Hodgkins, 2017).

The application of ICT in health care services is a very promising effort to deal with problems caused by the aging population, the reduced family care but also the reduction of the working population. Therefore, the initially aim for access to care has transformed to low cost healthcare, the use of ICT for chronic diseases has expanded also to acute conditions and epidemics and telehealth systems "immigrate" from hospitals to homes and smartphones (Dorsey & Topol, 2020). Telehealth

applications have been already described in literature in case of a disaster or a public health emergency, with which an organized and structured care is provided from distance (Lurie & Carr, 2018). In the time of COVID-19, these technology methods have been expanded and put into practice, by monitoring and caring patients in hospitals and community. From the hemodynamic monitoring of patients in ICUs and the use of electronic files to both clinical nursing and the community, new technologies have become an integral part of nursing. Telenursing aims to the delivery, management, and coordination of care, using the telenursing care plan and process as in the traditional way. Nurses follow the steps of assessment, nursing diagnosis, planning, implementation and evaluation using ICT within the domain of nursing science (Taylor et al, 2015).

Despite the nurses' concerns about the consequences of improvements in telehealth and the potential impact on nursing roles, the reliable and flexible technology helped to overcome the barriers to acceptance. Through telenursing, nurses provide distance nursing care, by monitoring, education, follow-up, remote data collection and interventions, pain management, family support, and multidisciplinary care in an innovative way (Bashir & Bastola, 2018). A number of telehealth nurses act as "tele-agents", who work in the same area with patients and participate in telematics consultations with other healthcare professionals. The nursing staff of primary health care and especially the health centres assist the digital monitoring of patients. Others provide distance nursing care based on technological, communication equipment, and take place in a variety of settings, such as hospitals, homes or communities. In this way, patients who don't need to go to the hospital, either because their symptoms are mild or they belong to vulnerable groups, will be able to communicate directly with various medical specialties and have a first nursing evaluation through audio-visual media. The role of telenursing has been emerged as it makes a significant difference in providing patient care, "flattening the curve" in COVID-19 pandemic and afterwards, in similar health care conditions using the same technological tools.

Telenursing care, in addition to health and safety benefits, can provide quality of life and financial benefits to the patient, the family and health and welfare services. It creates the necessary conditions for the development of e-learning in nursing, telenursing simulation, evidence based nursing practice and nursing research. The integration of telenursing and the principles of nursing telecare in academic programs of study lies in the application of distance learning methods in education and research. It is also necessary to expand the documentation bases for nursing telehealth care and to develop, if necessary, a new nursing theory for the impact of nursing telehealth on the patient, family, community, health care system and research protocols (Taylor et al, 2015). Therefore, the expansion of telehealth into the nursing curriculum, under- and postgraduate, is required to extend nursing students' awareness and provide the dynamic development of nursing.

Considering the coronavirus pandemic as the greatest crisis in our time, it is widely accepted the necessity of new technology to seek and receive reliable medical guidance and care through a telehealth system. The future challenges in telehealth could be the technological advantage in health care systems and the training of future health care providers based on clinical simulation and online courses in order to upgrade the nature of care, to distance-based but still patient centered care.

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