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The Role of Nurses in Developing of e-Health Services – Case Finland

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Abstract

In Finland the first national strategy for health care development with technology was launched in 1995[1], in which the change of future service structure was recognized. According the strategy the change required the development of working methods as well as the development of knowledge and skills of health care staff. Due to the change in treatment practices, the occupational structure has changed, especially in the field of specialized health care, towards highly qualified personnel. The change of working life required new capabilities from the staff as well as multi-professional team work across the both in and outside of organizations. At that time effective and versatile utilization of both information and telecommunication technologies needed continuous training, the development of a knowledge-based level and the re-evaluation of work processes. The participation of patients, citizens and customers and self-reliance required new training of health care staff. Citizen support meant providing expert assistance and information to the citizen and citizen growing involvement in decision-making. Since then in Finland, the development of eSocial and eHealth services has been advanced systematically for over two decades.

In year 2015 the Finnish Nurses Association (FNA) celebrated its 90th anniversary and wanted to more emphasis nurses role in discussion how nursing care should be developed in information society. The FNA listened it's members and organized a group of experts in eHealth e.g. nursing practice, higher education, nursing research and development, and administration. The main objective is to focus public discussion on the role of nurses in the development and realization of eHealth services and at the same time strengthening the involvement of citizens in self-care and self-management. [2].

The building and development of the FNA´s national eHealth strategy can be seen as a multi professional triangulation. In the first phase the expert group had thorough discussions about the need and focus of new strategy for nurses. Questions rose e.g. how nurses are able to develop and use eHealth services, what kind of participation citizens and professionals will share at present and in future in health and welfare services. The larger group was split into smaller groups based on experts' interests, and the work was scheduled during one year period. Qualitative analysis method was used in the first part of knowledge creating. In the second phase an integrative review was conducted so that the group studied the research based from both national and international recommendations, norms and declarations. In the third phase the expert group discussed and changed thoughts via virtual writing hours. The collaboration with the FNA and writing together as a group method helped the experts to do abdicative reasoning of what kind of strategy is best for the nurses. The group used many information sources and formed a future-oriented and realistic base of the strategy. The fourth phase of knowledge creation was an open web based questionnaire to all members of the FNA and other specialists, such as FNA's professionals and Board of Directors, to make comments on the strategy electronically (n =13). The e-questionnaire had qualitative questions covering every part of the strategy. The final strategy was revised based on given comments. Totally, the process of creating the Finnish eHealth strategy for nurses took one year. After intense group working the content of the strategy is presented with the mission and vision statements as well as a short description of the strategy themes.[2].

Finnish nurses got their own national eHealth Strategy and it was launched in February 2016.[2] Furthermore the purpose of the FNA's eHealth strategy is to describe the nature of the changes affecting the working environment of nurses from different perspectives. The strategy is aimed at people working in specialized and public health care, self-employed nurses, organizations and their partners and organizations cooperating with the FNA. The strategy is also a part of the development of national and international digitalization, which involves both the reform of external and internal procedures, and making the digitalization of services client oriented. This work requires a new kind of competence from nurses. The strategy's objective is to strengthen the role of nurses in developing and implementing services as a feature of nursing work and in reinforcing the involvement of citizens in self-care and self-management. Reliable information on the wellbeing of clients and multichannel eHealth services are important for nurses and citizens. Increased mobility by citizens and freedom of choice require the cross-border exchange of information and closer European collaboration in electronic data management. [3]. This means that information exchange and multi-professional cooperation between different actors is smooth, safe and based on what clients want. The FNA's strategy's implementation projects are now ongoing like Pedagogical Solutions for Social and Healthcare Professionals 24/7 project has one of the main goals which is to get clients in multi-professional co-operation [4].

The thread running through the eHealth strategy concerns strengthening citizen participation in the use and development of health and social services, and strengthening the competence of nurses as

users of electronic services. The mission of the Strategy announces that nurses develop and use e-Health in client' nursing care, rehabilitation, alleviating suffering, promoting health and increasing well-being of citizens. Furthermore the vision of the strategy states that nurses are brave reformers of health care practices, who have the know-how to use, innovate and develop eHealth utilities with multidisciplinary cooperation with the client and other stakeholders. The strategy comprises six thematic areas which are 1) client participation, 2) nurse's daily work, 3) ethical aspects, 4) eHealth competency requirements, 5) nursing management and 6) knowledge management, research and development. In publishing on the web every theme has three goals and five actions to achieve the objectives of the theme in question. [2]

Client participation means that electronic services are an integral part of today's life. The participation of citizen is strengthened via national archives of health care data and different assessment tools of well-being. According to annual statistics citizens, like Finns, are increasingly using email and social media, and they also have access to comprehensive self-analysis tools that will make them more active partners during treatment [5,6]. Data networks allow the nurse to be actively present in citizen's lives 24 hours a day, 7 days per week [7]. The nurses encourage and counsel citizens to self-care, both in care units and outside them.

Nurses' daily work has increasingly eHealth services. Every competent nurse searches for information and understands the value of health information both for a patient's/client's self-care and in nursing care. The role of nurse is a clients' partner, and she/he offers them appropriate eHealth services and supports the use of eHealth services. In decision making nurses use the data that citizens and their families produce themselves and which is available in different information systems including national archiving services. Using social media in nursing requires that the nurse understands the differences between professional and private roles. The FNA has the guidelines to social media for all nurses [8]. The EU General Data Protection Regulation (GDPR) has published the new guidelines about security and legality issues to all actors in digital world, which is the most important change in data privacy regulation within 20 years. These changes induce new practices and processes to eHealth area, which resonates all nurses [9].

Ethical aspects clarifies that in health care, technology is used to support the citizens' quality of life, dignity, privacy, autonomy, and participation in human care. As the eHealth services are more and more common and available, it is important guarantee that every citizen has an equal right to access them. However, the quality of services, social interaction, or human aspects of care should not be forgotten. Furthermore, not every citizen is computer-literate, thus the versatile services need to be assured. Citizens should have information about the benefits, possibilities and risks in eHealth services and use of technology. Nurses who provide in eHealth services need to follow general ethical guidelines. In the FNA´s strategy the ethical theme is considered important. [2]

Nursing management is important when building eHealth services. Nursing leaders are in a key position in developing eHealth services both on an organizational and national level. Strong leadership and future view are needed to create person-centered eHealth processes that enhance the citizens' participation together with fluent working practices for the nursing professionals. Igt is crucial that nursing leaders ensure that the professionals have enough resources and 'good enough' competence so that their knowledge, skills or attitudes do not hamper the citizens' eHealth service use. Knowledge-based management and active use of knowledge warehouses need to be at the core of nursing leadership skills with the aim to ensure safe and qualified care. Easy access and visibility of nursing-sensitive outcomes strengthen the nurses' commitment and job satisfaction. [2]

In Finland University of Applied Sciences and Universities (UAS) have worked actively to develop bachelor and master level of education.

There has been many projects, some in EU [10] and other World Wide level [11] to increase nurses' knowledge to work with eHealth and develop digital services. In 2018 spring time 22 UAS´s and two universities started the earlier mentioned project Pedagogical Solutions for Social and Healthcare Professionals 24/7. The project will increases know-how needed in the service structure reform of social welfare and health care. The project produces skills for the use, management and development of the digital service structure of health care and social welfare for nurses, but also to the other professionals whose competence is related to developing digital services to health and social care [4].

eHealth competency requirements. There are three dimensions in the European Qualifications Framework EQF description of learning outcomes: knowledge, skills and competence [12]. Nursing education consists of five descriptions of learning areas: learning, ethicalness, working skills, innovations, and internationalism [2,13]. eHealth services are connected to all those areas. Nurses use new technologies in their daily work effectively. They must have basic skills for information literacy, technology usage, and knowledge management. Nurses need to have enough resources and a willingness to use eHealth services and the tools to support good self-care of citizens. The ongoing project in Finland Pedagogical Solutions for Social and Healthcare Professionals 24/7 project will increase eHealth knowledge, skills and competence of teachers, students and working life partners about [4].

Research and development theme refers to the fact health care sector is knowledge intensive area. eHealth is regarded as a chance to make health care and personalized services more visible, more available and equal for citizens. More and more data are being generated by citizens and processed by computers e.g. using wearable, wireless sensors and smart phones to collect person's own health data. Big data is growing exponentially. Using data elements reliably will allow for information to be gathered one time and reused for multiple purposes e.g. development of better nursing practice, and population preventive health. There is a need for developing reliable and fast methodology and how to make use of big date for purposes mentioned earlier. [14].

Discussion

The implementation of the eHealth strategy belongs to all nurses working in different levels. Educational organizations have added eHealth in their curricula; usually the information and communication technology penetrates subject specific content. In nursing practice eHealth solutions are in use and available both in public and private sector. In Finnish citizens have access to national archiving system, and will have possibility to share their own health issues by themselves. This nurses must utilize in joint decision making.

In Finland we have agreed on the minimum requirements of nursing excellence. All nurse educators offer nurse students the possibility to learn eHealth and health informatics knowledge, skills and competence. Due to the rapid expanding of information society services it is important to constantly pay attention to the nurse educators' skills, so that nurse students achieve the desired level of eHealth competence. Nurses have possibility to have further studies to master and PhD level in eHealth/nursing informatics/ health informatics/digital health area depending the higher education organization. After working in practical field nurses also have the possibility to show their expertise and apply for a Nursing Informatics Certificate from the FNA.

It is important that the strategy strongly encourages nurses to be more active in multidisciplinary research and development teams and bring the nursing expertise e.g. in information system development and implementation projects. Nurses are near patients/clients/customers and have a lot of knowledge and skills to share for the development of better eHealth tools and applications in nursing practice.

The Pedagogical Solutions for Social and Healthcare Professionals 24/7 project as large national activity which increases the teachers', the students' and the representatives' of working life know-how how to make most of the digital health and social services and utilization of service design. This strengthens the future ecosystem of health care and social welfare, where nurses have different kind of roles, as leaders, developers and carer of customers. [4] There is also a project which describes the nurses' future competences to base level of their education and there is cooperation between projects to describe the informatics competences. FNA is also partner in that project.[15].

Finally the FNA´s eHealth strategy[2] describes and defines the mission and vision of the nurse association as well as objectives and means of how to achieve them. In this strategy development our future vision is: healthier citizens and a better and more effective care to patients through ethically and technically sound advanced nursing care.

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