eHealth strategy of the Finnish Nurses Association 2015–2020





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Foreword

Nurses in the development of the information society

The Finnish Nurses Association (FNA) celebrated its 90th anniversary in 2015. Nurses are keen to keep abreast of the times in developing the information society, and in its anniversary year the association published its eHealth strategy. The aim is to focus public discussion on the role of nurses in the development and realisation of eHealth services and strengthening the involvement of citizens in self-care and self-management.

he FNA's objective is to work for good client oriented nursing with the aid of eHealth services and using multichannel service models. In Finland, the development of eSocial and eHealth services has been advanced systematically for over 20 years. The latest development is the National Archive of Health Information (Kanta), which includes the electronic prescription service, My Kanta pages, and Patient Data Repository. Nurses have access to information systems and electronic applications to support their work and its operational processes, which they must know how to use. Citizens have the My Kanta pages, which can act as an excellent tool for cooperation between nurses and >

Mission

Nurses develop and use eHealth services in caring, rehabilitation, alleviating the suffering and health promotion of clients, and in increasing the wellbeing of citizens. patients/clients. The national and EU strategies have highlighted the need for ensuring sufficient staff competence. The FNA supports this work. As nurses, we are the largest group of health care professionals and we want to be actively involved in developing electronic services in conjunction with other professions and the public.

The FNA focuses on communications linked to eHealth services, so that nurses are rendered the best possible message promoting electronic services. Nurses want to take responsibility for the changes that are required. It is recognized that the great need for an electronic communication service, data ownership and independent usage comes from clients, who are accustomed to electronic services in other areas, such as banking, insurance and commerce. The aim of the FNA is to support professionals who are involved in developing and introducing eHealth services, because they are in a key position in directing health communications to citizens.

The role of citizens and professionals, and between professionals is changing, and offers the scope for a rational division of labour. The digital divide is continually narrowing, as greater numbers of older people know how to use digital services and are actively involved in their own selfcare. The thread running through the 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. •

On behalf of the FNA, Merja Merasto President

Vision

Nurses are bold in reforming practices and have the skills to use and develop eHealth services on a multiprofessional basis and in cooperation with clients and other stakeholders.

Introduction

eHealth services as a component of nursing

he 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 health care, self-employed nurses, organisations and their partners and organisations cooperating with the FNA. The strategy is also a part of the development of national and international digitalisation, which involves both the reform of external and internal procedures, and making the digitalisation 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. This means that information exchange and multi-professional cooperation between different actors is smooth, safe and based on what clients want.

Numerous new strategies have been devised to manage change. The Ministry of Finance has published a client relationship strategy (2014) and a Europe 2020 strategy (2015), which envisage smart, sustainable and inclusive growth in Finland as well as well functioning services for > "Nurses need to have informatics and media literacy for such things as the safe care of clients and production of services as well as the management of services and resources."



citizens. The Ministry of Social Affairs and Health (2015) has produced the National Finnish eHealth and eSocial Strategy 2020, which aims to support and guide social and health care reform and promote active citizenship in maintaining one's own wellbeing by improving data management and boosting electronic services. To attain these objectives, it is essential to utilise social and health care information, which can be used to forecast and prepare for the future.

The current strategy uses the eHealth concept in conceptualising Finnish electronic health services. Also, the use of the term eHealth in the strategy embraces eSocial services. Technology is conceptualised as a one of the tools for producing eHealth services. Informatics refers to the use of technology and information systems for current data collection, processing, storing and sharing. Nurses need to have informatics and media literacy for such things as the safe care of clients and production of services as well as the management of services and resources. In this strategy, the term "client" also refers to "patient". Informatics skills are also necessary for developing and generating research data, and for data application in one's own work. The increase in the use of eHealth services also poses challenges for health care management, the everincreasing use of electronic information and informatics.

The FNA's eHealth strategy comprises six elements: 1) Technology in supporting client participation; 2) eHealth services are part of a nurse's work; 3) Ethical approaches in eHealth services; 4) eHealth services and expertise; 5) Managing eHealth services; 6) Researching and developing the digitisation of health services.

The strategy also takes account of means of implementation and defines the key concepts concerning eHealth services, which are listed at the end of the strategy document. • In this strategy, the term "client" also means "patient".

Main aims of the FNA's eHealth strategy

Health care utilises information coming from citizens themselves as part of their health care record. Citizens will be conversant with health information. Health care will meet the needs of citizens in providing targeted treatment and personalized services.

- Citizens' involvement in health care will grow and communications will take place partly through social media. The scope for using eHealth services will not be limited according to the weaker user.
- eHealth services will promote equality and client oriented care, prevent social exclusion and increase client participation. Citizens will look after their own health and self-management and the management of their own information as far as they are able.
- The work of nurses in eHealth services will be based on legislation regulating the profession and ethical guidelines for nursing, which emphasise the protection of client privacy.
- Nurses' training will teach skills in the use of technology, information literacy, knowledge management and the informatics process. These skills will also be updated with supplementary training.
- Organisations will devote activities to the development of safe electronic services. Managers will ensure that eHealth services will promote client oriented approaches and nurses' occupational wellbeing. The organisation will enable nurses to have sufficient resources to maintain their competence in the use of eHealth services.

- With the help of international multidisciplinary research, the functionality, quality, effectiveness and safety of eHealth service strategies will be developed. Information generated through the interaction between clients and professionals will be used in clinical decision-making, informatics and R&D.
- Every nurse will have the same possibilities to access R&D information and the competence to utilise it. Best practices in nursing will spread rapidly nationally and internationally.
- Nurses will take a positive approach to the change brought about by eHealth services and the opportunities it will generate. They will use technological solutions as a feature of safe care.
- 10 Nurses will be included in eHealth innovations and in developing solutions for social and health care reform. Cooperation between the home and place of treatment will change, as diagnoses using computers and smartphones will be done in client's homes. Contacts, guidance and supervision via networks will change, becoming active between home and hospital. Information will be transparent and patients/clients will own the information collected and share it at their discretion.

The Finnish Nurses Association's eHealth strategy comprises six elements



Strategy Technology in supporting client participation

The rapid development of technology is changing the society around us, and nursing is evolving with it. Organisations do not determine the course of transactions, which are performed to a growing extent by clients.

Electronic transactions are an integral part everyday life for clients, whose participation is being bolstered with such things as My Kanta and various other resources for measuring wellbeing. The increasing use by clients of email and social media, together with the possibilities to obtain comprehensive analyses of oneself, such as with genetic testing, are making clients more active players when under care. With the help of information networks, nurses are actively present where clients are. Nurses support and guide clients to be independent and responsible, according to their functional capacity, both at the place of treatment and outside it.

Objectives

- Clients have at their disposal information concerning them generated by professionals and technical devices/applications, and are able to decide on their use. Professionals use information at their disposal to promote client service.
- Clients are able to perform transactions electronically and to generate health and social welfare information for professionals to use.
- Clients receive support on owning, using and taking decisions based on information about themselves. Professionals support clients in generating such information and making decisions.

- Nurses ensure that clients' access to their own information is limited only for good reasons. Information is generated in a form that clients understand.
- 2 Clients can genuinely choose the use, method of transaction and technology concerning their information. Nurses know how to use different types of technology and encourage clients to use technology, and thereby facilitate clients' freedom of choice.
- 3 Clients have the opportunity to take advantage of the use of technology as they wish and nurses support them in this.
- Citizens are able to participate actively in the development of eHealth services together with professionals.
- 5 Nurses promote client participation as a part of health care processes. The nurses' motto will be: "I provide support either by myself or with the help of technology, I will not do it for clients, if they can do it themselves. I appreciate the information produced by clients."

Strategy Digital services are part of a nurse's job

The use of eHealth services and technology will in the future play an increasingly bigger role in the everyday work of nurses in the comprehensive and multidisciplinary care of clients.

The task of nurses is to obtain information and to understand the importance that health information in clients' self-care and in the activity of health care professionals, including with respect to the wider population. Nurses act as clients' partners, providing them applied eHealth services, taking into account the clients' baselines and resources, and to encourage and support their use. Increasingly frequently, the work of nurses deals with self-care areas and networked operational models. Technology helps in coordinating the care of clients and in networking different service producers across sectoral boundaries. Integrated decision support systems will be used in evidence based care. Also, the position of nurses as self-employed professionals and third sector services will be strengthened.

Objectives

- Nurses use eHealth services and understand their opportunities in an ever-expanding operational environment.
- Nurses utilise information generated by clients and their relatives and available from different information systems in nursing care, and will encourage and facilitate clients' participation and partnership in eHealth services.
- Nurses develop eHealth services in multi-professional and multidisciplinary teams.
- Nurses be able to use decision-making assistance in deciding suitable and appropriate methods in nursing and health promotion.

- 1 Nurses guide, support, facilitate and encourage clients in the use of eHealth services and different technologies.
- 2 Nurses enter information generated during clients' care on the patient information management system, utilise the National Archive of Health Information Services (Kanta services), contribute to it and utilise different data systems to acquire information to promote clients' health.
- 3 In clinical nursing, nurses use the necessary key management and control devices, communication technology, information systems and social media, cognisant of the difference between private and professional roles.
- 4 Nurses are able to use decision-making support when opting for suitable and appropriate procedures in nursing work and health promotion.
- 5 Nurses participate in multi-professional cooperation for the development of e-Social and e-Health, management, training and research the development of education and research.

3 Strategy

Ethical approaches in eHealth services

eHealth will support good quality of life, human dignity, self-determination, participation, humane treatment and care.

It is important to recognise and safeguard the right of every citizen to benefit from eHealth services in an equal way, both in public and private service provision. The use of technology will not be allowed to undermine the quality of services, social interaction or human factors. Not every citizen can be expected to have IT skills, and so health care services must remain diversified.

Clients must be aware of the benefits, opportunities and risks associated with eHealth services and technology. Every client who uses eHealth services is entitled to expect that nurses who produce eHealth information, or who are otherwise involved in producing eHealth services, adhere in their operations to ethical principles. Also, interactive media can be used as a tool of nursing, in sharing professional information or in acquiring information. Neither supervision nor the information that is being continually generated will violate citizens' rights to privacy and self-determination.

Objectives

- Legislation and nurses' ethical guidelines guide the operations of nurses in eHealth services.
- Clients receive ethically robust eHealth services in accordance with their needs.
- Client privacy protection is realised in eHealth services.

- 1 Nurses operate in compliance with commitments to secrecy and confidentiality in eHealth services as well as in interactive media.
- 2 Nurses agree on the use of eHealth services together with users, with overall attention to their needs and life situation and the benefits and potential risks associated with a service or technology.
- 3 Stakeholders, such as health care organisations, the education sector and businesses, which take part in developing, assessing and utilizing eHealth services, ensure that in practice there will be a wide range of expertise and cooperation as well as the required proficiency and ethically sustainable approach in providing eHealth services.
- 4 Stakeholders, such as health care organisations, the education sector and businesses, that take part in developing, assessing and utilizing eHealth services, also draw on the opinions of citizens/clients.
- 5 Employers guarantee resources and ensure that nurses have reliable and safe technology at their disposal for implementing eHealth services.

4 Strategy

eHealth services and competencies

There are three aspects of expertise: knowledge, skills and competencies. Nurses' training involves five areas of expertise: learning, ethics, workplace skills, innovations, and internationalisation. The production of eHealth services concerns all these areas.

In specific terms, workplace skills refers to smooth operations in workplace communications and interaction, as well as the ability to utilise information and communications technology and networks in the tasks of one's own field. Innovation expertise means that nurses are able to develop creative problem solving and work methods in their jobs, the proficiency to work on diverse programmes and know how to carry out research and development projects. Nurses also know how to apply existing knowledge and methods in their field and know how to look for financial and client-oriented solutions.

Objectives

- Nurses know how to use information and communications technology in nursing effectively and responsibly.
- Nurses have basic skills in using technology as well as data literacy and information/ knowledge management skills for functioning in eHealth services. Nurses' levels of competency based on experience and training:

Level 1: New nurses, according to Staggers (2001, 2002), have basic competence and skills in informatics and health literacy, as well as in the use of various types of technology.

Level 2: Experienced nurses are proficient in their own area of specialisation and will be highly skilled in informatics. They will use information technology to support their work and in cooperation with nurses specialised in for improving various procedures.

Level 3: Nurses specialised in informatics are experts in this field, trained in both nursing and informatics. They are involved in the development of the information systems used by their organisation, drawing on their own specialist knowledge.

Level 4. Informatics innovators are information management developers, who research and develop theories and superintend information management practices and research.

- 1 All nurses have the resources and will to use currently existing electronic information management equipment, to further the good care of clients, and the health and wellbeing of citizens.
- 2 Students taking upper secondary qualifications in nursing at all universities of applied sciences acquire competence and skills to use eHealth service procedures in informatics in patient care planning and care, and be equipped to participate in the development of work processes and tools in their work community, and the use of eHealth service tools as intended. (See Appendix 1, Table 1)
- 3 Nurses have the opportunity to deepen their knowledge of eHealth services in specialised studies, master's degrees at universities of applied sciences and universities, so that they can operate in specialist duties in informatics, both in clinical work and teaching and research in the field of informatics.
- 4 Nurses are able to demonstrate their expertise by applying for the title of specialist from the FNA.
- 5 Nurses actively participate in the multi-profession discussion of eHealth service expertise with the aim of broadening it nationally and internationally. Employed nurses have the opportunity to deepen their expertise in this field.

5 Strategy

Managing eHealth services

Nursing managers are in a key position in developing eHealth services, both within their organisation and at national level.

The processes of making the social and health care service design client-oriented, comprehensively taking into account individual needs, requires robust management. Also needed is a vision of the possibilities that eHealth services will offer to increase citizen participation and assist in the flexibility of the working methods of professionals. eHealth services should be viable to all citizens, regardless of where they live.

Expertise by professionals in the use of eHealth services will be ensured so that their knowledge, skills or attitudes do not limit client services. Informatics is central to the competence of health care managers. Managers will also actively utilise electronic data resources in guaranteeing good quality and safe client care. Information from data resources depicting the outcomes of nursing care will strengthen nurses' commitment and job satisfaction.

Objectives

- Organisations' strategies support the use of eHealth services, so that every client has the chance to use electronic transactions as they please.
- eHealth services contribute to evidence based, high quality and safe care.
- eHealth services help promote staff job satisfaction.

- 1 Health care organisations facilitate the introduction of new eHealth services as part of client care processes.
- Nursing managers use eHealth information resources to support informatics so that clients receive evidence based and personalised care and staff working conditions develop with the help of up-to-date information.
- 3 Nursing managers make it possible for nurses to develop their expertise while they care for and guide clients using electronic means.
- Nursing managers ensure that nurses have the opportunity to actively develop eHealth and eSocial services in multi-professional networks nationally and internationally.
- 5 Nursing managers participate in and contribute to supporting research and development of eHealth services.



Developing the digitalisation of social and health care services

Digitalisation comprises the reform of practices, internal processes and creating e-services. The issue here is how nursing activity can be transformed using technology.

Meeting people and listening to them will still be a strong part of nurses' job description, but this will not always happen face-to-face, as technology is opening up new possibilities.

Working life emphasises the extensive data content of informatics in electronic format. In Finland the aim is to open significant data resources, which have been compiled and administered by government, by 2020. For example, research on the economic efficiency of health care is still in its infancy.

More nurses are needed for the development of different cooperative models. eHealth services will be developed in operational environments that are firstly research, development and piloting platforms. These help construct activity, assess it and generate comparative data on national and international cooperation. Central to the new activity are multidisciplinary partnerships (public sector, private actors and third sector) and common objectives for promoting health and wellbeing.

Objectives

- Nurses have flexible access to national and international research knowledge to facilitate evidence based nursing. They will use researched information in their work, participate in conducting research, and direct research and development teams, drawing on their own expertise and experience.
- Nurses promote the use of standardised terminology in their work, enter data in a variety of forms (e.g. using the Finnish Care Classification system), and participate in the development of a standardised nursing language on the basis if their skills and experience.
- Nurses are involved as experts in developing, testing and introducing nursing information systems in multidisciplinary working groups.
- Nurses are involved in national and international networks, share research data and best practices, and make use in developing their work of information produced by others.

- 1 Nurses produce reliable information for developing social and health care services and quality care, and will actively use and develop technological solutions.
- 2 Nurses have access to the latest international information, which will continue to be used in assessing and developing nursing practice. They are able to make use of material in foreign languages and participate in international debate.
- 3 All nurses have equal possibilities to access research and development information, develop eHealth services and have the ability to make use of technological developments as a part of safe care.
- As the largest professional health care group, nurses are represented in multidisciplinary working groups as eHealth solutions are developed as part of a broader health and social care reform.

Strategy implementation

The Finnish Nurses Association (FNA) and regional associations will be the implementers of the strategy

The FNA will play a guiding and facilitating role nationally and regionally in implementing eHealth, and concerning opportunities for opening up discussion in the area of international cooperation. Collaboration with other stakeholders promoting electronic transactions will increase the involvement of nurses in advancing eHealth services. In the future, players from many different areas in society will take part in promoting the wellbeing and health of citizens.

The FNA will promote eHealth services with its projects and communications work and health care professionals' responsibility for them. Nurses will receive support in their developing and implementing eHealth services, as they are in a key position in addressing communications to clients.

Objectives

- Using its own eHealth strategy, the FNA will realise the Information Strategy for Social and Health Care 2020 regionally and nationally and support the activity of regional associations to promote eHealth services.
- The FNA strengthens the central role of nurses in promoting eHealth services and support the strengthening of nurses' knowledge of eHealth services and activity in their introduction and development.
- The FNA emphasises eHealth services from the clients' perspective. Health care activity will develop together with other developments in society and electronic services should be facilitated as in other sectors.

- 1 The FNA regards and highlights eHealth service issues as a strategically important field.
- 2 The FNA invests in developing the crucial climate of opinion concerning eHealth services, and will communicate to nurses positively on eHealth.
- **3** The FNA's expert members cooperate with different players nationally and internationally to further eHealth services, for instance in the form of joint projects or strategy-based campaigns.
- 4 The goals of eHealth services are reflected in the strategies and activities of regional actors, on-going and future development projects and operational models and technologies currently in use.

Terminology

Client-oriented guidance method

The client-oriented guidance method refers here to a guidance method used to support and bolster an individual's cognitive resources (motivation and self-efficacy) for promoting and maintaining one's own health.

Open data

Open data refers to unprocessed data accumulated by government, organisations, businesses or private individuals that is open to outsiders to use freely and without cost.

Open data is not the same as public information. Public information is accessible to all, meaning people can read it e.g. on the Internet or in public libraries. Open public information, or open data, means that citizens and businesses can use information for their own purposes on an equal footing with government.

Big Data

Big Data refers to a large amount of diverse data that due to innovative technology is cost effective and quickly usable to aid decision-making.

Gartner Data Center, Demystifying big data, TechAmerica Foundation

i.e. not merely structures but vast quantities of diverse data.

Confidentiality and secrecy obligation

Confidentiality and secrecy obligation (also non-disclosure obligation) mean patients' / clients' information can only be viewed with discretion, for sound reasons, and can only be used for a specific purpose and must not be distributed. (Act on the Openness of Government Activities <u>http://www.finlex.fi/en/laki/ kaannokset/1999/en19990621</u> Personal Data Act 1999/523 <u>http://www.finlex.fi/en/laki/kaannokset/1999/19990523</u>

Cyber-Patients' Bill of Rights

Right to an effective architecture of privacy. Right to informed consent. Right to control disclosure of information. Right to accessibility and portability (Murray et al. 2009)

Digitalisation

Digitalisation comprises the reform of practices, internal processes and making e-services – providing a major insight into how one's own activities can be radically transformed using information technology. <u>http://</u> <u>vm.fi/en/digitalisation</u>

eHealth

The International Council of Nurses (ICN) defines eHealth services according to the WHO. The Finnish Nurses Association's strategy makes use of the perspectives on eHealth of the WHO, EU and Gunther Eysenbach. eHealth deals with health care personnel and client health-related information acquisition and production using information and communications technology. It also deals with the use of e-commerce in developing public health care services and health care management. eHealth provides new methods for the use of health-related resources. The Internet also provides a new channel for sharing information for the interaction and collaboration of institutions, organisations, health care personnel, service providers and the public.(WHO 2015). WHO 2015. Trade, foreign policy, diplomacy and health. eHealth. Sourced 12.5.2015. See http://www.who.int/trade/glossary/story021/en/

The term eHealth services refers to ICT use in health care products, services and processes, together with the organisational changes of health care systems and new skills. The aim is to use them to improve clients' health, the effectiveness and productivity of health service provision and the social and economic value of health. eHealth services embrace the interaction between clients and health care service providers, the transfer of information between medical institutions or peer to peer communication between patients and/or health care professionals. (EU Commission: eHealth Action Plan 2012-2020 - Innovative healthcare for the 21st century). With the increase in cross-border health care, the international perspective is also increasingly present in the requirements of multichannel social and health care services (MSAH 2014).

eHealth care deals with those health care services and tools that use ICT to improve prevention, diagnosis, treatment, follow-up, and management. eHealth contains the sharing of information and communications between patients and health care service producers, hospitals, health care personnel and health information networks, electronic patient records, telemedicine services, portable patient-monitoring devices, operating room scheduling software, robotized surgery and blue-sky research on the virtual physiological human.

(EU 2015.) EC, European Commission 2015. eHealth. see <u>http://ec.europa.eu/health/ehealth/</u>policy/index_en.htm

In addition to technology, eHealth involves a state of mind, attitude and commitment to a networked, global way of thinking with the objective of health care with the use of ICT locally, regionally and globally. The letter 'e' in eHealth can be understood in different ways – efficiency, enhancing the quality of care, evidencebased, empowerment, education, enabling information exchange and communication, extending health care across borders, ethics, and equity. (Eysenbach G. 2001.)

Eysenbach G. 2001. What is e-health? J Med Internet Res. 2001 Apr-Jun; 3(2): e20. Published online 2001 Jun 18. doi: 10.2196/ jmir.3.2.e20 <u>http://www. ncbi.nlm.nih.gov/pmc/articles/PMC1761894//</u>

FinCC

(Finnish Care Classification), The FinCC system consists of Finnish classification of nursing diagnoses (FiCND), the Finnish classification of nursing interventions (FiCNI) and the Finnish classification of nursing outcomes (FiCNO). Pia Liljamo, Ulla-Mari Kinnunen, Anneli Ensio. FinCC classification system, user's guide. National Institute for Health and welfare (THL), Helsinki 2012. https://www.julkari.fi/bitstream/ handle/10024/90804/FinCC-luokituskokonaisuuden%20opas.korjattu%20liitteen%C3%A4%20olevaa%20SHToL-luokitusta.pdf?sequence=1. (Abstract in English).

Health Technology

The application of technology to the solution of medical problems. (MeSH 2015)

Structured nursing documentation

Structured nursing documentation means that nursing information is recorded and presented in a structured form. The structured form is obtained by using uniform terminology, nomenclature, classification, glossaries or codes. The national electronic patient records standardized data contents. The guide implementing core data, headers, and outlook as well as specialist and activity-specific structures in patient data records: version 3.0 <u>http://www.kanta.fi/</u>

documents/10180/3441111/Ydintiedot_otsikot_nakymat_opas_uusi.pdf [in Finnish] Structured data refers to data that that is entered and stored using a previously arranged structure. Structured information can vary, for instance written in free form under a pre-assigned heading and by entering a code. Structuring information enables the automatic processing of information. Structured entering has significant benefits for health care professionals, the management of health care organisations and patients (Lehtovirta, Jukka ja Vuokko Riikka (eds.). Manual for structured

Terminology

data entry in health care. Entering essential patient record structures in the electronic patient record – Part I. National Institute for Health and Welfare (THL). Ohjaus 1/2014. 98 pages. Helsinki 2013. ISBN 978-952-302-108-2 (online). [Summary in English] <u>https://www.julkari.fi/handle/10024/110913</u>

Nursing informatics

Nursing Informatics refers to the processing of nursing information and integration of ICT in order to support the health of citizens worldwide. Nursing informatics specialisation combines nursing science, computer science and information science to manage and combine separate data, information, knowledge and wisdom in nursing. This helps support patients, nurses and other health care service producers in decision-making in different roles and organisations. (IMIA-NI, <u>https://www. amia.org/programs/alliance-nursing-informatics</u>)

Nursing informatics specialist certification

Since 2012, the nursing informatics specialist certification can be applied for through the FNA. The certification can be conferred on registered nurses on the basis of additional, supplementary and/or advanced training, work experience, multidisciplinary work approach as well as deepened and broadened professional knowhow due to research and development work; skills and status and specialist nursing role.

The granting of the nursing informatics specialist certification requires the attainment of a minimum number of credits (cr.) for each area of expertise: cognitive skills (training) 40 ECTS, skills expertise (work experience) 40 ECTS, and cooperative and development skills 60 ECTS. In addition, applicants must have at least 60 ECTS ranging from the above areas of expertise. The minimum credit requirement is 200 ECTS. (Finnish Nurses Association 2012.)

Kanta archive

The National Archive of Health Information (Kanta) and the National Client Data Repository for Social Services (Kansa) – the latter under preparation – are special social and health care service packages. The eHealth service they provide comprise a unique entity, based on legislation, gradually taken into use by citizens, health care, social welfare and pharmacies by 2016. The Ministry of Social Affairs and Health has been guiding the uptake of the services. The My Kanta service opened access to citizens to their medical records. This approach is being expanded further. Clients can also have all their records for their own use and not just to view. In this way they can decide how to use their records and to what services they will submit the information, for example for research purposes. <u>www.kanta.fi</u>

mHealth

mHealth refers to the use of mobile technology in health care. (WHO 2015, http://www.who.int/reproductivehealth/topics/mhealth/en)

My Data

My Data refers to a human centric approach to managing personal information, in which individuals are in control of their own data. In this way information generated in organisations can be given back to individuals, who can share, exchange or sell their information to other organisations. MyData – A Nordic Model for human-centered personal data management and processing (English version of the publication 'My data - johdatus ihmiskeskeiseen henkilötiedon hyödyntämiseen'' published in 2014.) <u>http://</u> www.lvm.fi/documents/20181/859937/MyData-nordic-model/2e9b4eb0-68d7-463b-9460-821493449a63?version=1.0

Open Notes movement

The Open Notes movement is an initiative to prompt clinicians to offer all patients/clients access to their clinical notes. The opening up of such information has been found to have a positive effect, e.g. in ensuring patients perform better in taking their medications. Only a small proportion of clients/patients have found clinical notes hard to understand, contrary to physicians' expectations. US experience with doctors and patients sharing clinical notes BMJ 2015; 350 doi: <u>http://dx.doi.</u> org/10.1136/bmj.g7785

Client participation

Participation and inclusion are sometimes used synonymously, though studies show that they are seen having different meanings as concepts concerning clientoriented activity. Participation is a broader notion than inclusion, and contains the idea of service users having an effect on an activity or service process. Inclusion is mainly about clients being present, for instance at an information briefing. Inclusion contains the notion of "a need to produce and develop a service in various ways so as to directly include service users." Participation can be said to be inclusion on a voluntary basis, as the motives for someone being included may be ideological, cultural, economic or social. The justifications for participation are threefold: 1) to produce client-oriented and high quality services (Heikkilä & Julkunen 2003); 2) to highlight the right of service users to be included in decision-making that affects them (Valokivi 2008); and 3) to emphasise the importance of the empowering effect of participation. (Niiranen 2002:67)

The most recent but still little used concept is that of 'agency'. This means that health care is involved in client care but that clients are active agents and in charge of their owns affairs – a fairly loose definition. We of course usually assume that clients have the possibility/right to be involved or be a participant in their own affairs. Agency assumes that health care has the right/possibility to participate or be involved in the affairs of clients. See e.g. Olli, J., Vehkakoski, T., & Salanterä, S. (2012). Facilitating and hindering factors in the realization of disabled children's agency in institutional contexts - literature review. Disability & Society, 27 (6), 793-807.

Participation

Participation comes from involvement, action and exerting an influence. It is proactive, forward looking and holistic. Participation places clients alongside professionals already at the planning stage. It is shaped by the experience of support and appreciation and is based on a sense of inclusion and membership of the community and society. Participation can be itemised as the right to information, involvement in planning, having powers of decision, and own activity (Kettunen, Kivinen 2012)

Personal electronic health record

The personal electronic health record is a user-friendly electronic tool that individuals can use to store health data concerning themselves and actively manage it. It complements rather than replaces electronic patient record systems. <u>http://taltioni.fi/en/</u>

Electronic decision support system

A decision support system analyses such things as patient records and personal electronic health record data and produces evidence-based recommendations and proposals for healthcare professionals or clients to help with decision-making. See e.g. <u>http://www.eb-meds.org/web/guest/home?</u>

Quantified self-tracking

Quantifies self-tracking refers to all information that individuals can measure by themselves. Such information, which is stored on computer, may relate to biological, physical, behavioural or environmental factors.

Terminology

e-Self-care services

e-Self-care services refer to the promotion and monitoring of the state of one's own wellbeing and health using the Internet or mobile devices. ICT enables people to follow their health situation and actively influence it.

Telemedicine

Tele medicine refers to the generation of health care services using ICT. It involves interactive consultation as well as diagnostics. (MeSH 2015.) It denotes the sort of medical practice where decisions and recommendations concerning procedures, diagnostics and treatment are based on data and documents conveyed by telecommunication systems. Ethical guidelines for telemedicine [Finnish] <u>http://www.laakariliitto.fi/edunvalvonta-tyoelama/liiton-ohjeet/</u>telelaaketiede/

Telenursing

Telenursing refers to the production of nursing services using ICT (MeSH 2015). See: American Telemedicine Association ATA Telehealth nursing SIG <u>http://www.americantelemed.org/docs/default-document-library/fact_sheet_final.pdf?sfvrsn=2</u>

Health technology

Health technology is more of a line of activity formed by the business sector. It refers to medical devices – meaning all such equipment, systems and supplies used in health and nursing, diagnostics, disease prevention, monitoring, treatment, as well as in recovery for injuries or impaired functional capacity. The concept also includes information systems and programming. Terveysalan tutkimus- ja innovatiotoiminnan kasvustrategia. [Health research strategy for growth and innovation. (Finnish)] Ministry of Employment and Economy reports 12/2014 WHO – health technology: http://www.who.int/topics/technology medical/en/

Privacy protection, data protection

Data protection refers to the prevention of unauthorised acquisition of information and the preservation of the confidentiality of information, the protection of personal information from unauthorised use or persons from harmful use. Privacy protection refers to the protection of individuals – peoples' private life and protection of privacy – and the safeguarding of these rights, for example in the processing of personal or medical records. The terms data protection and privacy protection are explicitly legal in nature, and their implementation and requirements are regulated in several laws. (Tammisalo 2007.)

Information security

Information security refers to the protection and safeguarding of data, information systems, communications and services using them in such a way that the existence, accuracy, availability, confidentiality and continuity of services are not jeopardised. It is the state of affairs where information systems and threats to the confidentiality of telecommunications, integrity and availability do not carry any significant risks. Realising information security requires the proper classification of information, the mapping of the threats of hazardous information and risks and the initiating of appropriate security measures. There must be an awareness of what information is protected, why it is protected and how information is being protected. Protection involves various administrative and technical decisions, principles, procedures and measures with which one can prepare for threats to information and prevent risks from materialising reduce their impact. (Tammisalo 2007.)

Information and communications technology (ICT)

ICT refers to all electronic media, devices and applications, which can be used to help in data processing. These include computers, mobile phones, computer systems, computer software, satellite systems, electronic services, video-conferencing and tele-education. According to the EU Commission the importance of ICT is less to do with the technology itself than in its potential to provide access to information in all parts of the world. Ministry of Finance Europe 2020 – Strategy (2015) <u>http://ec.europa.eu/europe2020/pdf/nd/nrp2013_finland_en.pdf_http://vm.fi/julkaisu?pubid=4805</u>

Media literacy

Media literacy is the ability to read web text and to be able to retrieve, filter and compile from diverse, often fragmentary, sources. Media literacy involves critical evaluation of web content and sources, and its development requires diligent online mobility and activity. Apart from written texts, media literacy includes the ability to read images and multimedia. A crucial aspect of media literacy is meticulousness. Suomen Ammattiliittojen keskusjärjestön Keskusjärjestö SAK. 2015. Työelämän verkkoopisto, Opi verkossa: <u>http://</u> www.opiverkossa.fi/verkko-opiskelun_erityispiirteet/ verkkolukutaito/Media literacy definition: <u>http://www</u> medialit.org/media-literacy-definition-and-more

Appendix 1

| Competencies in nursing training | Nursing informatics / expertise in eHealth services | Competencies in nursing training | Nursing informatics / expertise in eHealth services |
|--|---|--|--|
| 1. Client-orientation 10 ECTS | Highlights the ability to appraise clients' resources and support them in their care planning, implementation and evaluation, as well as clients' rights and participation in service systems' selection and development. | 6. Evidence based activity and decision-making component 30 ECTS | Able to determine nursing needs, to plan, implement and evaluate nursing according to the decision-making process and to make active use of scientific data (recommendations based on research evidence, reviews) in nursing decision-making and in documenting nursing work, proficiency in information retrieval from the most common health information data bases, comprehend the concept of evidence-based activity and the significance of Normalisation process Theory (NPT) in social and health care, comprehend the role of nurses in evidence-based activity and commit to it. Able to identify and critically evaluate their work and working practices, understand the importance of standardised practices in client care and work in accordance with them. Able to participate in development, innovative and research processes. |
| 2. Nursing ethics and professionalism 5 ECTS | Able to perform profession according to legislative and ethical guidelines, and able to evaluate their implementation. Able to ensure that care and service are arranges equitably and fairly. | | |
| 3. Managing and entrepreneurship 5 ECTS | Able to manage one's own work and to work in various changeable health sector operating environments. | | |
| 4.Social and health care operating environment 5 ECTS | Able to make use of electronic services as a part of the overall care of clients. Able to use social media in nursing and to separate one's personal and professional role | | |
| in using social media. Able to use technology in care of patients. Proficiency in the use of the main necessary treatment and monitoring devices in clinical nursing. Able to use patient records systems. | 7. Guidance and teaching proficiency 5 ECTS | Able to make use of situation-relevant client-oriented teaching and guidance methods, able to use appropriate existing teaching and guidance materials (and produce new ones) guidance and communications by utilizing ICT | |
| 5. Clinical nursing 105 ECTS Able to respond to care needs by using nursing assistive methods and to document them in structured form with a uniform classification. Able to estimate patients' care needs for appropriate clinical and physiological evaluation/measurement methods, prioritise proven needs and document them in structures form with a uniform classification. The key contents are the national and international treatment recommendations, guidelines in the treatment of various disease groups, nursing assistive methods (e.g. in accordance with the Finnish Care Classification System, FiCC) and the national documentation model. | 8. Health and functional capacity promotion 10 ECTS | Able to plan, carry out and evaluate health and functional capacity-promoting interventions at individual, group and community levels by utilizing the multi-specialist and multi-profession network. | |
| | uniform classification. The key contents are the national and international treatment recommendations, guidelines in the treatment of various disease groups, nursing assistive methods (e.g. in accordance with the Finnish Care Classification System, FiCC) and the national documentation model. | 9. Proficiency in social and health service quality and safety 5 ECTS | Data protection and security, comprehend the importance of information security and data protection in treatment processes, act responsibly in maintaining information security and data protection. Main issues are of comprehensive silence and the protection of information, patients' right to access information, information security plan and information security risks, information systems and their use in patient documents, responsibility for information idocumenting and communicating nursing |
| | | | activity, social media, electronic registers and other forms of electronic communications and health care registers |

Combined competencies of nursing training (180 ECTS) are defined as nine components. All competence components are linked to expertise in nursing informatics / eHealth services (Eriksson, Korhonen, Merasto, Moisio 2015).

and paper archives.

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