![ENS4Care logo]

Evidence Based Guidelines for Nursing and Social Care on eHealth Services

Advanced Roles

Report type	**Deliverable D4.2.1**
Report name	**Guidelines on WP4 - Advanced Roles**

Dissemination level	PU
Status	Final Version
Version number	4.0
Date of preparation	15-06-2015
Delivered by	WP4

Contents

Acknowledgement

The ENS4Care[1] executive committee thanks the various contributions from the stakeholders represented in the consortium for their support in drafting, reviewing and evaluating the present guideline. Their contribution ensures that all appropriate stakeholders' views are included.

List of the ENS4Care partners

Executive Summary

The increasing and changing health needs of citizens of the European Union (EU) have led to member states considering new ways of organizing and delivering health and social care. Within a context of tighter health budgets and rising demands for high quality and safe care, advanced roles for nurses and social workers are required to make best use of the resources available and enhance quality. eHealth is the use of information and communication technology (ICT) in services and processes, combined with new skills, to improve the health and wellbeing of all citizens and efficiently deliver person-centered, coordinated health and social care to those with complex needs. eHealth is not a substitute for face to face contact with professionals that citizens require at times of crisis or during acute phases of their illness. However, it has the potential to radically enhance the exchange of information between citizens and those concerned with their treatment and support and ensure that changing requirements are speedily addressed.

> **Guideline statement: eHealth should not be seen as a substitute for face to face contact with health and social care professionals that citizens require at times of crisis or during acute phases of their illness.**

Whilst nurses, social workers and other care professionals across Europe already possess well-developed core skills and share values, there is a wide variation in the organisation and management of services and the advanced roles that professionals are increasingly required to undertake in different countries. Examples of these for both nurses and social workers include those that arise from the need to work in interdisciplinary teams, assess people's requirements holistically and commission and coordinate complex packages of care. The practice of nurse prescribing which has been successfully developed in a number of countries, clearly requires advanced skills for nurses as do the statutory responsibilities of social workers to carry many jurisdictions for the protection of children and vulnerable adults from abuse.

eHealth plays a key role in supporting the introduction and development of the new skills required to carry out advanced roles. Principle amongst these are Information Prescribing to promote informed choice and Shared Decision Making (SDM), and those required to devise and arrange Social Prescriptions when it is appropriate to offer a citizen the option of assistance to change their lifestyle as an alternative to medication or other clinical intervention. Examples of Social Prescriptions include assistance to join an exercise or other club or a smoking or alcohol cessation support group. Such

---

[1] Evidence-based Guidelines for Nursing and Social Care

forms of assistance can be of particular benefit to people whose problems stem from social isolation or other circumstances affecting their mental health (OPM 2013).

> **Guideline statement: Nurses and Social workers should offer Social Prescriptions when it is appropriate to offer a citizen the option of assistance to change their lifestyle as an alternative to medication or other clinical intervention.**

This document outlines evidence-based guidelines that can inform policy-makers, health professionals, social workers, citizens and industry in the deployment of eHealth services at EU level. These guidelines are based on identified best practice examples collected through the ENS4Care network and as such are rooted in the daily practice experience of nurses and social workers from countries across the EU.

1. Introduction

The Thematic Network ENS4Care aims to deliver evidence-based guidelines over a two-year period to enable the implementation of eHealth services in nursing and social care. The overall objective of the Network is to make up-to-date and effective eHealth guidance available to health and social care staff and those using their services in accessible formats, as well as foster continuity and quality of care as well as patient safety across all EU Member States and the EEA.

The eHealth guidance that is being developed will put information at the fingertips of citizens, carers and professionals. It will support them about the merits of different treatment options, models of care and specialised equipment that can enable citizens challenged by illness or disability to retain or regain control over the services they are receiving. The development of Information Communication Technology (ICT) based solutions, such as TeleHealth and TeleCare, are a central objective of the project. TeleHealth can empower people living at home to assess their own state of health and where they wish this can enable health and social care professionals to remotely monitor their physiological data for diagnosis or disease management. TeleCare uses a combination of sensors and other equipment, usually in the home environment, to help vulnerable and physically less able citizens to keep themselves safe and alert a control centre if help is required.

> **Guideline statements:**
>
> - **Nurses and Social Workers should employ TeleHealth solutions to empower people living at home to assess their own state of health and where they wish this can enable health and social care professionals to remotely monitor their physiological data for diagnosis or disease management.**
>
> - **Nurses and Social Workers should employ TeleCare that uses a combination of sensors and other equipment, usually in the home environment, to help vulnerable and physically less able citizens to keep themselves safe and alert a control centre if help is required.**

eHealth is already influencing and supporting the development of professional roles in health and social care. Accordingly, these initial eHealth guidelines reflect the evidence acquired from a consideration of the best practice examples submitted. Furthermore citizens are assuming a more active role. People using social and health care services are helping to develop and assess them. There are higher expectations regarding customer relationships, the accessibility of services, and mobility. New ways of using data, utilising information resources, and new technologies all create opportunities for work in the social and health care sector. Due to advances in ICT, social and health care service users are now able to participate in the implementation and monitoring of their own service and treatment measures of care, as well as in the decision-making processes concerning these measures (Sillanaukee 2014).

> **Guideline statement: Nurses and social workers should empower service users to participate in the implementation and monitoring of their own service and treatment measures of care, as well as in the decision-making processes concerning these.**

The present document is intended at guiding decisions about how eHealth services can be usefully deployed in the **introduction and development of advanced roles** for nurses and social workers in health and social care. Across the developed world advanced roles for nurses and social workers are being developed in response to increasing and rapidly changing health and social care needs within restricted budgets (DiCenso et al., 2010). Advanced roles are seen as the way forward in order to improve access to care and patient outcomes, contain provider related costs and improve recruitment and retention rates through enhanced career prospects (Delamaire and Lafortune, 2010; Buchan et al., 2013). For the purposes of this document advanced practice refers to:

> 'Advanced Nurse Practitioner - a registered nurse or social worker who has acquired the expert knowledge base, complex decision-making skills and clinical competencies for expanded practice, the characteristics of which are shaped by the context and/or country in which s/he is credentialed to practice' (European Federation of Nurses Associations).

> 'Advanced Social Worker –a social worker who has acquired the expert knowledge base, complex decision-making skills and clinical competencies for expanded practice, the characteristics of which are shaped by the context and/or country in which s/he is credentialed to practice' (International Federation of Social Workers).

The guidelines presented here have been developed following input from ENS4Care network partners and submitted cases of good practice examples. The results of that data collection process and its analysis are included in [the ENS4Care Deliverable](#) on Nursing and Social Care practices in ICT enabled Prevention, Clinical Practice, Advanced Roles, Integrated care and nurse ePrescribing. This was prepared by the ENS4Care partners in May 2015. Collected examples of eHealth services for advanced roles aimed to improve the efficiency of health and social care services, while at the same time improving the quality of health and social care that citizens receive. Examples of these practices include social workers' video interviewing citizens via the Internet to make health services more accessible, convenient as well as efficient (Austria); specialist nurses setting up and running virtual wards and rehabilitation units through which to monitor citizen conditions using telemonitoring solutions (UK); and nurses assuming expanded roles in health centres, to treat unscheduled citizens, as well as in the community as case managers (Finland).

Data pertaining to these examples were collected following a structured survey, and they were analysed quantitatively and qualitatively using standard descriptive and content analysis techniques. The key steps to the implementation of the examples of eHealth services for advanced roles were gathered, alongside reflections on the barriers and facilitators to success, as well as on the key lessons learned. The main features of these were then fused so that the principles generated are not unique to particular national contexts, but are able to transcend countries and can be transferable to different local, regional or national health and social care settings across the EU.

In the following pages the scope of the guideline and its intended audience is clarified and key practice examples are given to illustrate the potential these can offer. The main elements of implementation for a given eHealth service for advanced roles are then detailed and clarified. These are intentionally presented at a common level in order not to limit the scope of this document to any one particular eHealth service or any particular country, while bearing in mind the evolving nature of advanced practice. It is expected that this document will be equally useful to clinicians, citizens, industry and policy makers who find themselves as the commissioners, implementers or recipients of eHealth services for the introduction and development of advanced roles in nursing and social care.

2. The guideline

2.1 Scope

This guideline represents an evidence-based consensus statement that aims to guide decisions about appropriate eHealth services, in order to support the introduction and development of advanced roles in nursing and social care. This is supposed to improve the safety, quality and efficiency of care of an individual citizen, family or population in primary or secondary health and social care settings.

Case practice name
Online interviews in social care

The content of the practice
In family services they started a pilot to introduce online (skype) communication with family members and children instead of home visits.

Main benefits
The practice provides low-level access to social workers for patients and individuals through the use of a free, internet based video calling facility.

Social workers gain substantial efficiency gains by avoiding unnecessary travel times and reducing travel related costs.

Patients and citizens benefit from access to social care from within their own home and are empowered to take control of their care needs.

From ENS4Care partner
International Federation of Social Workers

eHealth services for advanced roles can be especially relevant in the care of citizens in the community who suffer from long-term conditions. However, they can also be applied more widely to any health issue that would benefit from an advanced level of nursing or social care.

The guideline is addressed to policy makers, health and social care professionals, citizens and industry. While this guideline will be of particular relevance to policy makers concerned with the introduction and development of advanced roles, it also hosts important messages that can empower citizens in securing an active role in setting the direction of the professionals responsible for their care.

This guideline offers an evidence-based pathway to the deployment of eHealth services for the introduction and development of advanced roles. It identifies the key steps to be taken and main issues to be considered. Importantly, it highlights the main **context and process factors** that are likely to act as barriers and facilitators to the process.

While based on examples from different countries across Europe, this guideline was developed following analysis that distilled the key success features of such practices without limiting itself to particular policy or practice contexts. It is therefore designed and is intended to be readily transferable across EU countries.

2.2 Process & Outcome

Guideline Deployment Pathway
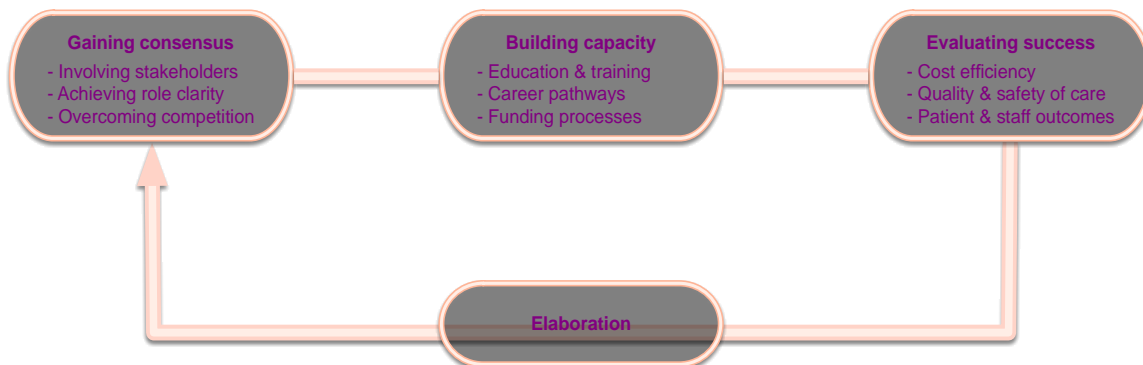
2.2.1 Process

The ENS4Care survey tool collected cases of existing practice in relation to advanced roles of nurses and social workers within EU Member States between January and March 2014. In total nineteen best practices from twelve different countries (Austria, Portugal, Scotland, Northern Ireland, Italy, Switzerland, Iceland, Netherlands, UK and Finland) were submitted. Identification and selection of appropriate eHealth services for the introduction and development of advanced roles should follow the procedure adopted by the ENS4Care network and provided in detail in deliverable D1.8 Evaluation Framework. Specifically, a chosen eHealth service and advanced role should fulfil the following criteria: 1. Clarity regarding the education and competences of the advanced roles needed for the effective use of ICT technologies; 2. Advanced involvement of nursing and social care professionals; 3. Potential of the ICT tool and the advanced role to be cost-effective; 4. Potential to improve care and empower citizens; 5. Proven usability and usefulness of the ICT tool by the citizens / professionals; 6. Person centred and compliant with citizen's rights, in particular their privacy and safety. Based on these, six best practices were selected for detailed evaluation and are presented herewith.

Case practice name
Case manager in primary care

The content of the practice
Use clinical information systems in identifying comorbid clients, call systems, structured electronic documentation. Open information system for clients in supporting clients' self-care and use decision support systems.

Main benefits
Case managers can strengthen the client orientated services, and support and coordinate the care of clients with chronic conditions.

The role helps to plan an appropriate delivery of tasks between physicians and nurses to develop further inter-professional teamwork.

The model may help the client and the care team communicate more productively and through that to produce improved outcomes to decrease the use of emergency, hospital and specialized services.

From ENS4Care partner
Helsinki Metropolia University of Applied Sciences

The analysis of the submitted cases and particularly of the best practices chosen by WP4 – Advanced Roles (ENS4Care Overview of Practices D2/3/4/5.1) reveal a three-phase process pathway that can enable successful deployment of eHealth services for the introduction and development of advanced

roles: **Gaining consensus**, **Building capacity**, and **Evaluating success**. This process can be fostered or hindered by different context and process factors, and is subject through a process of refinement through continued **Elaboration**. Each phase is described in sequence in the paragraphs that follow.

Phase one: Gaining consensus

Case practice name
Peadiatric Research Service

The content of the practice
Assist with grant applications, costings and once grant funding awarded ensure research governance of the application process including assisting with development of documentation,training staff, registration and monitoring of study once active.

Main benefits
The practice improves research delivery.

Leads to better health outcomes when a study involves trialing a new medication.

It provides opportunities for the involvement of families as research participants.

Encourages participation of nurses and input to research.

From ENS4Care partner
Royal College of Nursing

The starting point of deploying an eHealth service for introducing and developing advanced nurse and social worker roles will involve decisions not just about the technology to be used but importantly also about the shape and form of the advanced role to be introduced and developed.

Experience drawn from the practices submitted highlights the significance of **involving stakeholders** early in the deployment process. Caution was issued in many practices that lack of consensus among parties with vested interests can jeopardise the process and hinder commitment to making it a success.

Mobile eHealth solutions, including tablets and smartphones, were frequently indicated as the tools of choice. This is for the reason that they allow access to the internet and electronic records, diagnostic applications and remote advice, as well as enabling remote monitoring. However, the cost for providers and profit for manufacturers can be substantial and therefore careful decisions need to be taken based on

principles of patient-centeredness.

> **Guideline statement: Mobile eHealth solutions, including tablets and smartphones should be seen as the tools of choice.**

Consensus will also be needed on the way in which the eHealth service will be used to support an advanced role, as well as on which staff can make use of and **access** the tool. For example, lack of advanced agreement about who can have access to an eHealth tool (electronic patient record) led to a breakdown of communication in one example. Achieving consensus during this phase will also set the foundation for subsequent discussions of funding.

In terms of the advanced role to be introduced, the evidence submitted shows that **clarity** around responsibilities and functions is crucial to the role being implemented in practice and receiving support by health and social care professionals. Any unresolved disagreement or vagueness at this phase can

lead to diverse practices being implemented that can lead to unanticipated outcomes and conflicting conclusions.

The single most frequently reported barrier to the successful deployment of eHealth services in the context of introducing and developing advanced roles, was resistance by other health or social care professional groups arising out of **competition**. For example, some reports indicated that the transfer of responsibilities from one group to another was perceived to also be associated with a transfer of funding. Some perceive loss of funding negatively, especially in times of austerity, and it can also fuel competition over resources such as eHealth tools. Clarifying the professional boundaries within which advanced roles can operate, and building consensus around any associated task shifting, can help contain professionals' urge to compete and can foster collegiality.

Phase two: Building capacity

Development of advanced roles for nurses and social workers with the associated eHealth solution necessitates developing the skills and knowledge of the workforce through relevant **education and training** with a particular attention to inter-professional education. Analysis of the examples submitted showed, that attaining relevant academic and clinical qualifications alongside clinical experience, as a requirement for the development of advanced roles are commonplace among countries. However, standardisation is lacking. Provision of a consensus-based set of educational requirements can help to ensure staff are adequately prepared to respond to any shifting of roles and responsibilities and make best use

Case practice name
ePsychNurseNet and PsychWebChina

The content of the practice
Awareness of qualified nurses' educational needs and existing educational provision in various European countries related to the management of distressed and disturbed patients in psychiatric hospitals and inpatients units. Continuing education was developed to enhance nurses' skills to communicate with distressed and disturbed patients.

Main benefits
Decrease of treatment procedures in psychiatric hospitals that require close nursing supervision.

Decrease in the amount of patient complaints.

Increase of eLearning and savings in travelling costs of the continuing education.

From ENS4Care partner
Helsinki Metropolia University of Applied Sciences

of the technology provided to support them in delivering care. Examples as the development of the EFN Competency Framework for general care nurses, the European Public Health Reference Framework for public health professionals, developed by ASPHER, and the Workforce Learning Strategy and Knowledge and Skills sets to embed Electronic Assistive Technology in Social Care could be a starting point of tools for the further development of advanced roles for nurses and social workers.

> **Guideline statement: Provision of a consensus-based set of educational requirements will help to ensure staff are adequately prepared to respond to eHealth responsibilities.**

Many of the examples of advanced roles submitted were innovations currently in pilot or early stages of implementation, although some also reported on established practices. These hold lessons with regard to the preparation of nurses and social workers for the uptake of advanced roles and their subsequent development. Key here is a clear articulation point between educational preparation and a clear **career pathway** with an appropriate associated remuneration to accompany the increase in responsibility. Clarity about nurses' and social workers' development along the care continuum can also clarify expectations and responsibilities within and across professional groups, help tackle any professional culture of resistance to change and foster staff engagement.

> **Guideline statement: Development of a career pathway for nurses and social workers with an appropriate associated remuneration to accompany the increase in responsibility related to eHealth is key.**

Implementation of eHealth solutions for advanced roles can hinge both on staff commitment and on the establishment of transparent **funding processes**. Funding was identified as a common barrier to the deployment of eHealth services for advanced roles in many of the practices submitted, where lack of long-term commissioning commitment suggested uncertainty in the sustainability of the advanced role and associated eHealth solution. Most of the practice examples indicated receiving support from public financing and health insurance organisations, with investment justified on the basis of reducing staff costs and generating cost savings from improved patient outcomes. However, others reported difficulty in securing the required funds. This indicated, that the advanced role could be in jeopardy if adequate funding processes are not in place and a sustainability plan has not been developed.

> **Guideline statement: There is a clear need to establish transparent funding processes to support advanced professional posts.**

Phase three: Evaluating success

The importance and challenge of evaluating the success of the deployment of eHealth solutions for advanced roles was emphasised in the majority of the examples submitted. Analysis of the qualitative comments pointed towards a **three-layer evaluation** in terms of cost, quality and safety of care, and citizen and staff outcomes.

Case practice name
FIT-Nursing Care (IT-supported platform to support evidence-based practice)

The content of the practice
Analyses in German language of relevant international studies i.e. provides synopses of studies and syntheses, answers clinical questions, conveys high methodological quality in-house standards or guidelines, refers to national and international guidelines on specific topics, national and international journals and training courses on Evidence-Based Nursing

Main benefits
Helps to ensure daily practice is evidence-based, thus supporting nurses to deliver high-quality and safe care.

It enables nurses to remain up-to-date with the latest research evidence.

The platform helps to implement research-based nursing knowledge into practice.

It helps build research capacity with the information guiding nurses systematically in the nursing process.

From ENS4Care partner
SBK ASI Swiss Nurses Association – European Federation of Nurses' Associations

While cost was revealed in the submissions made as a key consideration, evaluating **cost effectiveness** can be fraught with difficulties. In particular, while quantifying staff costs in terms of working time can be feasible, this is only one part of the equation; diagnostic tests, prescriptions, follow-up visits and readmissions are some of the components that need to be factored in such evaluations of costs. Demonstrating cost-efficiency is revealed as a primary concern among the examples submitted, and an indicator for the sustainability and future development of the advanced role and eHealth solution.

Quality and safety of care also appeared to be the principles that demanded such technological and role developments. Reduction in errors, avoiding emergency visits to hospitals and containing readmission rates were shown to be key indicators of success. Moreover, in many of the practices, ensuring the delivery of high quality and safe care was indicated as inextricable with nursing and social care that is informed by the latest evidence-based advice. Evaluating this layer would require careful planning that remains sensitive to particular contexts and clinical settings. It would furthermore, be based on both numerical facts as well as qualitative findings since quality and safety are concepts that can have a normative component for patients. Success was also seen in terms of **patient outcomes** and especially improvements in the ability to self-manage care and having a better quality of life avoiding a disruptive health and social care.

Equally important would be concrete improvement indicators as related to particular health conditions, as well as evaluation of satisfaction with health and social care services. In addition, the more established practices in the dataset suggested that **staff outcomes** were also critical. Examples included greater multi-professional communication, coordination and teamwork. Staff satisfaction

with their work environment and working practices would also be useful indicators of success that can be included in such evaluations.

Elaboration

The three phases of the guideline pathway as described above should be complemented by an elaboration phase. This would be part of continued professional development in the advanced roles in coordination with continued professional development (CPD) of other collaborating professions and the associated eHealth solution. It is therefore inevitably cyclical in order to allow for appropriate consideration of the evaluation results and for any remedial steps to be taken. Given the fast pace of technological development and shifts in disease and illness patterns, adapting to change and learning from experience in order to improve, is a critical element to the long-term viability of advanced roles of nurses and social workers.

2.2.2 Outcome

The analysis of the submitted practices indicated that potential outcomes of eHealth services for advanced roles include improved **quality** of care, increased **efficiency** through a reduction in duplication of work, improved **communication** and **collaboration** among professionals, and speedy referral processes. Concrete outcomes were also noted, including the potential to reduce **hospital admissions** by providing low-level access to health education and advice, improved ability for patients to self-manage and better **quality of life**.

Cost benefits were also expected owing to the provision of more accessible and comprehensive care to citizens that reduces unnecessary and recurrent home visits by staff and visits to hospitals or clinics by citizens. Improving standards of care was also seen as holding potential to reduce complications and associated costs. Finally, making best use of clinicians' time and resources was the key means through which significant cost savings could be made.

Many of the submissions indicated changes to the role and responsibilities of the nurse and social worker as additional positive outcomes. Such changes mainly related to nurses and social workers gaining more autonomy and responsibility over their practice. For example, nurses in such advanced roles reported more control over the delivery,

Case practice name
North Down Virtual Ward

The content of the practice
Prescribing and health assessment qualifications. Uses telehealth to monitor patients and prevent unplanned admissions to hospital.

Main benefits
The practice contributed to more sustained follow-up, monitoring and care for patients with chronic conditions such as diabetes and heart failure.

It led to a decrease in attendance at emergency departments and contained hospital readmission rates.

Patients' and individuals' compliance with treatments plans was improved.

The practice enabled prompt intervention to be given when patients become unwell.

Reducing costs through better use of clinicians' time and resources.

From ENS4Care partner
Public Health Agency for Northern Ireland – EFN

assessment and planning of patient care. Improved multi-professional collaborative approaches to working was another outcome reported as particularly positive and welcomed by social care staff.

3. Policy context

With regard the deployment of eHealth solutions for advanced roles, **national eHealth policies**, and strategies would need to be considered and the present guideline would need to be seen in light of any local requirements. For instance, the following national eHealth strategies and agencies were offered by the submitted practices as examples: the UK Department of Health Information Strategy; the Irish National eHealth Strategy; the Icelandic Directorate of Health; the Italian Agency Healthcare Regionale Emilia Romagna; and the Swedish Society of Nursing eHealth. Countries needing to update, revise or develop their eHealth policies can refer to the WHO's **National eHealth Strategy Toolkit** (www.who.int/ehealth) and the European Commission's eHealth Portal.

The introduction of advanced roles is in various stages of development across EU countries. The **Organisation for Economic Co-operation and Development** (OECD) and the **International Council of Nurses** (ICN) outline the arguments for and benefits of advanced roles in reports and publications available from: www.oecd.org and www.icn.ch. Moreover, consideration needs to be given to the modernised **Professional Qualifications Directive (2013/55/EC)** and the provisions it makes, especially for general care nurses.

4. Requirements to implement the guideline

With regard to the eHealth component of the guideline, an EU legal framework can be drawn from a series of related directives and most significantly the **Data Protection directive 95/46/EC** on the processing of personal data and on the free movement of such data. eHealth also presents a series of ethical challenges which, if not met before its implementation, can undermine its success and wide use. Among other things, data security, privacy, consent and liability are implicated, as are changes in the health care professional-citizen relationship and in the role of health informatics professionals (EHTEL 2012). Similarly, where the eHealth service is concerned with implementation of innovative monitoring equipment then conforming to the **Medical Device directive 2007/47/EC** also becomes a requirement.

From an EU perspective, uniformity and harmonisation in the development of advanced roles would benefit from a common education pathway. Education and training are the most significant factors that affect the successful implementation of ICT (Valta 2013). In particular, a roadmap is needed to guide EU Member States towards an agreement about a **common training framework** for advanced roles according to the modernised **Professional Qualifications Directive (2013/55/EC)**. The new article 49a on common training frameworks offers an opportunity to extend the existing system of automatic recognition to new professional groups on the basis of such frameworks.

Nursing and social care in particular has already established advanced roles in some EU countries, although in many this is still in development. Member states would do well to share their experiences of introducing and developing advanced roles, especially advanced nursing practice and aim for:

- a system of registration underpinned by mandatory regulation of advanced nursing practice to ensure effective mobility of advanced nursing practitioners without prejudice to public safety;
- a robust quality assurance system for all advanced nursing practice programmes covered by this regulation;
- a commitment to continuing professional development for advanced nursing practitioners;
- a clear articulation and understanding of the line of accountability between a registered nurse and an advanced nursing practitioner and;
- a system which is flexible and gender sensitive to respond to future workforce needs.

5. Review of the guideline

ENS4Care was undertaken at a particular point in time and within a particular EU policy context; this is reflected in the development of the present guideline. Any major policy changes will likely have an impact on this guideline and as such this may benefit from a periodic review and update when deemed necessary. In particular, with the completion of the EU's Horizon 2020 programme a reflection on the contribution and adoption of this particular guideline would be of benefit and could lead to a revision.

6. Conclusion

The implementation of eHealth services for the introduction and development of advanced nursing and social care roles is crucial in order to meet the changing and increasing needs of EU patients and citizens. This holds great potential for substantial benefits to health and social care, as well as for nurses and social workers.

The guideline presented here aims to guide decisions about the deployment of eHealth services to support advanced roles for nurses and social workers. Analysis of best practice examples of developments in nursing and social care towards improving patient care enabled identification of the key components of success, which were translated into the present guideline. A three-phase pathway emerged and contextual and process factors acting as barriers or facilitators to the process identified.

This guideline is addressed to policy makers, professional associations and clinicians interested in the use of eHealth solutions to support the introduction and development of advanced roles for nurses and social workers. It can be used to guide sensible decision-making and inform the development of a common European approach.

Clinicians and local commissioners should also refer to this guideline to inform them of the task of implementing a given eHealth service in a local context and of the decisions and processes to be followed. The recognition of future IC-technologies e.g. the Internet of Things (IoT), is crucial when developing and implementing new services. Patients and citizens may also benefit by reading this guideline, through raising their awareness of the options and pathways available to organise the

delivery of their health and social care. In this way patients and individuals across Europe can be empowered to input into shaping their local health service and take charge of their health and illness trajectories.

7. Glossary

Advanced practice – A new way of delivering cost-effective care and increasing access to qualified health and social care practitioners.

Advanced Nurse Practitioner – a registered nurse who has acquired the expert knowledge base, complex decision-making skills and clinical competencies for expanded practice, the characteristics of which are shaped by the context and/or country in which s/he is credentialed to practice (European Federation of Nurses Associations).

Advanced Social Worker – a social worker who has acquired the expert knowledge base, complex decision-making skills and clinical competencies for expanded practice, the characteristics of which are shaped by the context and/or country in which s/he is credentialed to practice (International Federation of Social Workers).

Community-based care - spectrum of services that enable individuals to live in the community and, in the case of children, to grow up in a family environment as opposed to an institution. It encompasses mainstream services, such as housing, health care, education, employment, culture and leisure, which should be accessible to everyone regardless of the nature of their impairment or the required level of support. It also refers to specialised services, such as personal assistance for persons with disabilities, respite care and others. In addition, the term includes family-based and family-like care for children, including substitute family care and preventive measures for early intervention and family support.

EC – European Commission

eHealth – Refers to Information and Communication Technology tools and services for health, used by healthcare professionals, institutions and administrations as well as utilities which provide patients directly with services related to healthcare. (epSOS)

EU – European Union

Electronic patient record – A number of different versions of patient record systems exist referred to by a number of varying terms and acronyms, a common one being Electronic Health Record (HER). They are all basically a way of viewing a patient's health and social care and medical record via a computerised interface.

ICN – International Council of Nurses

ICT - ICT (information and communications technology) is an umbrella term that includes any communication device or application. For example radio; television; mobile phones; computer and network hardware and software; and services such as videoconferencing and distance learning.

Internet of Things (IoT) – IoT is the interconnection of uniquely identifiable embedded computing devices within the existing Internet infrastructure. IoT is expected to offer advanced connectivity of devices, systems, and services that goes beyond machine-to-machine communications (M2M) and covers a variety of protocols, domains, and applications.

SCIE – Social Care Institute for Excellence. Source of information about the development in social work and social care. Available from: http://scie-mailing.org.uk/4O5-34IT5-F0P0YC670/cr.aspx

SDM – Shared Decision Making

Team – A group of individuals who work together to produce products or deliver services for which they are mutually accountable. Team members share goals and are mutually held accountable for meeting them, they are interdependent in their accomplishment, and they affect the results through their interactions with one another. Because the team is held collectively accountable, the work of integrating with one another is included among the responsibilities of each member (Mohrman et al, 1995).

Telehealth – Telehealth is the delivery of health-related services and information via telecommunications technologies. Telehealth could be as simple as two clinicians discussing a case over the telephone or as sophisticated as doing robotic surgery between facilities at different ends of the globe.

Telemonitoring – Telemonitoring involves remotely monitoring patients who are not at the same location as the health care provider.

WHO – World Health Organisation

8. References

Delamaire M and Lafortune G (2010) Nurses in Advanced Roles: A Description and Evaluation of Experiences in 12 Developed Countries. OECD Health Working Paper No. 54. Available from: www.oecd.org/els/health/workingpapers

DiCenso A, Bryant-Lukosius D, Bourgeault I, Martin-Misener R, Donald F, Abelson J, Kaasalainen S, Kilpatrick K, Kioke S, Carter N and Harbman P (2010) Clinical Nurse Specialists and Nurse Practitioners in Canada: A Decision Support Synthesis. Available from: http://www.chsrf.ca/migrated/pdf/10-CHSRF-0362_Dicenso_EN_Final.pdf

Buchan J, Temido M, Fronteira I, Lapao L, Dussault G (2013) Nurses in advanced roles: a review of acceptability in Portugal. Rev. Latino-Am. Enfermagem 21(Spec): 38-46

European Federation of Nurses Associations (2015), EFN Competency Framework. EFN Guideline to implement Article 31 into national nurses' education programmes. Brussels, Belgium.

EHTEL European Health Telematics Association (2012) Ethical Principles for eHealth Conclusions from the Consultation of Ethics Experts around the Globe. A Briefing Paper.

ENS4Care (2014) Deliverable D2/3/4/5.1: Overview of Practices. Brussels, ENS4Care

ENS4Care (2014) Deliverable D1.8: Evaluation Framework. Brussels, ENS4Care

European Parliament and Council Directive 2005/36/EC on Mutual Recognition of Professional Qualifications, amended by Directive 2013/55/EU. Available on: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02005L0036-20140117

European Parliament and Council Directive 2007/47/EC amending Council Directive 90/385/EEC on the approximation of the laws of the Member States relating to active implantable medical devices, Council Directive 93/42/EEC concerning medical devices and Directive 98/8/EEC concerning the placing of biocidal products on the market, OJ 2007 No. L247/21.

International Council of Nurses (2008) Nurse Practitioner/Advanced Practice Nurse: Definition and Characteristics. Geneva: ICN

The 'Data Protection' Directive, Council Directive 95/46/EC on the protection of individuals with regard to the processing of personal data and on the free movement of such data, OJ 1995 No. L281/31.

Naslund JA et al (2015), Emerging mHealth and eHealth interventions for serious mental illness: a review of the literature. J Ment Health 2015 May 28:1-12

Sillanaukee P. Wellbeing in the future depends on functional capacity and inclusive participation. Future Review of the Ministry of Social Affairs and Health. Press release 208/2014. 3.10.2014.

Skills for Care & Development (2014), Workforce Learning Strategy and Knowledge and Skills Sets to embed Electronic Assistive Technology (eAT) in Social Care. Social Care Regulators for Scotland, Wales and Northern Ireland and the UK Skills Council for Care (online) www.technologytocare.org.uk

OPM (2013). Social prescribing offers a model to prevent ill health, but shared decision making could be the mechanism that makes it happen. Available from: http://www.opm.co.uk/blog/social-prescribing-offers-a-model-to-prevent-ill-health-but-shared-decision-making-could-be-the-mechanism-that-makes-it-happen/

Valta M. 2013. The sociotechnical implementation of an electronic patient record. A seven-year follow-up study from expectations to adoption. 225p. University of Eastern Finland. Faculty of Social Sciences and Business Studies, 2013. Publications of the University of Eastern Finland, Dissertations in Social Sciences and Business Studies, no 62. ISBN (nid): 978-952-61-1216-9

Appendix

Best practice example case: ePsychNurseNet and PsychWebChina

General evaluation Practises are targeted for nurses and health care professionals who are working in psychiatric hospitals, inpatient units and nursing education in Europe. ePsychNurseNet was aimed to reply nursing professionals educational needs, to improve nurses professional skills and knowledge with support of this multinational training portal. The goal is to enhance the professional competence of nurses. PsychWebChina was developed for an educational use for nurses to train and improve their communication skills with distressed patients with different kinds of assignments. It includes instructions, information, assignments, discussion forums and virtual patient. The overall goal and the target population of the project are clearly defined and intended users are well identified to be nurses or possible other health care professionals in the field of mental health care.

ICT component

Using the practises only require the basic Internet connection, Electronic data base and Moodle electronic platform. These requirements could be in hospitals or in educational institutes in order to use so individual nurses do not have to have those as own. Users need to have sufficient clinical and technical skills for using the program but there is also education available for these practices. ePsychNurseNet course costs but the idea is that hospital pays the participants' fees and the course is run by the fees and WebPsychChina was originally a project which was financed by the Tekes. Target group for the practices are mainly nurses and hypothesis could be that they already have at least sufficient clinical knowledge and some basic skills of technic and educating them would not be too time or money consuming. In order to achieve the best possible outcome the staff need to be properly educated first. Negative attitudes towards online based learning could be major first but sufficient education and encouraging can help nurses to adjust these new methods into their work.

Nurses and social workers / health care

In organisational level these programs demands only the basic Internet connections and data base and Moodle, and also people who are responsible for the implementation of the program in organisation. The attitudes towards these kinds of programs might vary and education should be proper and conducted during the working time. Sufficient amount of equipment are required if the organisation wants to achieve benefits of the systematic use.

Health care professionals need to have a competency of nurse or related and knowledge of the field of mental health care. User needs to have an understanding of the patient safety and data protection. Introduction of the program doesn't include any specific experiences of the users about the program use.

Cost- effectiveness Both practises have a potential to be cost-effective and they are decreasing for example travelling costs of the education visits. Practises might also decrease treatment procedures which are requiring close nurse supervision and it is also possible that the amount of patient complaints decreases as happened with WebPsychChina. ePsychNurseNet course has run over 400 nurses in Finland and the practice has expanded in other psychiatry units as well. Interaction between the different units and hospitals is easier, faster and more cost-effective since the information is available online.

Patient empowerment The amount of patient complaints has decreased. Nursing and social care professionals get information faster and guidelines for their actions faster and also patient benefits from it and will get information concerning one's own health more effectively.

Usability and usefulness of the ICT tool/service Practices are easy to use in hospital environment and using these educational portals enables continuing education for health care professionals. These portals are already in use in Europe and China and it appears that these practices are useful in the field of mental health. Time and money spend for the education of nurses in the beginning will be paid back in the end. Programs and courses are mentioned to be easy to modify. When modifying the programs cultural aspects needs to be considered and local professionals help is most likely needed in that process.

Safety and privacy Portals have developed for hospital use and those have already been in use. Program doesn't involve clinical information or sharing or exchange of clinical messages.

EU/ EEA The project has been funded by the European Commission (Leonardo da Vinci programme) and has started on October 2006 and has run for 2 years.

ENS4Care Partners

European
Nursing
Research
Foundation