Annexe I
Smart4Health MOOC2

Digital Health Literacy and Electronic Health Records Explained to the Nursing Profession

READ MORE
Some references

The European Union, What's in it for me?

Paul De Raeve, 2017

This book offers nurses a valuable and insightful resource into the politics and strategic direction of health policy that shapes frontline nursing and midwifery practice in the EU.

Read the book ONLINE :
https://online.anyflip.com/eumpx/ssim/mobile/index.html

EU Lobby Strategies Fitting a New Political Context

Paul De Raeve, 2017

This book builds on concrete achievements of the nursing community, its leaders to move the European political agenda, to advance nursing in such a way that it delivers concrete benefits for EU citizens.

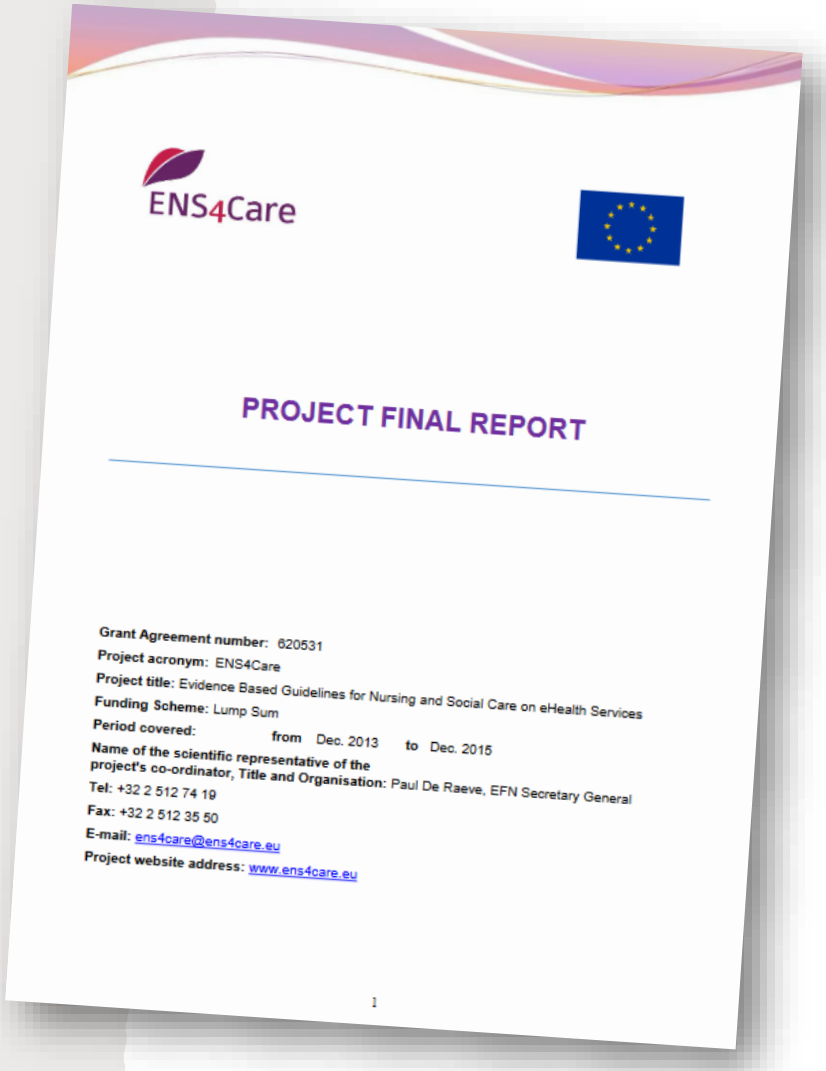
Read the book ONLINE :

https://online.anyflip.com/eumpx/ugmb/mobile/index.html

ENS4Care Final Report

This report provides an overview on all the work done over the 2-year project ENS4Care, coordinated by the EFN.

Read it here:
http://www.efnweb.be/wp-content/uploads/ENS4Care-Final-report-2.pdf


ENS4Care

PROJECT FINAL REPORT

Grant Agreement number: 620531
Project acronym: ENS4Care
Project title: Evidence Based Guidelines for Nursing and Social Care on eHealth Services
Funding Scheme: Lump Sum
Period covered: from Dec. 2013 to Dec. 2015
Name of the scientific representative of the project's co-ordinator, Title and Organisation: Paul De Raeve, EFN Secretary General
Tel: +32 2 512 74 19
Fax: +32 2 512 35 50
E-mail: ens4care@ens4care.eu
Project website address: www.ens4care.eu

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ENS4Care evidence-based guidelines

Drawn from a total of 122 existing good practices, at national and regional levels, the five guidelines (prevention, clinical practice, advanced roles, integrated care and nurse ePrescribing) are aiming to help policy-makers in the decisional process on healthcare systems, eHealth policies and delivery of care across the EU; inform nurses and social workers on the implementation steps of eHealth services; and promote a culture of evaluation of any service innovation.

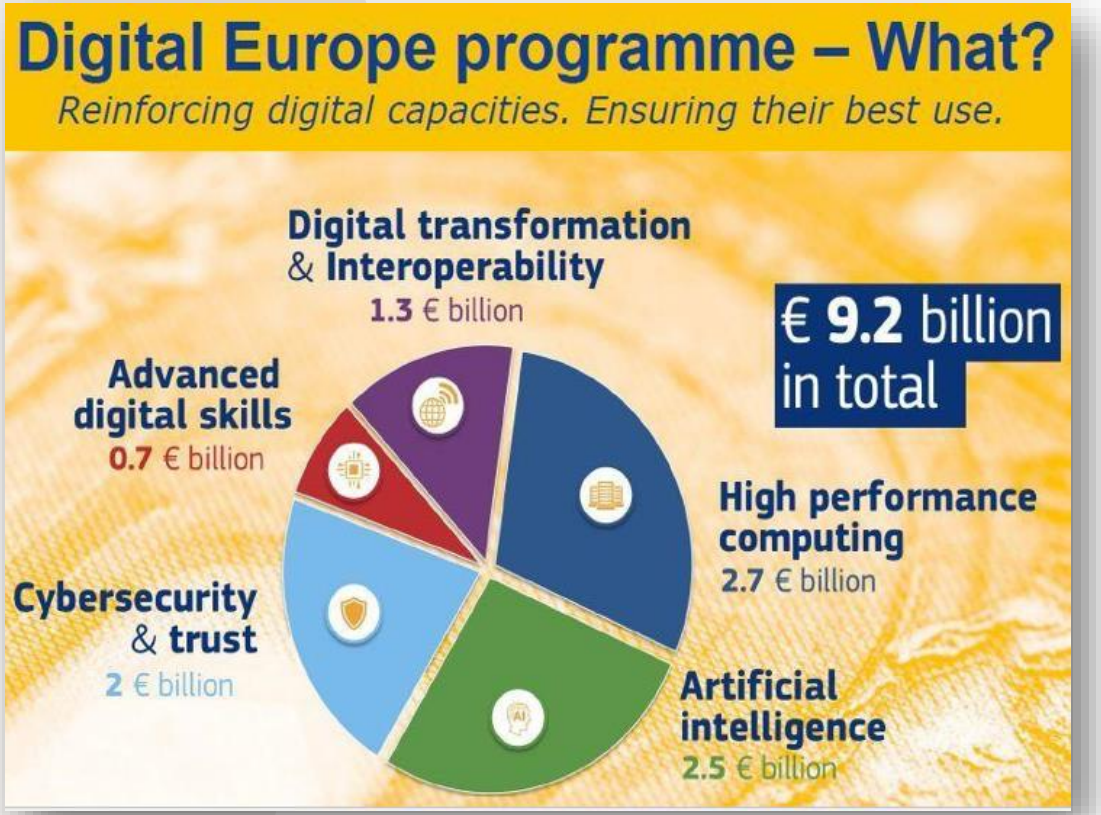
Read them here:

http://www.efnweb.be/?page_id=7060

Digital Europe Programme

The programme is a new EU funding programme focused on bringing digital technology to businesses, citizens and public administrations, and is designed to bridge the gap between digital technology research and market deployment.

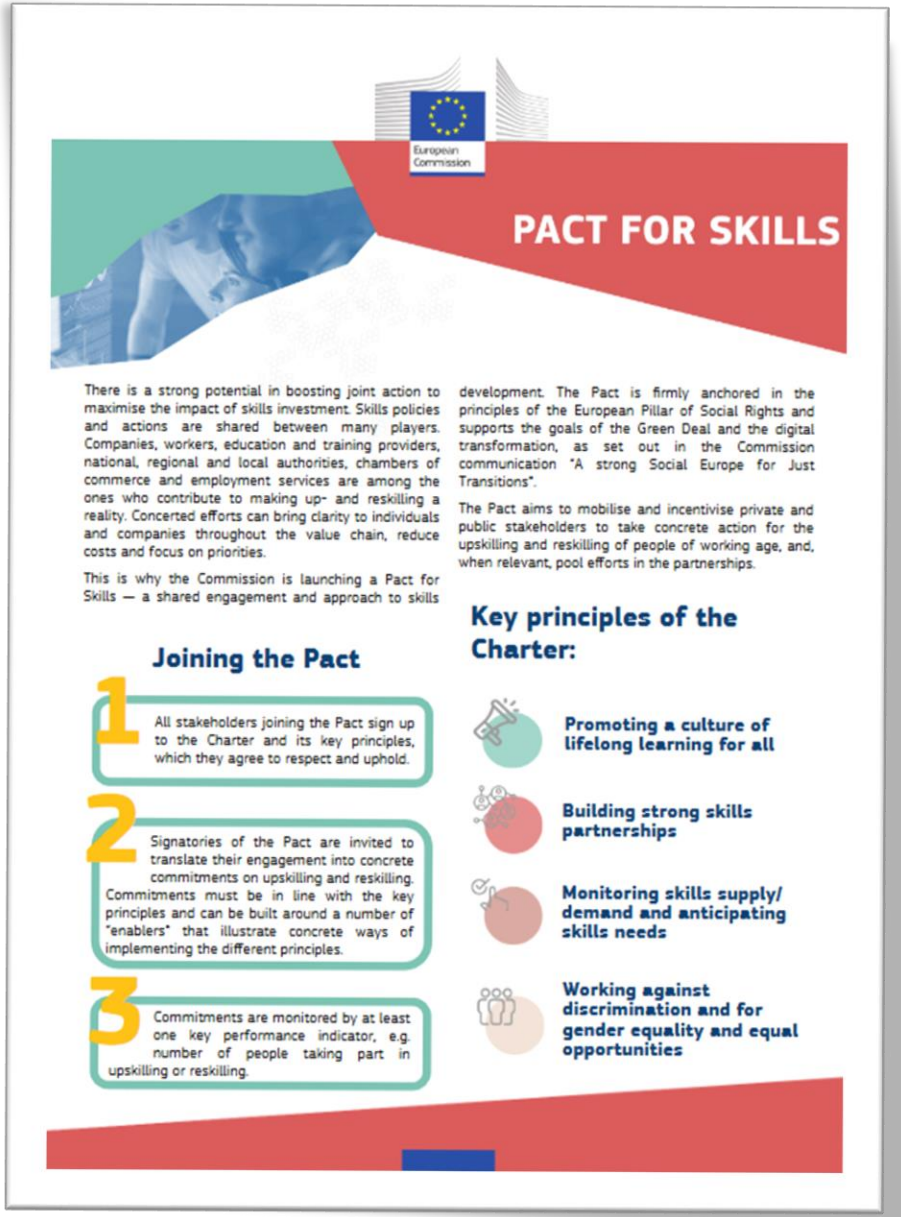
See here:
https://digital-strategy.ec.europa.eu/en/activities/digital-programme



Pact for skills

Pact for Skills, a shared engagement model for skills development in Europe, promotes joint action to maximise the impact of investing in improving existing skills (upskilling) and training in new skills (reskilling). Nurses' digital skills can be developed through this.

See it here:
https://ec.europa.eu/social/main.jsp?catId=1517&langId=en



European Commission

PACT FOR SKILLS

There is a strong potential in boosting joint action to maximise the impact of skills investment. Skills policies and actions are shared between many players. Companies, workers, education and training providers, national, regional and local authorities, chambers of commerce and employment services are among the ones who contribute to making up- and reskilling a reality. Concerted efforts can bring clarity to individuals and companies throughout the value chain, reduce costs and focus on priorities.

This is why the Commission is launching a Pact for Skills — a shared engagement and approach to skills development. The Pact is firmly anchored in the principles of the European Pillar of Social Rights and supports the goals of the Green Deal and the digital transformation, as set out in the Commission communication "A strong Social Europe for Just Transitions".

The Pact aims to mobilise and incentivise private and public stakeholders to take concrete action for the upskilling and reskilling of people of working age, and, when relevant, pool efforts in the partnerships.

Joining the Pact

1. All stakeholders joining the Pact sign up to the Charter and its key principles, which they agree to respect and uphold.
2. Signatories of the Pact are invited to translate their engagement into concrete commitments on upskilling and reskilling. Commitments must be in line with the key principles and can be built around a number of "enablers" that illustrate concrete ways of implementing the different principles.
3. Commitments are monitored by at least one key performance indicator, e.g. number of people taking part in upskilling or reskilling.

Key principles of the Charter:

- Promoting a culture of lifelong learning for all
- Building strong skills partnerships
- Monitoring skills supply/ demand and anticipating skills needs
- Working against discrimination and for gender equality and equal opportunities

Transforming Healthcare with AI

EIT Health and McKinsey & Company, 2020

While recognizing that it is still early days in terms of fully understanding the potential role of AI in healthcare, the report helps define the boundaries between aspiration, reality and hype, providing intriguing insights into how much of the AI in healthcare narrative is a reality and how healthcare professionals, startup executives and investors prioritise and navigate the choppy waters of innovation, in Europe and beyond.

Read it here:

https://eithealth.eu/wp-content/uploads/2020/03/EIT-Health-and-McKinsey_Transforming-Healthcare-with-AI.pdf

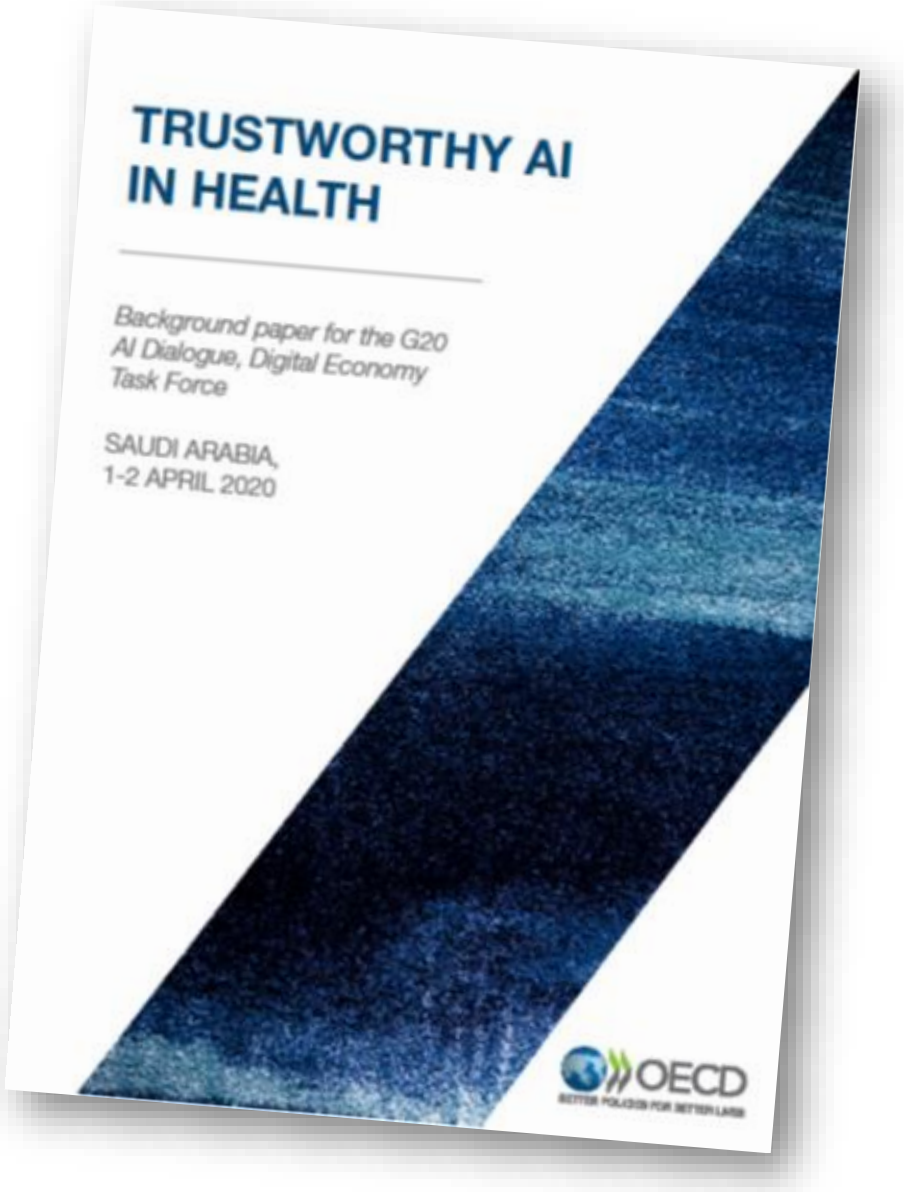
Trusthworthy AI in Health

OECD, 2020

This paper discusses the promises and perils of AI in health, and the key policy questions that policy makers will need to address in an uncertain landscape.

Read *it here :*

https://www.oecd.org/health/trustworthy-artificial-intelligence-in-health.pdf



Digitalising the healthcare ecosystem in the European Union

Paul De Raeve and Ricardo Jardim-Gonçalves, 2020

This article highlights the growing need for EU-wide electronic healthcare records.

Read it here :

http://www.efnweb.be/wp-content/uploads/H13-EFN.pdf

Paul De Raeve and Smart4Health Co-ordinator Ricardo Jardim-Gonçalves highlight the growing need for EU-wide electronic healthcare records

Digitalising the healthcare ecosystem in the European Union

There is increasing interest across EU institutions, national governments, healthcare industries and stakeholders to digitalise the healthcare ecosystem, mainly aiming at deploying more cost effective healthcare provisions, reducing the frontline nursing workload, easing lifelong learning activities for healthcare professionals, facilitating cross-border care, and fully developing EU Electronic Healthcare Records (EHR).

To develop sustainable healthcare ecosystems, co-creation and co-design with the end user becomes essential. Due to the current lack of end user co-creation, there is a lot of patchwork, too many digital health apps and tools, leading to a kind of 'blockage' for the end user. Many tools are not systematically supportive of the healthcare ecosystem or its frontline workforce. However, if there is one product for the digitalisation of healthcare that is key for frontline, it is the EU Electronic Health Record (EHR). Patients and citizens are increasingly demanding the possibility of having their complete health history accessible via smartphone or any other digital device, to be able to share it with their nurse and other healthcare professionals at different facilities and across borders.

The state of play of EHR in the EU

At the time of writing, there is not a single common EHR system operating across all EU Member States. Instead, some countries have it and some do not, and those which do often have different EHRs implemented at regional and municipal levels.

An example of a country which has successfully implemented EHR in its national systems is Finland. The coverage of EHR across the country is 100% in healthcare facilities in both the public and private sectors. Functionalities are implemented continuously in Finnish EHR systems, as well as e-services for citizens and patients. The digitalisation of healthcare in Finland is now an obligatory municipal strategy, with the whole country moving towards an integrated 'e-Government'. This is motivated by the expectation that it will reduce the administrative burden and improve patients' satisfaction. Finnish authorities aim to provide equal health services across the whole of Finland. The Finnish municipalities which previously used different health management systems that did not 'speak' to each other have been all integrated and now have a centralised data archive for citizen's health records and data. Close to Finland is Estonia, whose online portal 'Digilugu, operating at the national level, enables citizens to see their health records and determine who can view their data.

In contrast, Germany does not have a nationally operated EHR system in place, due to the resistance of physicians, who are mainly concerned about data protection issues. There are EHR systems in some German federal states, but with limited data. In the case of Belgium, a country marked by its linguistic complexity, different regions have developed different EHR systems which do not communicate across regions. A similar situation is Denmark, which developed several EHR systems operating at the national level, to meet differing regional needs. Across 98 municipalities, about four different systems of EHR are used: two regions use the EPIC system while the other three regions use the systematic system. The 98 municipalities are using three different systems: KMD, CSC and Systematic. In other countries, such as France, the system for EHR is developed at the national level as 'the Dossier Medical Partage (DMP). As of 2019, four million citizens are in the DMP system, which stores and secures the patient's health data and allows authorised healthcare professionals to share this information, with the patient's consent and under her or his control. Patients can create their personalised DMP online, and healthcare professionals can also do so on their behalf if the citizen allows. Italy has an operating Electronic Health Dossier, the Fascicolo Sanitario Elettronico, containing the citizen's entire health record. It allows for traceability, consultation and sharing of health data with healthcare professionals. In Portugal, all primary health care providers use electronic health records and most hospitals use electronic health records, with some interoperability between different software.

Croatia has the national Central Healthcare Information (CEZIH) system, providing IT services and basic e-health functions including e-orders and e-lists, e-prescriptions, e-records, national preventive programmes, e-Intranet code and the HZZO insurance portal. The inclusion of hospitals in the e-lists and e-ordering started in 2012. The Czech Republic started preparing for the launch of EHR in 2009 with the University Hospital Motol using the InfoMed Clinical Information Portfolio (ICIP) tool developed by Philips. It became fully functional since 2011 and is mainly deployed in the Department of Anaesthesiology and Intensive

Leveraging the trust of nurses to advance a digital agenda in Europe: a critical review of health policy literature

Paul De Raeve at Al, 2021

This article is a critical and integrative review of health policy literature examining artificial intelligence (AI) and its implications for healthcare systems and the frontline nursing workforce. A key focus is on co-creation as essential for the deployment and adoption of AI.

Read it here:

https://open-research-europe.ec.europa.eu/articles/1-26/v2

Open Research Europe

Open Research Europe 2021, 1:26 Last updated: 30 SEP 2021

REVIEW

Check for updates

REVISED **Leveraging the trust of nurses to advance a digital agenda in Europe: a critical review of health policy literature [version 2; peer review: 3 approved]**

Paul De Raeve[1], Patricia M. Davidson[2], Franklin A. Shaffer[3], Eric Pol[4], Amit Kumar Pandey[5], Elizabeth Adams[1]

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v2 **First published:** 26 Mar 2021, **1**:26
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Latest published: 13 May 2021, **1**:26
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Abstract

This article is a critical and integrative review of health policy literature examining artificial intelligence (AI) and its implications for healthcare systems and the frontline nursing workforce. A key focus is on co-creation as essential for the deployment and adoption of AI. Our review hinges on the European Commission's White Paper on Artificial Intelligence from 2020, which provides a useful roadmap. The value of health data spaces and electronic health records (EHRs) is considered; and the role of advanced nurse practitioners in harnessing the potential of AI tools in their practice is articulated. Finally, this paper examines "trust" as a precondition for the successful deployment and adoption of AI in Europe.

AI applications in healthcare can enhance safety and quality, and mitigate against common risks and challenges, once the necessary level of trust is achieved among all stakeholders. Such an approach can enable effective preventative care across healthcare settings, particularly community and primary care. However, the acceptance of AI tools in healthcare is dependent on the robustness, validity and reliability of data collected and donated from EHRs. Nurse stakeholders have a key role to play in this regard, since trust can only be fostered through engaging frontline end-users in the co-design of EHRs and new AI tools. Nurses hold an intimate understanding of the direct benefits of such technology, such as releasing valuable nursing time for essential patient care, and empowering patients and their family members as recipients of nursing care.

This article brings together insights from a unique group of stakeholders to explore the interaction between AI, the co-creation of data spaces and EHRs, and the role of the frontline nursing workforce.

Open Peer Review

Reviewer Status ✓ ✓ ✓

	Invited Reviewers		
	1	**2**	**3**
version 2 (revision) 13 May 2021		✓ report	✓ report
version 1 26 Mar 2021	✓ report	? report	✓ report

1. **Pamela Hussey**, Dublin City University, Dublin, Ireland
2. **Andreas Xyrichis**, King's College London, London, UK
3. **Dorota Kilanska**, Medical University of Lodz, Lodz, Poland

Any reports and responses or comments on the article can be found at the end of the article.

Digital transformation of healthcare for the patient

Paul De Raeve, 2021

The article considers the importance of digital transformation to support high-quality patient healthcare.

Read it here:

http://www.efnweb.be/wp-content/uploads/Digital-transformation-of-healthcare-for-the-patient.pdf

SECTION

Digital transformation of healthcare for the patient

Paul De Raeve, Secretary General of the European Federation of Nurses Associations, considers the importance of digital transformation to support high-quality patient healthcare

The promise of digital transformation within health and care has raised hopes and expectations. EU citizens/patients are expecting access to their health data – anytime, anyplace - trying to become more involved and empowered in managing their own health conditions. Facing challenges of time and complexity, nurses require timely access to accurate and relevant health data, to better organise the continuity of care and as such, facilitate better health outcomes.

The ability to access and share health data is unfortunately not yet happening. Although some initiatives have been taken to make progress, frontline healthcare barriers still exist. However, the engagement of frontline nurses to build solutions based on a 'co-creation" approach is needed to move from 'theory' to 'practice'. Co-creation as the way forward to effectively implement digital transformation of the healthcare sector will be key to have a better understanding of how citizen/patient and nurses want to achieve better work processes and health outcomes.

Value of digital innovation

The value of digital innovation in bringing benefits for citizens, patients and health systems will depend on trust. Health data, data that frontline healthcare professionals collect, need to be integrated with the EU Electronic Health Record (EHR) to boost continuity of care and integrated care. Innovation in health should empower patients and frontline nurses, moving towards an integrated care system based on proactive/empowered health-aware patient/citizen. We need to ensure that the information technology and communication (ITC) tools and the data revolution support and facilitate the shift towards a resilient health and care system and supports nurses to deliver frontline high quality and safe care. Therefore, it is key that the medical, nursing and other relevant health professional data are integrated into the EHR to boost continuity of care and as such, build trust: citizen and patient' trust is a central concept in developing digital tools.

Due to the current lack of end-user co-creation, there is much patchwork, too many digital health apps and tools, leading to a kind of 'blockage' for the end-user. The need of patients and citizens to be able to access their own health data is becoming an important priority at the EU level, however, it is central that such tools respond to real frontline needs and facilitate their daily work, allowing healthcare professions to spend more time on the frontline with the citizens/patients.

Advancing healthcare sector interoperability

In their daily practice, nurses may benefit from greater access to knowledge and constant support for the analysis of complex data. Continuity of information has the potential to support the integration of care, alongside its quality and safety. When nurses plan their care, revise medication, and think of clinical interventions, interoperability can support care practices and reduce errors significantly, provided health data warehouse, and specifically, the EHR, functions to support the workflow of the nurses. It can also ensure constant knowledge sharing/training for every healthcare professional (HCP), which is essential when digitalising the healthcare sector. Considering that the main task of frontline nurses is direct patient care, there is an intrinsic human touch that cannot be replaced by anything else – not even the most advanced technology. But in both cases, a robust EHR will augment and supplement nurses' abilities to perform their duties with the integration of clinical

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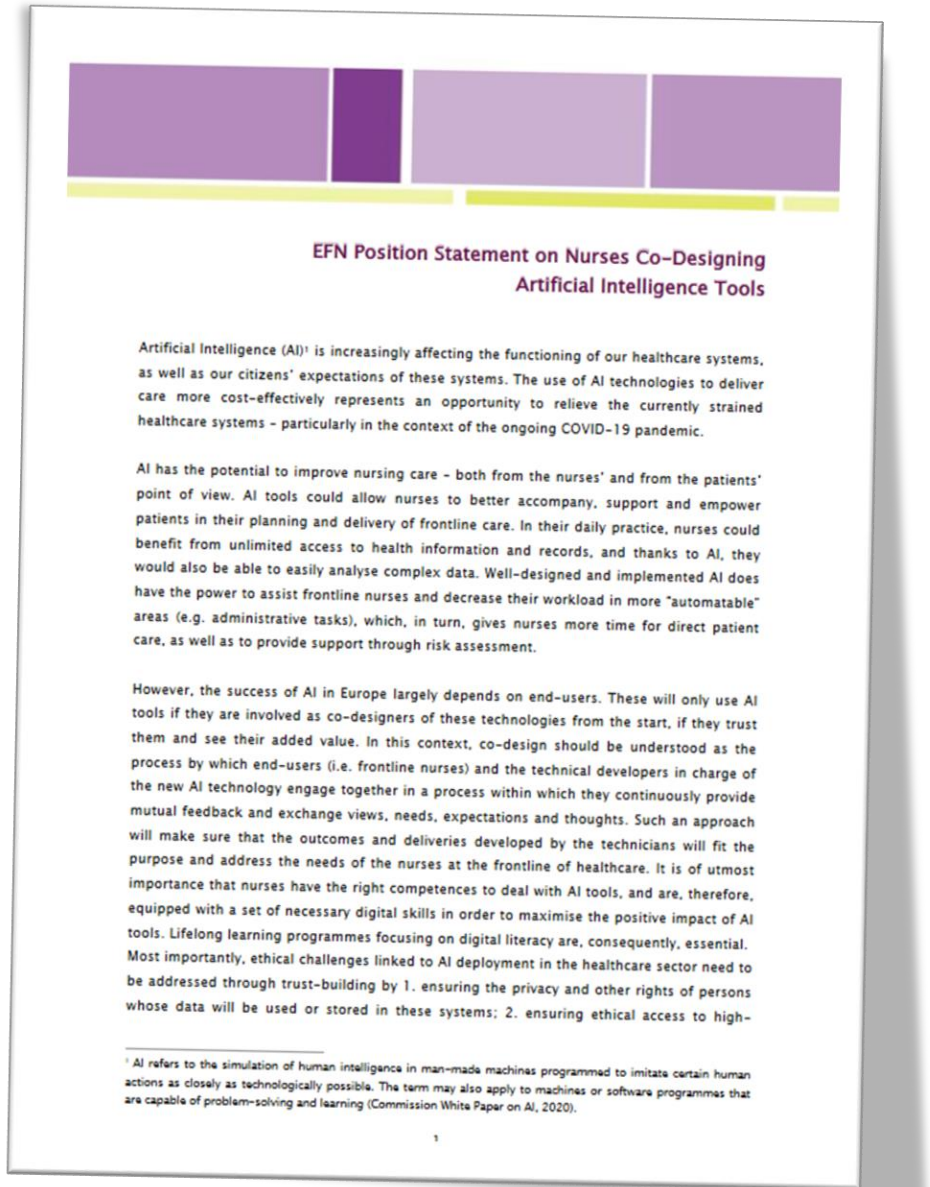
EFN Position Statement on Nurses Co-Designing Artificial Intelligence Tools

Approved by the EFN Members in April 2021, this position statement some key recommendations towards the EU Institutions.

Read it here:

http://www.efnweb.be/wp-content/uploads/EFN-PS-on-Nurses-Co-Designing-Artificial-Intelligence-Tools.pdf



EFN Position Statement on Nurses Co-Designing Artificial Intelligence Tools

Artificial Intelligence (AI)[1] is increasingly affecting the functioning of our healthcare systems, as well as our citizens' expectations of these systems. The use of AI technologies to deliver care more cost-effectively represents an opportunity to relieve the currently strained healthcare systems - particularly in the context of the ongoing COVID-19 pandemic.

AI has the potential to improve nursing care - both from the nurses' and from the patients' point of view. AI tools could allow nurses to better accompany, support and empower patients in their planning and delivery of frontline care. In their daily practice, nurses could benefit from unlimited access to health information and records, and thanks to AI, they would also be able to easily analyse complex data. Well-designed and implemented AI does have the power to assist frontline nurses and decrease their workload in more "automatable" areas (e.g. administrative tasks), which, in turn, gives nurses more time for direct patient care, as well as to provide support through risk assessment.

However, the success of AI in Europe largely depends on end-users. These will only use AI tools if they are involved as co-designers of these technologies from the start, if they trust them and see their added value. In this context, co-design should be understood as the process by which end-users (i.e. frontline nurses) and the technical developers in charge of the new AI technology engage together in a process within which they continuously provide mutual feedback and exchange views, needs, expectations and thoughts. Such an approach will make sure that the outcomes and deliveries developed by the technicians will fit the purpose and address the needs of the nurses at the frontline of healthcare. It is of utmost importance that nurses have the right competences to deal with AI tools, and are, therefore, equipped with a set of necessary digital skills in order to maximise the positive impact of AI tools. Lifelong learning programmes focusing on digital literacy are, consequently, essential. Most importantly, ethical challenges linked to AI deployment in the healthcare sector need to be addressed through trust-building by 1. ensuring the privacy and other rights of persons whose data will be used or stored in these systems; 2. ensuring ethical access to high-

[1] AI refers to the simulation of human intelligence in man-made machines programmed to imitate certain human actions as closely as technologically possible. The term may also apply to machines or software programmes that are capable of problem-solving and learning (Commission White Paper on AI, 2020).

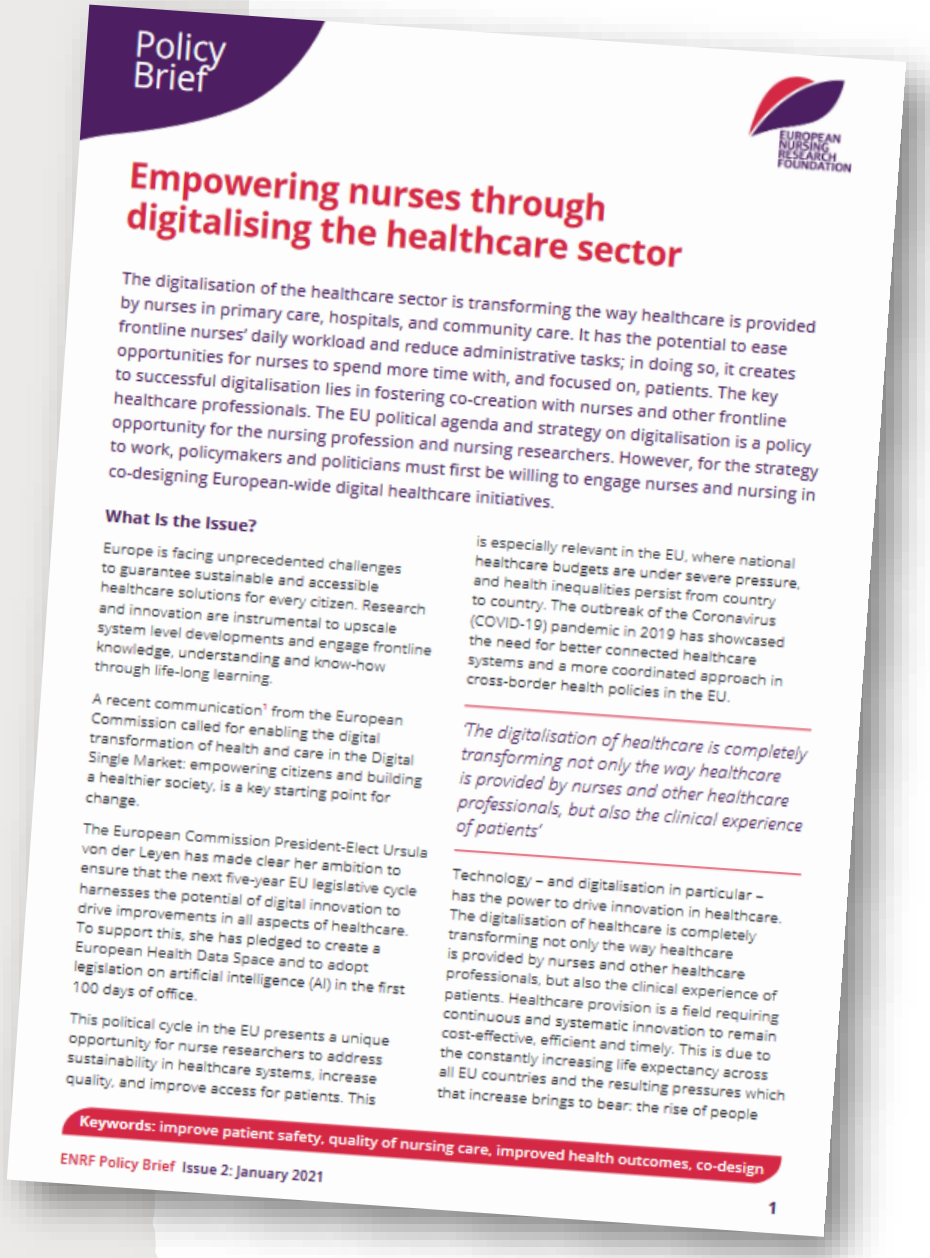
1

ENRF Policy Brief on Digitalisation

Published in April 2021, by the European Nursing Research Foundation (ENRF), this Policy Brief shows that digitalisation of the healthcare sector has the potential to ease frontline nurses' daily workload and reduce administrative tasks; in doing so, it creates opportunities for nurses to spend more time with, and focused on, patients.

Read it here:

http://www.enrf.eu/wp-content/uploads/2021/04/ENRF-Evidence-Based-Policy-Brief-on-Digitalisation-April-2021.pdf



Policy Brief

EUROPEAN NURSING RESEARCH FOUNDATION

Empowering nurses through digitalising the healthcare sector

The digitalisation of the healthcare sector is transforming the way healthcare is provided by nurses in primary care, hospitals, and community care. It has the potential to ease frontline nurses' daily workload and reduce administrative tasks; in doing so, it creates opportunities for nurses to spend more time with, and focused on, patients. The key to successful digitalisation lies in fostering co-creation with nurses and other frontline healthcare professionals. The EU political agenda and strategy on digitalisation is a policy opportunity for the nursing profession and nursing researchers. However, for the strategy to work, policymakers and politicians must first be willing to engage nurses and nursing in co-designing European-wide digital healthcare initiatives.

What Is the Issue?

Europe is facing unprecedented challenges to guarantee sustainable and accessible healthcare solutions for every citizen. Research and innovation are instrumental to upscale system level developments and engage frontline knowledge, understanding and know-how through life-long learning.

A recent communication[1] from the European Commission called for enabling the digital transformation of health and care in the Digital Single Market: empowering citizens and building a healthier society, is a key starting point for change.

The European Commission President-Elect Ursula von der Leyen has made clear her ambition to ensure that the next five-year EU legislative cycle harnesses the potential of digital innovation to drive improvements in all aspects of healthcare. To support this, she has pledged to create a European Health Data Space and to adopt legislation on artificial intelligence (AI) in the first 100 days of office.

This political cycle in the EU presents a unique opportunity for nurse researchers to address sustainability in healthcare systems, increase quality, and improve access for patients. This is especially relevant in the EU, where national healthcare budgets are under severe pressure, and health inequalities persist from country to country. The outbreak of the Coronavirus (COVID-19) pandemic in 2019 has showcased the need for better connected healthcare systems and a more coordinated approach in cross-border health policies in the EU.

'The digitalisation of healthcare is completely transforming not only the way healthcare is provided by nurses and other healthcare professionals, but also the clinical experience of patients'

Technology – and digitalisation in particular – has the power to drive innovation in healthcare. The digitalisation of healthcare is completely transforming not only the way healthcare is provided by nurses and other healthcare professionals, but also the clinical experience of patients. Healthcare provision is a field requiring continuous and systematic innovation to remain cost-effective, efficient and timely. This is due to the constantly increasing life expectancy across all EU countries and the resulting pressures which that increase brings to bear: the rise of people

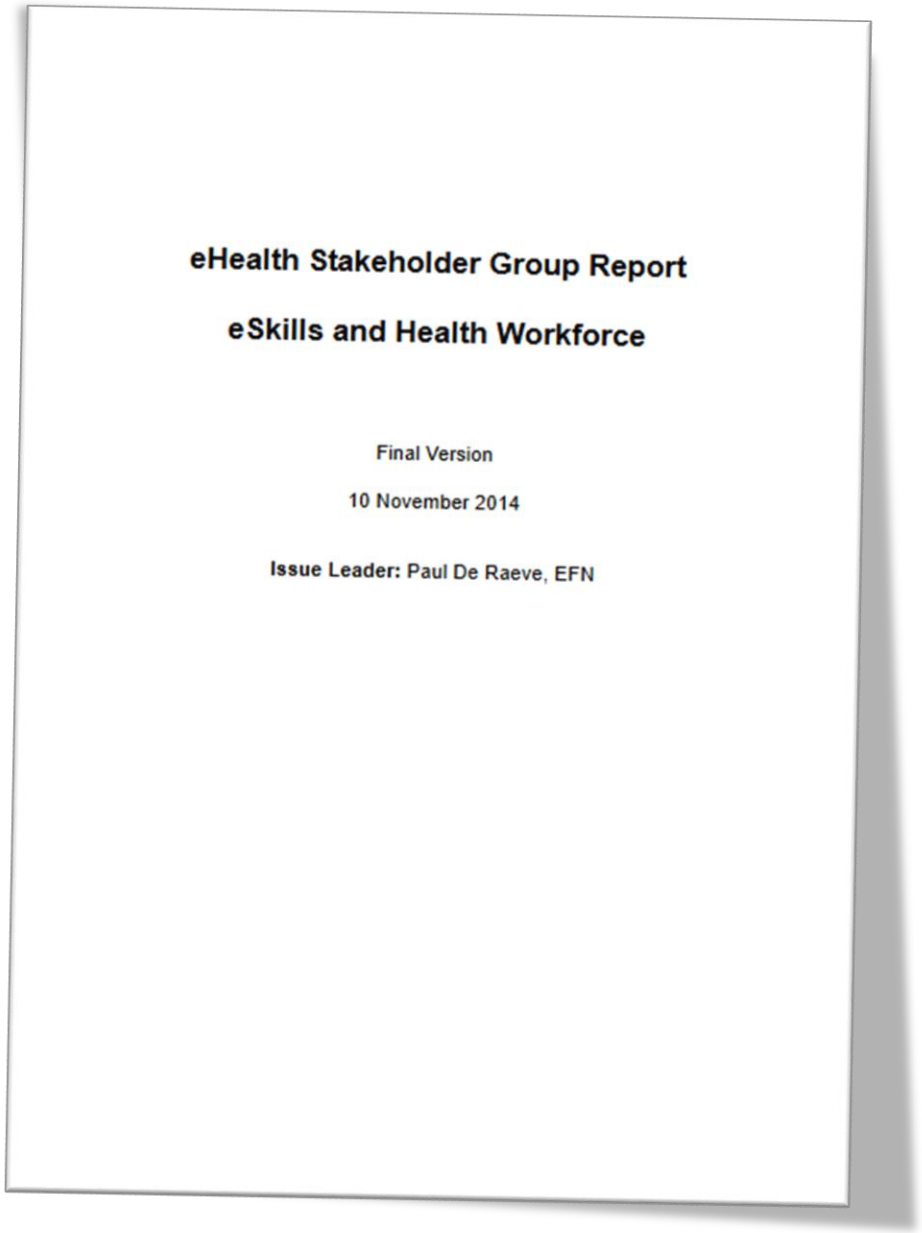
Keywords: improve patient safety, quality of nursing care, improved health outcomes, co-design

eHealth Stakeholder Group report on “eSkills and Health workforce”

Led by EFN and published by the European Commission in 2014, the report provides an overview of the gaps in eSkills of the EU healthcare workforce while providing for a series of practical steps

Read it here:

http://www.efnweb.be/wp-content/uploads/eHSG-Report-on-eSkills-Health-Workforce-Final-28-11-2014.pdf


eHealth Stakeholder Group Report

eSkills and Health Workforce

Final Version

10 November 2014

Issue Leader: Paul De Raeve, EFN