



**World Health
Organization**

REGIONAL OFFICE FOR **Europe**

NURSES AND MIDWIVES: A VITAL RESOURCE FOR HEALTH

Compendium of good practices
in nursing and midwifery

DRAFT

FOR DISCUSSION AT THE REGIONAL COMMITTEE 64, TECHNICAL BRIEFING

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EXECUTIVE SUMMARY

Health 2020, the policy framework for health and well-being in the WHO European Region, highlights nurses and midwives as having key and increasingly important roles to play in society's efforts to tackle the public health challenges of our time, ensure the continuity of care and address people's rights and changing health needs. Nurses and midwives comprise the majority of health care professionals in Europe. As front line health workers they have close contact with many people, and therefore they should be competent in the principles and practice of public health, so that they can use every opportunity to influence health outcomes, their social determinants, and the policies necessary to achieve change.

The WHO Regional Office for Europe works closely with Member States, governmental chief nursing and midwifery officers, the European Forum of National Nursing and Midwifery Associations (EFNNMA) and other relevant partners to create evidence-based knowledge on nursing and midwifery and to influence national policies that will lead to the provision of high-quality, accessible, equitable, efficient and responsive health services.

To guide Member States in enabling and enhancing the contribution of the nursing and midwifery workforce to support the Health 2020 implementation, the Regional Office has developed a policy document *Strengthening Nursing and Midwifery – European Strategic Directions towards Health 2020 goals*. This document – the first of its kind in the WHO European Region – aims to strategize action, and to align policies with practice to achieve the 12 defined objectives in the framework and ultimately to contribute to the Health 2020 implementation.

In support of the Strategic Directions, the Compendium of good practices in nursing and midwifery has been developed to demonstrate and promote examples of value-added nursing and midwifery interventions in addressing people's health needs in the WHO European Region. The Compendium is part of a year-long project led by Human Resources for Health Programme at the WHO Regional Office for Europe. It is based on 55 case studies from 18 countries in the Region. For the purpose of this Compendium, a collective case method with a framework approach was used. All collected case studies were reviewed, analysed into categories and themes, mapped, interpreted, summarized and compiled into the Compendium. Case studies in this compendium provide empirical evidence on practice development but certain limitations exist in terms of the availability of reported information and validity of the data.

The key findings of the analysis of the case studies can be summarized by the following key conclusions:

- **Good practices in nursing and midwifery exist supporting Health 2020 implementation** – A variety of new healthcare models and innovative practices have been implemented in various settings across the European Region, ranging from small-scale projects to nationwide nursing and midwifery reforms. The good practice and innovation that exists, however, is not always well documented or rigorously evaluated and rarely shared within or across countries.
- **Nurses and midwives enhance health** – The case studies demonstrate a large range of contributions of nurses and midwives in improving health and preventing diseases, spanning from health promotion throughout the life course, to empowering individuals and communities. Nurses' and midwives' roles have often evolved and expanded in response to changing healthcare needs of the population. This demonstrates how nurses and midwives are a vital and versatile resource towards achieving the goals of Health 2020.

- **Evidence-based practice and interprofessional collaboration facilitate innovation** -Collaboration within multidisciplinary teams is proven to be effective and feasible. Nurses and midwives are playing an increasing role in developing evidence-based practice, conducting health research and developing innovative practices as part of interdisciplinary teams.
- **Enabling policies maximize nurses' and midwives' potential** – The nursing and midwifery workforce has the expertise and potential to improve population health and much of this is still untapped. The case studies revealed that effective policies and workforce planning, strong professional leadership, regulatory frameworks, educational standards and supportive managerial practices are essential to enable nurses and midwives to work to their highest potential.

The findings presented within this Compendium show that nurses and midwives provide safe, high quality and person-centered care, improve the coverage and integration of health services and reduce the costs of health care organizations and health systems. Their roles are evolving and expanding, particularly in health promotion, disease prevention and the management and coordination of chronic diseases. Practice development in nursing and midwifery is in response to the health needs of the population. It is generally guided by evidence and quality improvement methods and achieved by strong leadership and supportive systems.

The compendium establishes that nursing and midwifery practice contributes significantly to the Health 2020 implementation. Nurses and midwives is a vital resource towards improving population health and reducing health inequalities – the goals of Health 2020. How this contributes to the four priority areas is summarized below:

Health 2020 priority area one: investing in health through a life course approach and empowering people

- Nurses and midwives are key players in empowering individuals and families and in promoting health literacy and changes in health behavior throughout the life course. Moreover, their services have been shown to be cost effective and/or cost saving. Midwifery and public health nursing services in the country case studies have demonstrated a remarkable impact on promoting normal births, supporting a healthy start in life, child development, and the health and well-being of families.
- By enhancing health literacy it is possible to enable people to make informed choices, and create supportive environments for health decision-making. These are critical strategies for addressing communicable and noncommunicable diseases now and in the longer term. To support good health through a life-course approach, nurses and midwives can lead the deployment of new health promotion strategies through primary health care, community-based and home-based services.
- Nurses are also key players in supporting healthy ageing and independent living by assessing care needs, providing care counseling and new forms of services to older people which support independence and well-being.

Health 2020 priority area two: tackling the European Region's major health challenges – noncommunicable and communicable diseases

- In many country case studies, integrated care pathways and person-centered interventions specifically targeted at supporting people in managing noncommunicable diseases are led by nurses who provide expertise working in one to one relationships with patients and in multidisciplinary and multiagency teams. In line with recent trends, nurses used health technology applications to promote self-care for patients,

and enhance integration of hospital and community based care. These actions contribute to improving care and well-being and to reducing the costs to health care organizations and systems by decreasing hospitalization rates and prevention of misuse of medicines. Thus the use of nursing expertise in this way contributes to proactive approaches to meet patient needs in a timely and cost-effective manner, reducing complications of disease health outcomes and best value for health spend.

Health 2020 priority area three: strengthening people-centered health systems, public health capacity and emergency preparedness, surveillance and response

- Nurses and midwives play important roles in strengthening health systems which adopt the principles of person-centered care. Nurses also form part of public health teams increasing population resilience and are key members of emergency response teams. Examples of good practice include promoting women's choice in childbirth, supporting parents to give their children the best start, supporting shared decision making, promoting self-care management, and the transfer of traditional hospital-based care to community based settings and patients' homes in accordance with health reforms.
- Expanded roles of nurses and midwives are an efficient and feasible way to extend certain activities and care of several patient groups and improve access to care and promote universal coverage. New nursing and midwifery services are targeted at vulnerable patient groups and improving access to care in rural areas and therefore support universal health coverage.

Health 2020 priority area four: creating resilient communities and supportive environments

- Community based nursing and midwifery services focus on involving people from the communities and generating ownership of health issues. The aim is to promote healthy living among young people and families, provide early interventions to support independence and well-being in older age and promote efficient and quality home care. These practice developments are implemented through integrated service models and facilitated via ICT-supported communication with local communities. In other country cases, new partnerships between academic and health care institutions played important role in mobilizing the student community.

The compendium is designed to influence future progress towards better health and well-being of populations. It can provide technical guidance to individual Member States by identifying ways to improve workforce capacity, professional education, working conditions, and to strengthen health care services at country, regional and institutional levels. The aim is to inspire and encourage the development and dissemination of good nursing and midwifery practices and to make the best use of nurses and midwives as a vital resource for better health and well-being.

NURSES AND MIDWIVES: A VITAL RESOURCE FOR HEALTH

COMPENDIUM OF GOOD PRACTICES IN NURSING AND MIDWIFERY

1 INTRODUCTION

Health 2020, the European policy framework for health and well-being, was adopted by the 53 Member States of the Region at the sixty-second session of the WHO Regional Committee for Europe in September 2012. Health 2020 aims to support action across government and society to «significantly improve the health and well-being of populations, reduce health inequalities, strengthen public health and ensure people-centered health systems that are universal, equitable, sustainable and of high quality».

The policy framework is evidence-based and peer-reviewed. It gives policy-makers a vision, a strategic path, a set of priorities and a range of suggestions about what works to improve health, address health inequalities, and ensure the health of future generations. It identifies strategies for action that are adaptable to the many contextual realities of the WHO European Region.

Investing in health through a life-course approach and empowering people is the first of the four priority areas in Health 2020. With demographic changes underway, promoting health, preventing disease and improving health literacy are major priorities within a life-course approach. The second priority area is tackling communicable and noncommunicable diseases, which are Europe’s major health challenges. These challenges should be addressed through integrating strategies and interventions in whole-of-government and whole-of-society approaches, focusing on equity and social determinants of health. Strengthening people-centered health systems, public health capacity and emergency preparedness, surveillance and response is the third priority area. This includes reorienting health systems with new integrated forms of service delivery, relocating care and improving access to high-quality and affordable care. Revitalizing public health and transforming service delivery to achieve better health outcomes requires a flexible, multi-skilled and team-oriented workforce. Creating resilient communities and supportive environments is the fourth priority area. This entails generating health promoting settings, involving people and generating community ownership in collaborative and intersectoral environments.



Figure 1. The Health 2020 strategic policy framework for the WHO European Region

Health 2020 highlights nurses and midwives as having key and increasingly important roles to play in society's efforts to tackle the public health challenges of our time, ensure the continuity of care and address people's rights and changing health needs. «Nurses and midwives together form the largest health professional group in all countries. Because they have close contact with many people, they should be competent in the principles and practice of public health, so that they can use every opportunity to influence health outcomes, their social determinants, and the policies necessary to achieve change». With increasing service demands and an aging population, nurses and midwives are essential to provide safe, high quality and efficient health services across the life-course. Thus, nurses and midwives are a vital resource towards achieving the goals of Health 2020.

The WHO Regional Office for Europe aims to strengthen nursing and midwifery as an integral part of health systems across the European Region, based on the goals endorsed in the Health 2020 framework. Therefore, the European Strategic Directions towards Health 2020 – Strengthening Nursing and Midwifery (ESD) (WHO 2014) and the «Nurses and Midwives: A vital resource for health. Compendium of good practice ¹in the WHO European Region» has been developed to support this aim.

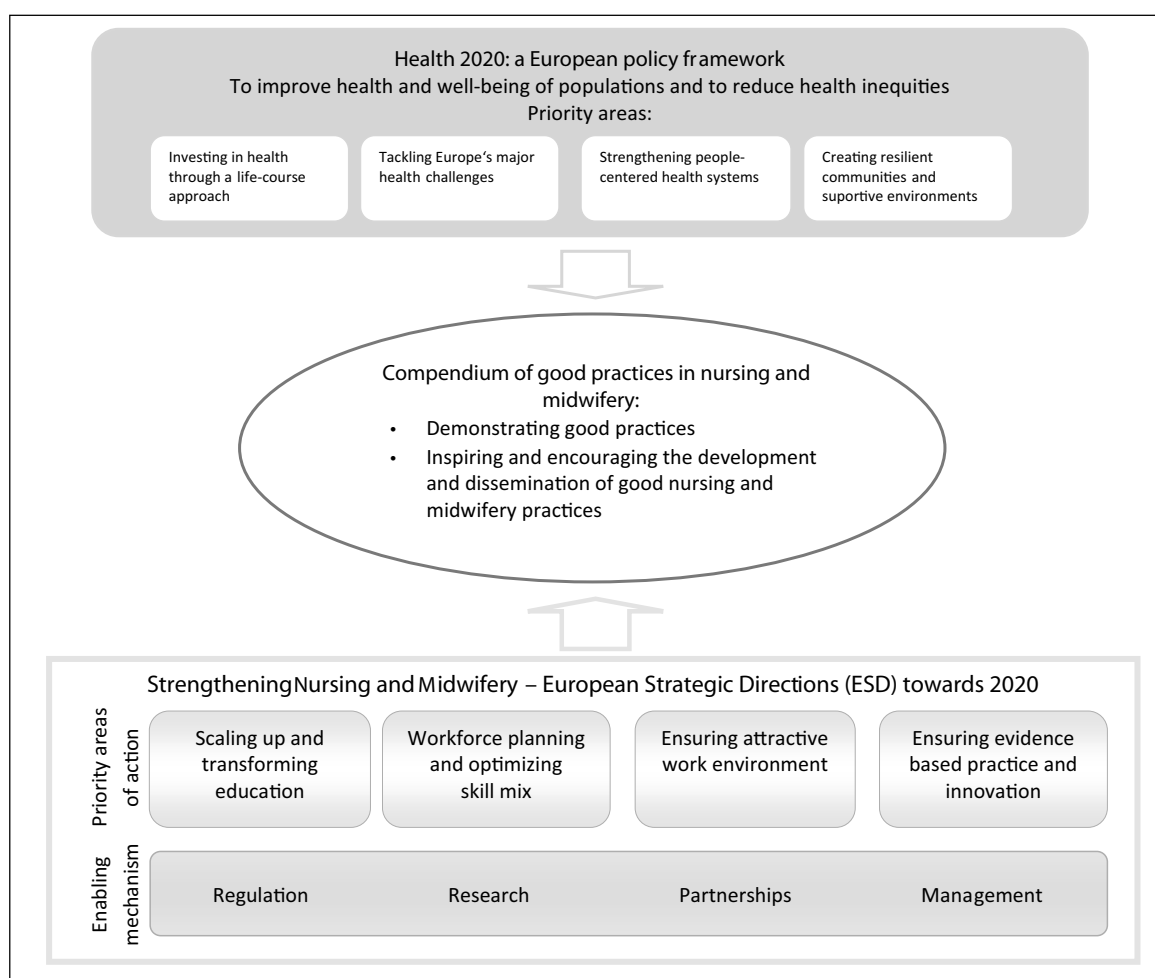


Figure 2. The Compendium of good practice in nursing and midwifery in the context of the European Strategic Direction (ESD) and Health 2020 policy framework

¹ Good practice is based on the best available evidence and appraised as a relevant course of action in its operational environment. Good practice can be characterized as beneficial for client, supportive of the client's well-being, justifiable, evaluated, effective, result-oriented, subject to modeling and co-modification, applicable, transferable, widely distributed and ethically sustainable (National Institute for Health and Welfare in Finland, 2013)

The links between Health 2020, good practices in nursing and midwifery and the ESD are shown in Figure 2. The compendium generates evidence of good practices in nursing and midwifery and demonstrates the contributions of nurses and midwives towards reaching the goals of Health 2020. Good nursing and midwifery practices contribute to implementing Health 2020 through providing safe and evidence-based health promotion, disease prevention and people centered care. The ESD framework defines the priority areas of action and enabling mechanism required to develop, implement and disseminate good nursing and midwifery practices. Both of these documents will further guide Member States in achieving the Health 2020 goals of improving the health and well-being of populations, reducing health inequalities and ensuring sustainable people-centered health systems.

As stated in Health 2020, it is recognized that countries engage from different starting points and contexts and have different capacities. Wide variations exist in the disease patterns and modes of health practice and service delivery in the 53 countries of the WHO European Region. The compendium provides evidence of good practices across these various health systems with nurses and midwives playing different roles. A good nursing or midwifery practice can include enhancing the role of nurses and midwives, can be innovative and can further develop practices, but most importantly, a good practice is safe, efficient, person-centered, and of high quality in line with Health 2020. Every country can contribute and learn from these practices, and drawing on the knowledge of nurses and midwives and the evidence of good practices is essential to improve the health and well-being of populations.

The compendium was developed for discussion at the technical briefing of the sixty-fourth session of the WHO Regional Committee for Europe. The compendium presents a contextual analysis of the contribution made by nurses and midwives to health systems based on country case studies across the European Region. This work is targeted for Health Ministers and policy makers, along with nurses and midwives who are responsible for delivering care using good practices in accordance with health policy targets and population needs.

2 PURPOSE OF THE COMPENDIUM

A compendium may be defined as «a book containing a collection of useful hits» or «a comprehensive summary of a larger work». This compendium has elements of each of these definitions. It summarizes and analyses country case studies of nursing and midwifery practices collected from the WHO European Region, with particular emphasis on the contribution of nurses and midwives to the strengthening of health systems and responding to changing health needs.

The purpose of this compendium of nursing and midwifery practices is to demonstrate good practices in these professions and present how these contribute to the implementation of Health 2020 and improving quality of health care services. The compendium is designed to provide evidence to policy-makers on how nursing and midwifery contributions and different models of care can influence future progress and key health policy targets and, hence, how to make the best use of the nursing and midwifery workforce as a vital resource for better health and well-being.

In addition, country case studies can provide technical guidance to individual Member States by identifying ways to improve workforce capacity, professional education, working conditions, and to strengthen health care services at country, regional and institutional levels. The aim is to inspire and encourage the development and dissemination of good nursing and midwifery practices to support Health 2020 implementation.

3 MATERIALS AND METHODS

In May 2013, the technical programme Human Resources for Health at the WHO Regional office for Europe made a call for country case studies to Governmental Chief Nursing Officers, national nursing and midwifery associations, and WHO collaborating centers for nursing and midwifery. To guide the data collection, a manual containing a standard template (Annex 2) for creating country case studies developed by the WHO Regional Office for Europe, was sent to the case submitters to help them identify and report cases of good practices in nursing and midwifery in their respective countries. In the course of 12 months, 55 cases from 18 countries (Table 1) were collected, reviewed, analysed, interpreted and compiled into this compendium.

Table 1. List of submitted county case studies

Country	No.	Title of the country case study	Authors
Belgium	1	Aggression management in mental health care	<i>Dr Sofie Verhaeghe sofie.verhaeghe@UGent.be</i>
	2	Implementing nutritional guidelines in acute geriatric wards	<i>Ms Thérèse Van Durme</i>
Croatia	3	Everyday needs and activities of geriatric patients – Users of home care	<i>Ms Valentina Kriškić Mara Županić</i>
Denmark	4	Midwifery-led services in a postnatal clinic. Systematic evaluation of wound healing in hospital	<i>Dr Sara Kindberg</i>
	5	Telemedicine for rehabilitation of COPD patients	<i>Ms Birthe Irene Dinesen</i>
	6	Telemedicine video consultations for COPD patients	<i>Ms Anne Dichmann Sorknæs</i>
	7	Using telemedicine in rehabilitation of cardiac patients	<i>Ms Christina Skov</i>
Finland	8	Supporting families in a Baby Friendly Hospital	<i>Ms Tuija Tuominen</i>
	9	Implementing the role of Case Manager and the Chronic Care Model	<i>Ms Sirpa Luukkainen</i>
	10	New approach to improve health of families with children	<i>Dr Marjaana Pelkonen Dr Tuovi Hakulinen-Viitanen</i>
	11	Nurse consultations for acute health problems and noncommunicable diseases	<i>Dr Marjukka Vallimies-Patomäki</i>
Germany	12	Improving pain management in nursing homes in Muenster	<i>Dr Jürgen Osterbrink</i>
Hungary	13	Cervical Screening Programme by Health Visitor Nurses	<i>Ms Gabriella ErdélyiKissné</i>
Iceland	14	Outpatient clinic for children and adolescents with diabetes	<i>Ms Elisabet Konradsdóttir</i>
Ireland	15	Midwife-led antenatal clinic for adolescents, Rotunda Hospital	<i>Ms Deborah Browne</i>
	16	Early discharge and integrated care for COPD patients, St. James's Hospital, Ireland (No. 16)	<i>Ms Maria Kane</i>
Israel	17	MOMA- First national call centre for treatment by nurses	<i>Dr Galit Kaufman</i>
	18	Public health unity in the struggle against polio in Israel	<i>Dr Yafa Haron Mira Honovich</i>

Country	No.	Title of the country case study	Authors
Lithuania	19	Independent practice of diabetic nurse: Better focus on patient needs	<i>Ms Virginija Bulikaite</i>
Norway	20	A solution-focused approach to improve self-esteem in socially withdrawn school children	<i>Ms Lisbeth Gravdal Kvarme</i>
	21	Redesigned community care to prevent and treat postpartum depression in women	<i>Dr Kari Glavin</i>
Portugal	22	A nursing pain management group towards a pain-free hospital	<i>Prof. Ananda Fernandes</i>
	23	Before you get burnt: health promotion and harm reduction in youth recreational nightlife	<i>Dr Irma Brito</i>
	24	Improving the assessment of pain intensity in a paediatric hospital	<i>Dr Luís Manuel Cunha Batalha</i>
	25	Individualized care for quality and effectiveness of nursing care	<i>Dr António Fernando Salgueiro Amaral</i>
	26	Mobilization of higher education communities to promote healthy settings	<i>Dr Irma Brito Dr Fernando Mendes</i>
	27	Tender adventure: Launching a centre for childbirth and parenthood preparation	<i>Dr Rosa Maria dos Santos Moreira</i>
	28	White Ribbon: Preventing violence in dating relationships	<i>Ms Maria Neto Leitão</i>
Russian Federation	29	Early physical activity and education for patients after lower limb amputation	<i>Ms Marina Anatolyevna Klimeniuk</i>
	30	Independent and advanced nursing services in Samara city polyclinic No 15	<i>Ms Larisa Yuldashevna Pudovinnikova</i>
	31	New nursing role – teaching family members to care for severely sick patients	<i>Ms Marina Anatolyevna Yashenko</i>
	32	Strengthening the role of nurses in providing primary care to children in a Toliatty polyclinic	<i>Ms Natalia Vladimirovna Borovik Ms Liudmila Viktorovna Vasyleva</i>
	33	Tuberculosis and HIV controlled treatment coordinated by ward nurses of the dispensary unit, Samara region	<i>Ms Irina Alexeevna Lyapina</i>
Spain	34	Establishment of a Centre for Evidence Healthcare: a collaborating Centre of the Joanna Briggs Institute	<i>Dr Teresa Moreno-Casbas</i>
	35	Implementation of evidence-based guidelines to establish a Network of Centres committed to using best care practices	<i>Ms Esther González-María</i>
	36	Involving the midwife in screening and emergency obstetric care	<i>Ms Concepción Cuenca Calabuig</i>
	37	National Nursing Research Strategy in Spain: Engaging nurses in evidence based practice and research	<i>Dr Teresa Moreno-Casbas</i>
	38	School of caregivers	<i>Ms Carmen Ferrer Arnedo</i>

Country	No.	Title of the country case study	Authors
Sweden	39	Designing interactive ICT-supported health communication to support District Nurses' health promotion and disease prevention efforts in primary health care	<i>Dr Amina Jama Mahmud</i>
Switzerland	40	Linking nursing practice and research to support Pain management in the Neonatal Intensive Care Unit	<i>Dr Cignacco Eva</i>
United Kingdom, England	41	Creating a dementia friendly hospital	<i>Ms Karen Bowley</i>
	42	Developing a nursing strategy that delivers compassionate patient care	<i>Ms Helen Mackenzie</i>
	43	Enhancing the life chances of children and young people: School nursing services to support local population needs	<i>Ms Wendy Nicholson</i> <i>Ms Linda Arnot</i>
	44	Health visiting contribution to youth and family early intervention teams	<i>Ms Emma McDonough</i>
	45	Relaunch of a freestanding birth centre to promote normal birth	<i>Dr Tracey Cooper</i>
United Kingdom, Northern Ireland	46	Bereavement support midwife post	<i>Ms Hilary Patterson</i>
	47	Improving health outcomes for people with learning disabilities	<i>Mr Maurice Devine</i>
	48	Improving health outcomes for women with faecal incontinence	<i>Ms Janice Reid</i>
United Kingdom, Scotland	49	Improving palliative care for heart failure patients and their carers	<i>Ms Yvonne Millerick</i>
	50	Pre-birth planning service	<i>Ms Val Arbuckle</i>
	51	Weight Management in Pregnancy Intervention 'optiMum' in Tayside	<i>Ms Linda Arnot</i> <i>Ms Carol Barnett</i>
United Kingdom, Wales	52	Development of a community based falls telerehab service	<i>Ms Jayne Sankey</i>
	53	Fostering influence: Clinical expertise and leadership in diabetes nursing	<i>Ms Julie Lewis</i>
	54	Nurse colposcopists and their positive impact on the Cervical Screening Programme	<i>Ms Bethan Morgan</i>
	55	Provision of home blood transfusions and IV therapy service	<i>Ms Jayne Sankey</i>

The case study research approach is used to generate an in-depth, multi-faceted understanding of a complex issue in its real-life context (Stake, 1995)². For the purpose of this compendium, a collective case method with a framework approach, (ibid) was used to illustrate the contribution of nurses and midwives to the overall goal of Health 2020. This approach enables the analysis of multiple cases based on a predetermined framework or a theory (ibid). The collected cases were reviewed, analysed into categories and themes, mapped and interpreted (Figure 3). A categorization matrix consisting of analytical themes, based on the WHO template and the European Strategic Directions' priority action areas and enabling mechanism (Table 3) was used

² Stake, E.R. (1995). The art of case research study. London: Sage Publications Ltd.

as a framework for mapping themes that illustrate how nursing and midwifery practice and modals of care contribute to the priority areas of action and Health 2020 implementation.

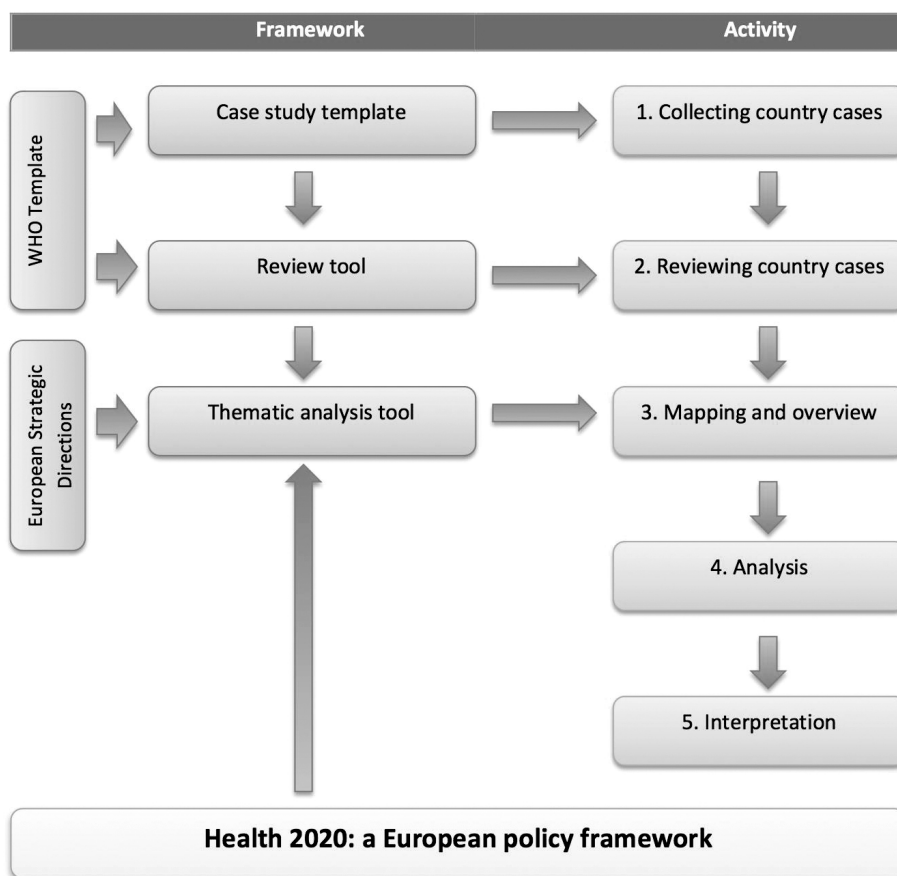


Figure 3. Phases of developing the compendium

To highlight the diversity in the roles played and how they contribute to creating new services, nursing roles were used in the analysis to outline the mechanisms for implementing practices and delivering outcomes. Substitution and supplementation of tasks were regarded as an indication of role expansion and provision of new service^{3, 4}, hence practice development in relation to the enhanced roles of nurses and midwives were further categorized into three groups: (1) nurse- and midwife-led services, (2) expanded roles and (3) supplementary roles. In addition, the role enhancements were categorized in terms of community and home based services and leading and senior specialist posts. Finally, outcomes were interpreted in view of nurses and midwives contributions to priority areas in the policy framework of Health 2020 (Table 2).

Data analysis was initially conducted by a team at the WHO Regional Office for Europe and thereafter negotiated and checked for comprehension with a larger number of experts within the fields of Nursing and Midwifery. The submitting teams validated the results.

³ The substitution of tasks indicates expanding the breadth of a job by working across professional divides or by exchanging one type of worker for another (Bourgeault et. al. 2008).

⁴ The supplementation of tasks indicates providing new services with the aim of enhancing services and improving the quality of care (OECD 2010).

Table 2. Analytical themes based on the country case study template, the ESD framework and Health 2020

WHO manual	The ESD framework		Health 2020
Country case study template	Priority areas of action	Enabling mechanisms	Priority areas
Drivers for change Area of service development Role enhancement Health and performance outcomes	Scaling up and transforming education Workforce planning and optimizing skill mix Ensuring positive work environment Evidence based practice Innovative practice	Regulation Research Partnerships Management and leadership	<ul style="list-style-type: none"> • Life-course approach and empowering people • Noncommunicable and communicable diseases • People-centered health systems and public health capacity • Resilient communities and supportive environments

The key findings are presented using the analytical themes in Table 2.

Sections 4.1–4.3 are based on the country case study template:

- drivers for change (section 4.1),
- areas of service development (section 4.2), and
- key aspects of the nursing and midwifery practice development (section 4.3).

Sections 4.4 and 4.5 refer to the ESD Framework Priority areas of action and Enabling mechanisms. Health 2020 priority areas reflected in section 4.6. Each section provides illustrative, although not comprehensive, examples drawn from selected case studies.

Limitations

Case studies in this compendium provide empirical evidence on practice development but certain limitations exist in terms of the availability of reported information and validity of the data. The case studies were selected by the providing countries, rather than independently identified by the expert group. Country case studies provided different levels of evidence; some case studies were based on research projects, randomized control trials, pilot studies or other forms of research. In other cases evidence was based on local data from the health care institution or from internal audits and evaluations, while some cases did not clearly state how the evidence was developed. In addition, several cases clearly defined how the data and evidence was developed but references were not provided. The case studies were grouped into three categories based on the level of evidence: (a) case studies providing references to the source of evidence (e.g. research publications), (b) cases clearly providing evidence but reference are missing (e.g. internal unpublished evaluations), (c) cases not providing reference and the evidence source is unclear.

4 OVERVIEW OF THE KEY FINDINGS

Section 4 provides an overview of the key findings showing the role nurses and midwives play in strengthening and revitalizing health care systems and their contributions towards improving population health and well-being and reducing health inequities. The analysis shows that both professions contributed to practice development by adapting, expanding and enhancing their professional roles.

Data analysis shows that Drivers for change (4.1) for the initiatives reported in the country cases are needs-driven and facilitated in various ways depending on the health system and health professionals involved.

Areas of service development (4.2) illustrate the broad range of settings within which nurses and midwives operate and how role enhancement (4.3) facilitated engagement in multidisciplinary teams which contributed to outcomes (4.3) that were person- centered and required integrated care. The priority areas of action (4.4) identified several areas of support and how they effectively contributed to the health of their communities.

Consequently, enabling mechanisms (4.5) to support the process are outlined. Detailed information on the key activities and main outcomes related to role enhancements in the country case studies can be found in Annex 1 tables 16, 17 and 18. Finally in section 4.6, nurses' and midwives' contribution to priority areas of Health 2020, is presented.

4.1 Drivers for change

Across initiatives it is essential that governments, different authorities and professional organizations affected support new professional roles (Bourgeault et. al. 2008). Initiatives can be driven by different needs and facilitated in various ways according to the health systems and health professionals involved.

To enhance the roles of nurses and midwives, approximately half of the initiatives described in the case studies were developed and implemented using a top-down approach while the other half applied a bottom-up⁵ approach. In addition, two-way approaches⁶ were used in some of the illustrated cases.

Approximately half of the initiatives were initiated and implemented at the local level. In these case studies, local initiators were managers of the health care organizations, multidisciplinary teams, groups of nurses and midwives and in a few cases, individual nurses or midwives. In several case studies academia was the initiator, while in others the initiator was a nursing association. Less than one-third of case studies were initiated at the national level, and less than one-third were developed at the sub-national level (such as regional authorities).

Approximately half of the cases reported that additional funding was received while this information was not available in the other half of cases. More than half of the cases reported that the initiative was supported by health authorities, such as Health Ministries as well as national and regional health strategies, plans and programs.

In nearly all cases the change in practice was primarily implemented and followed up by nurses or midwives. In half of the cases, other stakeholders, including researchers, authorities and families played a major part in carrying out the new practice.

Bottom-up approach

To promote healthy settings among university students in Portugal, a Participatory Health Research project, including a toolkit to mobilize higher education communities was developed. A group of nursing professors and students identified the health needs of their student community and prioritized the problems found in order to empower people. This data generated evidence to design “bottom up” local strategies for health promotion, prevention and harm reduction, engaging students in the intervention to define problems and solutions while being part of the research initiative. (26)

⁵ The initiative was defined as top-down if it was set forth and directed from health authorities or higher organizational or management structures. The initiative was defined as bottom-up if it was developed and directed by nurses and midwives themselves.

⁶ A two-way approach is based on both bottom-up and top-down approaches.

Top-down approach

The Hungarian Cervical Screening Program provides an example of a project that was initiated and implemented top-down. Health authorities initiated the program and the Office of Chief Medical Officers implemented the program under the Hungarian Health Visitor Nurse system. The nurses' role expansion was carried out under this framework. (13)

The majority of cases identified response to population needs as the main reason for change whilst a few cited organizational or institutional reasons such as physician shortages as the rationale. In less than one-third of cases, the change was motivated by the needs of health care personnel, for example a need for new competencies among nurses and midwives.

Organizational and health workforce needs as drivers

An example of a role enhancement developed in response to organizational and health workforce needs is found in Finland. In this case, a shortage of physicians working in primary health care led to long waiting lists. In addition, a social and health service reform combined with a growing interest in improving nursing competencies led to a need for reallocation of certain patient groups from a physician's care to a nurse's care. As a result of this, the work of nurses was reorganized and advanced nursing roles were developed (11).

4.2 Areas of service development

New initiatives in practice and role enhancement for nurses and midwives took place in various settings and across service levels. Approximately one-half of the initiatives were implemented at the community level or in a home based setting, while several initiatives occurred in both community and home based settings. A comparatively larger number of the initiatives were at the primary care level, while several initiatives were at the secondary care level, primarily hospitals, and few initiatives were concentrated at the tertiary level (Table 3).

Table 3. Level of care services presented in case studies

Level of service	Number of case studies*
Community or home-based setting	24
Primary care	16
Secondary care	20
Tertiary care	6

* Several cases were based at both the primary care level and community or home-based setting. Thus, the total number of case studies exceeds 55.

Services were developed and new initiatives implemented in various types of services for clients and patients across different ages. Community-based nursing services focused on health promotion, counseling, screening, palliative care, rehabilitation and intravenous therapy. In primary health care, enhanced nursing roles were implemented in health centers and outpatient clinics. They provided health education, counseling, screening, health check-ups, treatment and follow-up services as well as ensuring continuity of care. Pain management in nursing homes and specific treatment procedures were also developed at the primary care level. Secondary level nursing services were provided in outpatient hospital units for patients requiring cervical screening, diabetes and respiratory disease management and intravenous therapy. Additionally,

nursing services were provided in inpatient hospital units for surgical and stroke patients, and patients with mental health problems, dementia, tuberculosis and HIV. At the tertiary level new nursing practices addressed nutritional assessment in acute geriatric wards and pain management in paediatric and neonatal wards. New midwifery-led services were introduced into community and hospital outpatient and inpatient services covering the entire continuum of maternal care from pregnancy to the post-natal period.

4.3 Role enhancement contributing to outcomes

In more than half of the cases the changes in health outcomes were assessed systematically, showing positive results. Improvements in outcomes were demonstrated by new nurse/midwife led services, in instances where roles had been expanded or supplemented, and in community and home based settings. Overall, patients were satisfied with the new nursing and midwifery services. In many case studies multidisciplinary team work was recognized as an important precondition for person-centered and integrated care. In terms of performance outcomes, improved access to care and reduced costs were reported in one-third of the cases. However, the reporting of access to care and costs was not consistent.

The impact of nurse-led services was apparent in terms of patient outcomes. Nurse-led services improved patients' compliance with treatment and quality of life. The role of a Consultant Nurse leading a multidisciplinary team resulted in reduced use of psychotropic medication, emergency admissions, disability and falls. Incidents related to behavior problems and admissions to residential care among patients with dementia. Nurses were also able to manage the majority of the health service needs in a rural area with the support of a physician using e-consultation. Furthermore, hospital costs were reduced by decreasing both length of hospital stays and readmission rates (Table 4, Annex 1 table 16).

Midwife-led units promoted good practices in supporting normal labor and birth which resulted in increased normal birth rates, later admissions and earlier discharges from hospital. It also increased use of non-pharmaceutical pain relief. Women's awareness of preferences and knowledge about the birthing process also improved with antenatal education given by midwives, thereby reducing anxiety surrounding giving birth. Midwife-led services for women with low risk did not cause increased risk to the newborn but rather led to a healthier start in life and higher rates of breastfeeding. By encouraging partners to also stay at the birth centre, midwives were able to support the family which enabled them to better adjust to the new life situation. In addition, midwife-led services were initiated in hospital for supporting mothers with perineal wounds after early discharge (Table 4, Annex table 1).

Table 4. Examples of nurse- and midwife-led services in multidisciplinary environments

Nurse-led services	Midwife-led services
A nurse-led health station in primary health care in a rural area supported by e-consultation with a physician in the health centre (11)	Midwifery-led services in a postnatal clinic for systematic evaluation of wound healing in hospital (4)
A nurse-led clinic of ambulatory nursing services in hospital for children and adolescents with diabetes and their families (14)	Midwife-led birthing unit in the Baby Friendly Hospital Hospital with midwives managing care along the continuum for low obstetric risk mothers (8)
Nurse-/ physiotherapist-led service in the respiratory assessment unit in hospital managing all aspects of COPD* (16)	Midwife-led antenatal clinic for adolescents, run alongside an obstetrician led clinic providing care and risk assessment during uncomplicated pregnancy (15)

Nurse-led services	Midwife-led services
Nurses as coordinators of the controlled TB and HIV treatment in the dispensary unit (33)	Midwife-led freestanding birth centre promoting normal birth in a community hospital (45) Midwife-led bereavement service developed in partnership with management team, colleagues and bereaved parents, providing a confidential support for couples grieving the loss of their baby (44)
Consultant Nurse leading a multidisciplinary team in a Dementia Friendly Hospital (41)	Midwife-led clinics for weight management and healthy lifestyle counseling for obese women during pregnancy and post-partum periods, supported by multidisciplinary team (51)

* Chronic Obstructive Pulmonary Disease.

Expanded roles were established for nurse consultations in primary health care settings and cervical screenings performed by nurses. These roles resulted in improved and timely access to care, fewer hospitalizations as well as improved productivity and continuity of care. In addition, the expanded roles promoted patient satisfaction with counseling and multidisciplinary collaboration. Correspondingly, expanded roles for midwives such as conducting obstetric screening and decision-making in emergencies helped to avoid interventions, reduce anxiety of the mother and support her active participation in labor (Table 4, Annex 1 table 17).

Supplementary roles of nurses were established to serve unmet patient needs, focus on follow-up and patient education, and provide training to caregivers. Supplementary roles resulted in improved person-centered care, health outcomes, level of knowledge, coping mechanisms and compliance to treatment, as well as faster rehabilitation after surgery and a decreased need for hospital and social care (Table 5, Annex 1 table 17).

Table 5. Examples of expanded and supplementary roles of nurses and midwives

Expanded role	Supplementary role
Nurse consultations for acute health problems and NCDs* in primary health care and emergency care (11)	Nurses implementing nutritional guidelines and discussing nutritional care for older patients in multidisciplinary team in acute geriatric wards(2)
Cervical screenings performed by health visitor nurses(13)	Case manager nurses coordinating the care of highly complex patients with NCDs in primary health care multidisciplinary teams (9)
Special diabetes nurse consultations for patients with diabetes (19)	Nurses as disease managers performing follow up visits and providing health education for client groups with chronic conditions via a national call centre (17)
Independent and advanced nursing receptions in primary care clinics for patients with NCDs (30)	Special nurses as patient teachers for self-care after lower limb amputation in a surgical hospital unit (29)
Independent nursing receptions for children in primary care clinics (32)	Nurses teaching family members in a stroke unit (31)
Midwives performing screening and emergency obstetric care in the delivery room and the obstetric emergency room in hospital(36)	Nurses as caregiver trainers and coaches (38)
Cervical screenings performed by nurse colposcopists in outpatient hospital care (54)	Continence Specialist Nurses performing nerve stimulation for women with faecal incontinence in primary care (48)

* Noncommunicable diseases.

Community based nursing and midwifery services also led to positive outcomes through the life course as well as during an epidemiological outbreak. Early identification of health problems, creating a supportive environment for making healthy decision and empowerment of parents helped them improve their children's health behaviours. Furthermore, community and home based services had a remarkable cost savings benefit for hospitals in reducing bed days (Table 6, Annex table 3).

An extensive health examination of families with children helped public health nurses and midwives find unidentified problems, identify health problems and support needs earlier, and target support more effectively to children and families most in need. A new model of school nursing whereby health visitors were engaged in a multi-agency team had remarkable results in improving emotional well-being, readiness for school, weight management, conception rates as well as vaccination coverage. Also reported were reductions in school exclusions and absences, smoking and alcohol use and chlamydia prevalence in young people, as well as improvements in self-efficacy in socially withdrawn children. Another case study also showed that universities can provide health education and counseling to the population by improving health literacy and promoting healthy behaviors in university students (Table 6, Annex table 3).

Home based services for older people with chronic diseases allowed them to live independently in their homes. Heart failure patients and caregivers benefitted from nursing services that met their palliative care needs and facilitated their preferred care options including place of death. Hospital nurses in collaboration with district nurses administered intravenous antibiotics and blood transfusions in settings that were most appropriate for the patient and caregiver. In addition, use of tele-health applications supported individualized rehabilitation activities for discharged patients and integrated hospital and community based care. Teleconsultations were found to be a safe way to provide care remotely, while patients took ownership for their measurements and gained better insight into their own illness and treatment (Table 6, Annex I table 18).

Table 6. Examples of community-based and home-based practices in nursing and midwifery

Case study (No.)	Community- and home-based practices
3	Nurses assessing activities of daily living and providing home nursing services for older people with chronic diseases
5	Nurses providing rehabilitation services for patients with COPD through tele-health
6	Video consultations between hospital based nurses and discharged patients with COPD
7	Nurses providing rehabilitation services for patients with cardiovascular disorders using tele-health
10	Extensive health examination provided by public health nurses and midwives for children and parents
18	Large scale vaccination against polio operated by public health nurses in family wellness clinics in a short timeframe
20	Promotion of behavioural changes among socially withdrawn children through Solution Focus Approach group meetings led by school nurses
21	Public health nurses preventing and treating postpartum depression as part of the redesigned community care model
23	Peer to peer counseling by nursing students with supervision of nurses or physicians to reduce harm during student festivals
26	Teachers and nursing students promoting healthy settings through participatory action research

Case study (No.)	Community- and home-based practices
27	Professors and postgraduate degree students in midwifery in collaboration with a midwife in a primary health care centre providing educational sessions in childbirth and parenthood for pregnant women and couples
28	Teachers and nursing students in collaboration with nurses providing peer education in partner violence for young people
39	District nurses in primary health care, in collaboration with a team of multidisciplinary professionals and laymen, developed an interactive internet based health channel that responded to community needs and preferences for health promotion and disease prevention.
43	A new model for school nursing to meet the present and future needs of school-aged children and young people
44	Health visitors working in a multi-agency team towards an early intervention agenda for families, children and young people aged 0 to 19
49	Team of specialist nurses providing palliative care for heart failure patients in collaboration with community, acute and palliative care professionals
52	Virtual consultation on community based falls between the nurse case manager in district nursing services and the advanced nurse practitioner in an outpatient department of a rehabilitation unit
55	Advanced nurse practitioner and nurses collaborating with district nurses to provide intravenous and blood transfusion services in an outpatient suite, patients' homes and 24-hour care settings

4.4 Priority areas of action

This section provides an overview of the findings regarding the priority areas of action identified within the ESD framework that are necessary for supporting nurses and midwives in contributing effectively to the health of their communities.

Scaling up and transforming education

Continuing professional education and training are essential to enhance the role and scope of practice for nurses and midwives. In most cases reported here, nurses and midwives received additional education or training to update and expand their role, knowledge and skills; however in several cases, information was not available on the specific training program.

In more than one-third of cases, role enhancement was part of specific career advancement opportunities that led to higher positions, greater autonomy and responsibility. However, in most cases role enhancement did not lead to higher nursing or midwifery positions and education or training was not part of any recognized formal diploma or certificate that added to the health professional's title or formal educational achievements.

In most cases the training was done at the workplace through a short course or seminar attended by the health professional during regular working hours. In nearly all cases the training was evidence-based. Major areas of focus in the training were on developing competencies in disease prevention, health promotion and empowerment of people and patients (Table 7).

Table 7. Specific areas of training presented in case studies

Focus areas*	Number of case studies
Health promotion	20
Disease prevention	23
Empowerment of people/individuals	18
Noncommunicable diseases	13
Acute care	11
Long-term care	9
Other areas of focus (e.g. paediatrics, eldercare and research)	17

*The training in each case can focus on several areas, thus the total number of case studies exceeds 55.

Career advancement opportunities

The role of nurse colposcopists from Wales is one case study in which a nationally recognized formal education program enabled the advancement of the nursing profession by providing opportunities for career development. The introduction of a national colposcopy training program allowed nurses to attain the same standards of practice in colposcopy as doctors, leading to British Society of Colposcopy and Cervical pathology accreditation and becoming colposcopists in their own right. This case also provides an example of innovative on-the-job training, where an accredited trainer in the workplace along with the lead colposcopist provided clinical support, and monthly meetings were held between colposcopists, cytopathologists and histopathologists to discuss interesting cases. (54)

Workforce planning and optimizing skill mix

Effective service delivery requires that there is sufficient staff available at the right time, and with the right skill mix to deliver high quality health care (WHO 2014). A few case studies focused on workforce planning or optimizing skill mix. Within these case studies, the shortage of physicians, the high workload of nurses and the need for more efficient use of nursing cadres were identified as important initiators of change (Table 8).

Table 8. Examples of case studies with workforce planning engagement

<ul style="list-style-type: none"> Increasing physician shortages in primary health care, declining access to treatment and growing interest in improving nursing competencies led to a need for workforce planning. In response new roles of nurses were developed to reallocate certain groups from a physician's care to a nurse's (11)
<ul style="list-style-type: none"> With increasing demands, an insufficient supply and coverage of birth centers and services for parenthood preparation led to the establishment of a birth- and parenthood preparation center. In addition, there was a wish to improve the quality of training for midwives and engage in research. Midwifery professors expanded their scope of work by adding clinical activities in the center to their teaching and research commitments. Master students in midwifery supported the center. The Management of the Nursing School supports the initiative providing human resources, simulation laboratories and equipment for the activities of the center (27)
<ul style="list-style-type: none"> Understaffing of physicians in a polyclinic led to planning the workforce changes to more efficiently use of the nursing cadres. An independent nursing reception service was established which allowed nurses to receive patients and carry out the consultation. Physicians were asked to assist when needed. Establishment of an independent nursing reception enabled a decrease in the workload for physicians in order for them to treat patient most in need (32)

- Increasing numbers of women being referred for colposcopy resulted in prolonged waiting times and pressure for services to meet standards. A shortage of colposcopists, combined with reduction in junior doctors working hours meant less coverage. A reliance on locum coverage resulted in lack of continuity of care and locum doctors were not always up-to-date with the cervical screening policies and procedures. The introduction of a national colposcopy training program allowed nurses to attain the same standard of practice as physicians. Nurse colposcopists can manage their own caseload including assessing, diagnosing, treating and discharging women (54)

Representatives from other disciplines, such as consultant physicians, medical specialists, dieticians, mental health experts, physiotherapists, psychologists and social workers were reported to work alongside nurses and midwives in multidisciplinary teams. In addition, teachers and researchers acted as collaborators and coaches to nurses. Nurses and midwives also worked within wider multidisciplinary teams that involved local authorities from other sectors (Table 11), with families being engaged in interagency meetings as key partners in assessing and planning care. In some cases, nurses worked with community stakeholders in mobilizing communities. In another case the method of participatory action research was also applied in order to engage stakeholders in the development and implementation process. Several approaches to developing the workforce were reported, e.g. new job descriptions to promote role enhancements, career structures directly by national regulations, an operation manual created for the delivery room which defined the expanded functions of midwives, a workforce development plan to explore the role of the health visitor.

A model for optimizing the structure of nursing personnel to provide high quality care

In Portugal, a data model and a tool were developed to allow hospital nurse administrators to monitor different nursing qualifications and interventions, and their impact on outcomes in the health and well-being of local populations. Nurses applied an individualized care model to achieve nursing sensitive outcomes that focused on high quality, efficient and person-centred nursing care. (25)

Ensuring positive work environment

Positive work environments should be promoted and assured through different measures in order to improve health and performance outcomes (WHO 2014). In nearly all cases the role enhancements of nurses and midwives were implemented in multidisciplinary environments. Various mechanisms were used to engage nurses and midwives in role expansions such as multidisciplinary and nursing committees, workshops and platforms, national and local working groups and local multiagency groups.

Nurses and midwives received feedback on their new roles through numerous channels. In addition to traditional managerial feedback, and patient satisfaction and organizational surveys, feedback was provided through local networks of expert nurses, stakeholder meetings, media and recognition awards. One health care organization gave annual rewards to staff for the top-performing specialties, however, only a few case studies reported on resulting wage increases or the development of new salary schemes.

The majority of case studies reported findings of increased job satisfaction and multidisciplinary work. Greater job satisfaction was reportedly due to role enhancements, increased responsibility and authority, acquisition of new skills, and positive outcomes and patient feedback. Job satisfaction also contributed to staff retention. Furthermore, nurses' participation in the development of tools and the use of these tools also promoted job satisfaction. Additionally, collegial relationships, effective communication, shared decision-making and mutual respect of the professionals were improved through multidisciplinary meetings and

by developing multiprofessional protocols. Two case studies also focused on changing the organizational culture in order to promote higher standards of staff behaviour and values.

Table 9. Examples of case studies having impact on positive work environment

<ul style="list-style-type: none"> • In Finland, implementing the role of Case Manager and the Chronic Care Model created new ways of working. As an expected outcome, development of primary health care had a positive effect on ensuring the sustainability, retention and well-being of the staff. (9)
<ul style="list-style-type: none"> • Organization models that increase the autonomy of nursing and enhance the relationship among nurses and physicians, possess better outcomes, including better job satisfaction. In Portugal, data collection and assessment on the nursing work environment and patient environment in the acute care setting showed a positive relationship between favorable environments and good patient outcomes. The data also showed a good climate between nurses and doctors. (25)
<ul style="list-style-type: none"> • In Portugal, a toolkit «PEER» designed for nursing schools to be used for participatory action research in supporting their work towards healthy settings. The toolkit included a seed group training course and a framework to community assessment. (26)
<ul style="list-style-type: none"> • In Spain, involving midwives in screening and emergency obstetric care resulted as increased the feeling of job security, improved job satisfaction as well as increased responsibility and autonomy of midwives. (36)
<ul style="list-style-type: none"> • Professionals' attitudes and behaviours are linked to improved patient satisfaction. In England, a nursing strategy that delivers compassionate patient care embedding the '6Cs' (care, competence, compassion, courage, communication, and commitment) values was developed, aiming to secure high standards of staff behaviour. All nurses were engaged in shaping the strategy and practical tools. (42)
<ul style="list-style-type: none"> • In England, introduction of health visitors working in a multiprofessional teams towards an early intervention for families, children and young, reduced professional barriers through improved understanding of roles and responsibilities as well as improved partnerships and integrated working. As a result, an open culture with shared values and outcomes was created. A trusting professional climate led to improved access and communication. (44)

Promoting evidence based practice and innovation

Health services should be delivered using the best available evidence to ensure safe and efficient care. Evidence-based practice should be promoted through education, research and leadership while nurses and midwives should be supported in their efforts to apply evidence-based practice in their clinical work (WHO 2014). Nearly all country cases used evidence-based practice in expanding nursing and midwifery roles or developing new practices. Most cases reported on evidence-based guidelines to direct clinical practice or used management support to ensure that evidence-based interventions were applied (Table 10). Furthermore, research was produced to provide the best available evidence to guide clinical decision-making. Less than one-third of cases did not clearly define the use of evidence-based practice.

Table 10. Examples of impact of evidence based practice on the outcomes

Evidence-based practice	Outcome
<ul style="list-style-type: none"> • Use of an evidence-based and validated registration instrument for aggression management was implemented in mental health care (1) 	<ul style="list-style-type: none"> • Positive effect on the self-efficacy of nurses • Positive effects on the self-efficacy and coping styles of patients; shift to more non-physical interventions in managing aggression may be expected • Staff felt able to intervene in a professional and therapeutic manner
<ul style="list-style-type: none"> • Evidence-based guidelines on best-practice in nutritional care for older patients were implemented in geriatric wards (2) 	<ul style="list-style-type: none"> • Improved person-centered nutritional care • More in-depth analysis of patient nutritional status • Increased counseling for older patients
<ul style="list-style-type: none"> • A nursing pain management group was established to improve pain management by using evidence-based practices • The pain group identified gaps in pain management, collected evidence from the literature, organized education for ward nurses, developed pain assessment and pain management guidelines (22) 	<ul style="list-style-type: none"> • Pain assessed and documented in all children • Use of pain management guidelines • Defined policies, standards and guidelines
<ul style="list-style-type: none"> • The best clinically usable and evidence-based scales were selected to assess pain intensity in a paediatric hospital (24) 	<ul style="list-style-type: none"> • A protocol for pain assessment was designed based on: data on the child's pain, pain scales based on the type of pain, clinical condition and child's age, guidelines to assess pain intensity
<ul style="list-style-type: none"> • A nursing and healthcare research unit collaborated with other stakeholders to implement and ensure the use of evidence based practices across 8 healthcare settings (35) • A triennial call that allows clinical settings to join the program (35) 	<ul style="list-style-type: none"> • Committees were created on each guideline for the implementation process • Increased professional satisfaction • Improved patient satisfaction
<ul style="list-style-type: none"> • Pain assessment guidelines and tool were developed for paediatric pain management by conducting several systematic literature searches and attending international paediatric pain conferences (40) 	<ul style="list-style-type: none"> • General reduction in the number of painful procedures performed in infants • Adequate pharmacological and non-pharmacological management of pain • Reduced risk of infections in intact skin • Support for parents to better cope with stress through active involvement in pain management
<ul style="list-style-type: none"> • Nurses facilitated the implementation of the direct enhanced service for people with learning disabilities by expanding their scope of practice through continuous professional development, ensuring practice was underpinned by the latest evidence-base, knowledge and skills (47) 	<ul style="list-style-type: none"> • Increase in people with learning disabilities accessing GP practices and receiving health checks every year • Increased number of GP practices signing up to service • New health needs were identified • Identification of people with learning disabilities not previously known to services • Accurate registers of people with learning disabilities recorded in GP practices

Supportive virtual environment for health promotion

District Nurses in collaboration with a multidisciplinary group of professionals and laymen designed a needs based, user friendly interactive ICT-based health channel to support District Nurses' efforts for health promotion and disease prevention in primary health care. The health channel enabled District Nurses to disseminate health information, support healthy lifestyle and enhance health literacy by providing access to reliable, evidence-based health information and decision support to the community in their homes. The District Nurses expanded their health promotion efforts to engage 'hard to reach' groups including the youth and immigrant groups, who are important target groups for primary prevention (39)

4.5 Enabling mechanisms supporting the progress

This section presents findings regarding the enabling mechanisms that support the initiatives and changes in nursing and midwifery practice. The enabling mechanisms were identified within the framework provided by the European Strategic Directions.

Regulation, guidelines and regulatory framework

Regulative frameworks such as legislation or guidelines can act as enabling as well as limiting mechanisms for changing practice and enhancing the roles of nurses and midwives. Approximately one-third of the cases reported having a legislative framework supporting role enhancements (Table 11).

Table 11. Examples of legislative frameworks directing the change

Case study	Legislative framework
Telemedicine video consultation between hospital-based nurses and discharged patients with severe COPD (6)	<ul style="list-style-type: none"> • Teleconsultation with discharged patients in Denmark is legally comparable to a visit at an out-patient clinic. Nurses can use teleconsultation which is equivalent to a health clinic based consultation
New approach to improve health of families with children (10)	<ul style="list-style-type: none"> • Legislation on maternity and child health clinics and school health care regulating extensive health examinations came into force in Finland in 2011
Nurse consultations for acute health problems and NCDs (11)	In Finland, legislation on nurse prescribing authority came into force in 2010 and postgraduate education requirements in 2011
Cervical screening program by health visitor nurses (13)	<ul style="list-style-type: none"> • In Hungary, a legislative amendment (decree) of the Minister of Health, Social and Family Affairs served as a regulatory framework. Health Visitor nurses were entitled to perform screening if they possessed the required competency
Nurses work independently as specialist diabetes nurses (19)	<ul style="list-style-type: none"> • In Lithuania, the diabetic nurse practice and education are regulated by the Decree of the Ministry of Health. The same legal document describes the requirements for establishing offices for specialist diabetes nurses

Over one-third of the cases reported having regulatory frameworks in place and more than half of the cases reported on guidelines or care pathways directing the change in practice (Table 11). Governmental approvals, decisions made by local health boards, orders from chief physicians and similar audit requirements as physicians regarding particular service areas are examples of regulatory frameworks. In nearly all cases the

role enhancement and change in practice was supported by other foundational structures such as National Boards of Health, committees, research institutions or guidance from national health plans and strategies.

Table 12. Examples of national programs and guidelines leading to the development of nursing and midwifery roles

National programs and guidelines
<ul style="list-style-type: none"> • Implementation of nutritional guidelines in eight acute geriatric wards in six hospitals (2) • Multidisciplinary team implemented systematic screening, full assessment and person-centered nutritional care for the elderly over six months (2)
<ul style="list-style-type: none"> • As part of the National Development Program for Social Welfare and Health Care adopted by the government, nurse consultations for acute health problems and NCDs and the role of case managers based on the Chronic Care Model were developed (9,11) • New care pathways and processes facilitating care coordination within and across organizations were implemented based on the initiatives (9,11)
<ul style="list-style-type: none"> • To improve pain management in nursing homes, pre-defined nursing care plans in accordance with the National Standard for Pain Management in Nursing were implemented as a key element of the multi-professional pain management agenda (12)
<ul style="list-style-type: none"> • A four level service model for school nursing was developed and implemented based on the government public health strategy and directions 'Healthy Lives, Healthy People' reflecting the nursing role in public health in the school community (43)
<ul style="list-style-type: none"> • Clinical governance, clinical guidelines and interventional procedure guidance were used to develop specific guidelines and treatment pathways within the service to treat patients with faecal incontinence (48)

Research

Research in nursing and midwifery should be integrated in planning and assessing health services (WHO 2014). It is equally important to incorporate partnerships with nursing and midwifery-based and multidisciplinary researchers to generate evidence regarding the entire continuum of care.

Country case studies provided evidence of a variety of ways in which research was facilitated in clinical settings. The Spanish case studies introduced a nationwide framework led by an academic nursing research unit for facilitating research and implementing evidence-based practice. This framework covers a national nursing research strategy, a collaborating centre of the Joanna Briggs Institute and a network of hospitals across the country. Nurses and midwives also received training in critical appraisal and research methodology. They were also engaged in research and implementation of evidence-based practice through committees, platforms and advisory groups. In addition, guidelines on nursing research in clinical practice were published.

Research & Evidence-based practice

A national nursing research strategy has been established to expand nursing research and to build the scientific foundation for evaluating and enhancing practice and outcomes. Nurses took part in training and continuing professional education to improve their skills and knowledge of research methodology. Research was integrated as an integral part of their work and the results were translated into improved clinical practices. (36)

Some case studies provided additional examples on how to engage nursing students in developing and evaluating nursing practices by means of participatory action research. At the same time this method was applied as a new kind of teaching method regarding health promotion and community empowerment.

An evaluation phase was incorporated into most case studies. Evaluation was usually conducted by nurses and midwives or by university researchers engaged in the project. Some case studies were part of academic or wider multi-agency or multi-country research projects. The staff skills and competencies in data collection were also developed as part of the initiatives. In addition, external universities and research institutions were involved in the evaluation phase. For example in one case, the university initiated research on new roles and functions for specialist diabetes nurses. Several studies were used as pilots for other health care settings to learn from and provided evidence for strategic health service designs and dissemination of new practices.

Outcomes and changes based on the initiatives were reported through research and project reports, thesis, patient surveys or statistical data. Some initiatives were also shared through media. A case study provides an example of how nationwide surveys were used for evaluating and disseminating findings regarding the implementation and outcomes of role expansion of public health nurses and midwives in conducting extensive health examination of children in maternal and child health counseling clinics and school health care.

Partnerships

Building intersectoral collaboration and partnerships in health across society is important to address health challenges in a cost-effective, comprehensive and responsive manner (WHO 2014). In more than two-thirds of cases, partnerships were essential and integrated parts of the services provided. Of these, more than one-third had partnerships in place in-between different health care institutions such as hospitals partnering with other hospitals, health centres, clinics and general practitioners.

In most cases partnerships were established between health care institutions and non-health care institutions or organizations including universities and research institutions, schools and professional advisory boards. Among these partnerships more than one-third concerned partnerships with health authorities, while in a few cases partnerships with non-health sector authorities, such as Departments of Education, were in place (Table 13). Nearly one-third of the cases reported establishing partnerships with non-governmental organizations, such as local grass-root organizations focused on select population groups, and nursing and patient organizations. Few cases outlined partnerships with civil society.

Overall, partnerships provided the means to share information and deliver coordinated, high quality and integrated care in a safe and feasible manner. Partnerships between health care and research institutions were especially effective in terms of enhancing evidence-based practice while partnerships with authorities and civil society provided sustainable frameworks for larger reforms and changes in practice.

Partnerships in school nursing

The School Nursing Development Programme in the United Kingdom focused on improving the life chances of children and young people through effective preventative services and the provision of early help. School nurses worked in partnership with other agencies and as part of a wider multi-disciplinary team. To ensure the model was owned and led by the school nursing profession, a stakeholder advisory board and focused task groups were established. The professional organizations for the school of nursing and school nurses were key partners. The programme was co-produced with children, young people and parents in developing a vision based on evidence and feedback. The engagement with children and young people was led by key partners including the British Youth Council, National Children's Bureau and Netmums. (43)

Table 13. Types of partnerships presented in case studies*

Types of partnerships	Number of case studies
Partnership in place	39
Between different health care institutions	25
Between health care institutions and any non-health care institutions or organizations	35
Between health institutions and health authorities	21
Between health care institutions and non-health care authorities	8
Between health care institutions and NGO's	14
Between health care institutions and civil society	9

* Several types of partnerships in one case may exist, thus the total number of case studies exceeds 55.

Management and leadership

Good clinical practice is based on integrating nursing and midwifery management structures into the organizational culture to engage nurses and midwives in decision-making (WHO 2014). In nearly all case studies nurse and midwife management positions supported the role expansion. Likewise, other structures, including health care management and other facilitators of the new practice, supported nurses' and midwives' role enhancement. Most of these were at a local level while less than one-third of management support came from national or sub-national levels, such as Ministries of Health or regional health authorities.

Although nurses and midwives were included in different levels of decision-making, very few cases reported having formal structures in place to promote their inclusion in decision-making. Formal structures were found primarily in cases where nurses and midwives took on leading roles. These formal structures include signed agreements which served as a contractual basis for implementing the project and include nurses and midwives in decision-making, workforce development plans and organizational structures which place nurses and midwives in leading management positions.

Clinical leaders facilitating the development of pain management

The case study from Switzerland provides an example of how a transformational culture of medical and nursing leadership supported the development and implementation of evidence-based interdisciplinary pain management for preterm infants in a neonatal intensive care unit. All staff members participated in tailored educational sessions in pain management on a regular basis, and instructions on pain management were included in orientation sessions for new and returning staff. Opportunities were also provided for bedside teaching, supervision of novice professionals and discussion of individual cases. Infants underwent pain assessments and evaluations several times a day by means of a validated tool to assess the effectiveness of treatments, and evidence-based guidelines were used in determining non-pharmaceutical and pharmaceutical standardized pain treatments. This project was aligned and evaluated through research and the results were disseminated in scientific publications. Nurses were also engaged in the research projects. This initiative which took place over several years led to national awareness of the importance of better pain management (40)

Country case studies also provided examples of promotion nurses and midwives to senior posts in order to lead a multidisciplinary team or to support multidisciplinary and multiagency work (Table 14). These posts were focused on coordination of resources to provide services and improve access to services for patients with a primary focus on targeted and vulnerable groups. Post-holders were also responsible for developing care pathways, person-centered care packages, individualized care plans and processes for health check-ups and referrals.

Table 14. Examples of case studies presenting the alignment of senior nursing and midwifery posts with the contribution to the services

Examples with senior nursing and midwifery posts	Main contribution to the services
Nursing pain management group in a paediatric hospital (22)	<ul style="list-style-type: none"> • Identifying gaps in pain management • Collecting evidence from the literature • Organizing training and coaching nurses in practice changes • Developing guidelines
Bereavement Support Midwife regarding miscarriage, stillbirth and neonatal death (46)	<ul style="list-style-type: none"> • Integration of the wider regional health care team • Dedicated support and care resources for the multidisciplinary team • Care pathways providing a framework that reduces complex documentation and gives parents the confidence to return to the unit
Enhanced learning disability nurse in primary health care and community adult disability services (47)	<ul style="list-style-type: none"> • Support for the development and implementation of annual health checks and referral processes • Ensuring follow up and implementation of individual health action plans • Validating health assessment tools and provision of specific services • Coordinating an effective multidisciplinary response to ensure improved access to services
Additional Support Midwife Practitioner providing pre-birth planning services for vulnerable families (50)	<ul style="list-style-type: none"> • Proactive approaches and early interventions in supporting families, encouraging women to take control of adverse situations and leading care • Improved communication and collaborative work with partner agencies

Examples with senior nursing and midwifery posts	Main contribution to the services
Community diabetes lead nurse role(53)	<ul style="list-style-type: none"> • Access to structured diabetes education and implementation of individualized plans of care for adults with diabetes in primary health care • Avoiding admissions to specialist outpatient and inpatient services • Multi-disciplinary approaches to promote clinical and service development opportunities

4.6 Contribution to priority areas of Health 2020

The country case studies provide evidence on contributions in each of the four priority areas of Health 2020 (Table 14). The development of nursing and midwifery services in line with the first priority addressed empowerment and the life course approach through education, counseling, screening, health examinations, and tailored support. It also included early interventions for women in pregnancy, during birth and during the postpartum period as well as for children, families and older people. The shared aim was to promote a healthy and safe start in life, child development, health literacy, healthier choices and social behavioural change as well as healthy aging and independent living. These services were implemented via outpatient, inpatient and home based care.

Nurses tackled noncommunicable diseases in line with the second priority area by employing ambulatory and outreach services, call centers and using telephone and telehealth in order to support people to continue living in their homes. Rehabilitation and self-care capacities were also promoted through structured patient education and individual and group session as a core part of strategies addressing noncommunicable diseases. Because these patients often had a complex mix of service needs, nurses applied care and disease management approaches, coordinated care pathways and multiagency service delivery. In addition, public health nurses used media and other channels to raise awareness regarding the importance of vaccination and provided counseling for local communities during outbreaks of communicable diseases.

In line with the third priority area of strengthening person-centered health systems, nurse consultations were created in order to improve access to care and screening in primary health care, outpatient hospital care and in remote areas. Services traditionally based in hospitals were transferred to community in order to support patients with chronic conditions to receive the care they needed in their own homes. Nurses also established a comprehensive dementia friendly hospital in order to ensure person-centered care. In addition, care and support were also provided for vulnerable population groups through new nursing and midwifery services such as tailored planning, service schemes and care pathways as well as collaborative working across partner agencies. Telehealth was used to integrate community and hospital based nursing services as well as medical consultations in remote areas.

In line with the fourth priority area, communities of school children, young persons and local citizens were engaged in enhancing healthy lives, behavioral changes, facilitating health promotion through counseling, early intervention and through Information and Communication Technology (ICT) supported health communication. Universities also mobilized communities to prevent harmful behaviour and develop healthy settings through peer education. Hospital nurses provided education for family members and caregivers in order to support rehabilitation and quality home care for patients.

Table 15. Examples of specific contributions to the Health 2020 priority areas*

Priority area 1: Life-course approach, empowering people	Priority area 2: Noncommunicable and communicable diseases	Priority area 3: Health systems, public health capacity	Priority area 4: Resilient communities, supportive environ- ments
<p>Promoting safe pregnancies, normal births, healthy start in life and adjustment to the new life situation for women with low obstetric risk and their families via midwife-led antenatal and postpartum outpatient clinics and birth units (4, 8, 36, 45)</p> <p>Promoting antenatal and postpartum health through education, screening, counseling and tailored support via midwife-led antenatal and postpartum outpatient care and home visits (15, 21, 27, 51)</p> <p>Promoting child development, health literacy and behavioural changes in families via health examinations, empowerment, targeted support and early intervening (10, 20)</p> <p>Supporting healthy aging and independent living via assessing daily living and care needs and providing individual counseling, home based services and rehabilitation (2, 3, 29)</p>	<p>Supporting early discharge, promoting rehabilitation in the community and strengthening self-care, coping capacities and treatment compliance for patients with NCDs through ambulatory and outreach services, individual and group sessions and telephone support (14, 16)</p> <p>Addressing care needs, self-care and coping capacities and facilitating the continuity of care for patients with NCDs and a complex mix of service needs via care/disease management and coordination of care pathways in health centres and call centres (9, 17)</p> <p>Facilitating proactive approach and timely access to individual care via structured patient education, coordinating multiagency service delivery and development by clinical leadership in diabetes care (53)</p> <p>Promoting rehabilitation, observation and self-care capacities through patient education and coaching via telehealth (5, 6, 7)</p> <p>Raising awareness and ensuring vaccination coverage during epidemiological outbreaks through campaigns (18)</p>	<p>Improving access to care through new forms of services in primary health care and outpatient hospital care for patients with chronic conditions and communicable diseases (11, 30, 32, 33)</p> <p>Improving access to care and screening in remote areas through new forms of services in primary health care and outpatient hospital care and integrating services via telehealth (11, 13, 52, 54)</p> <p>Supporting patients with chronic conditions to stay in their homes through palliative care and home based hospital care (49,55)</p> <p>Implementing person-centered care for patients with dementia through transforming the organizational culture and the hospital environment and creating an outreach service(41)</p> <p>Addressing care and support needs of vulnerable population groups through tailored planning, service schemes and care pathways as well as collaborative working across partner agencies (46, 47, 50)</p>	<p>Enhancing healthy lives and life changes among school children, young people and their families through counseling, support and early intervening based on an integrated multiagency service model (43, 44)</p> <p>Creating supportive virtual environments for health to support healthy lifestyle and decision making. Contribute to an empowered, health and e-health literate population and health personnel. (39)</p> <p>Improving health literacy and preventing harmful behavior among young people and creating healthy settings via peer education and mobilizing communities (23, 26, 28)</p> <p>Promoting rehabilitation and home care through strengthening knowledge and developing skills of family members and caregivers (31, 38)</p>

* Case study numbers are indicated in brackets.

5 CONCLUSIONS

This compendium illustrates innovative and good practices in nursing and midwifery across the WHO European region. Based on 55 case studies from 18 countries, the compendium demonstrates the variety of existing and evolving roles of nurses and midwives in health systems and their contributions to accessible, cost effective, person-centered and high quality services.

Case studies in this compendium provide empirical evidence on practice development but certain limitations exist in terms of the availability of reported information and validity of the data. Four key conclusions resulted from the analyses of the case studies. While these conclusions are by no means exhaustive or a full synthesis of the case studies, they have been selected for their policy- and workforce- relevance and their potential to guide future action.

The four key conclusions are:

- **Good practices in nursing and midwifery exist supporting Health 2020 implementation** – A variety of new healthcare models and innovative practices have been implemented in various settings across the European region, ranging from small-scale projects to nationwide nursing and midwifery reforms. The good practice and innovation that exists, however, is not always well documented or rigorously evaluated and rarely shared within or across countries.
- **Nurses and midwives enhance health** – The case studies demonstrate a large range of contributions of nurses and midwives in improving health and preventing diseases, spanning from health promotion throughout the life course, to empowering individuals and communities. Nurses' and midwives' roles have often evolved and expanded in response to changing healthcare needs of the population. This demonstrates how nurses and midwives are a vital and versatile resource towards achieving the goals of Health 2020.
- **Evidence-based practice and interprofessional collaboration facilitate innovation** -Collaboration within multidisciplinary teams has shown to be effective and feasible. Nurses and midwives are playing an increasing role in developing evidence-based practice, conducting health research and developing innovative practices as part of interdisciplinary teams.
- **Enabling policies maximize nurses' and midwives' potential** – The nursing and midwifery workforce has the expertise and potential to improve population health and much of this is still untapped. The case studies revealed that effective policies and workforce planning, strong professional leadership, regulatory frameworks, educational standards and supportive managerial practices are essential to enable nurses and midwives to work to their highest potential;

The compendium has for the first time documented good practices in nursing and midwifery across the entire health spectrum. The case studies are aimed at feeding into a larger process to increase the sharing of good practice across the European region, to be guided by the WHO's policy framework – Strengthening nursing and midwifery: European Strategic Directions towards Health 2020 goals (ESD). The majority of country case studies have been implemented as small-scale projects, at single healthcare facilities or in specific regions. Seldom have they been implemented nationwide – which is a missed opportunity. Sharing evidence and evaluating results, discussing the transferability and scalability of such models and implications for policy, planning, regulation and education, can provide important lessons for those countries that plan similar reforms or are at different stages of implementation.

A sustainable health workforce requires solid workforce policies, effective finance mechanisms, and the evaluation of reforms. Improving Europe's population health is directly linked to an effective and efficient health workforce, including nurses and midwives. Maximizing health gains in the European region – the goal of Health 2020 – can be accelerated by strengthening nursing and midwifery, in line with strengthening the health workforce overall.

To ensure high quality care and sustainable services, it is important to promote evidence based practice, monitor and evaluate nurses' and midwives' contribution which should be enabled through education, research and regulation.

Despite the role enhancements found in several country case studies, there is still a need in the WHO European Region to further develop the education of nurses and midwives and match nursing and midwifery services to the health needs of the population. Member States are encouraged to take a lead and further expand the scope of practice for nurses and midwives so they can work to their full extent of education and highest potential. In addition, there is a need to integrate the field of nursing and midwifery into national policies within a whole-of-society framework that involves all stakeholders including local communities and civil society.

6 SELECTED COUNTRY CASE STUDY SUMMARIES

The following section presents summaries of country case studies, selected as examples of the range of practice development, innovations, or role enhancement provided by member countries. These summarized examples of country cases provide a unique insight to the good practices and contributions of nursing and midwifery to improve health and well-being across the WHO European Region.

Country case studies were originally developed according to a template (Annex 4) included in the WHO manual for the development of case studies. According to the manual, case studies were to focus on the role of nurses and midwives contributing to a new service or role enhancement. Content from the selected case studies was summarized according to the main themes of the template to maintain consistency in presentation across the various cases.

The summarized cases in the following section are organized according to the four main areas of focus in Health 2020: a European policy framework supporting action across government and society for health and well-being. It provides examples of good practices and contributions in each focus area.

EXAMPLES OF CONTRIBUTIONS TO HEALTH 2020 PRIORITY AREA 1: INVESTING IN HEALTH THROUGH A LIFE COURSE APPROACH AND EMPOWERING PEOPLE

Implementing nutritional guidelines in acute geriatric wards, Belgium (No. 2)

Background

Prevalence studies in Belgian geriatric wards showed that older patients at risk of malnutrition or already malnourished were rarely identified. Benefiting from a nationwide nutritional plan, three researchers supported the implementation of nutrition guidelines in eight acute geriatric wards of six hospitals.

Practice development

In each ward, a steering committee comprised of representatives from different disciplines made a baseline analysis of the current situation and developed a flowchart for systematic screening, multidisciplinary follow-up and evaluation of individualized nutritional care in the wards.

Nurses developed new skills related to the systematic screening and assessment of newly admitted patients using the Mini Nutritional Assessment scale.⁷ Nurses also referred, documented, discussed in multidisciplinary meetings and re-assessed systematically each patient. Nurses were taught to use a validated screening tool, to identify older patients at risk of malnutrition or who were already malnourished. Training regarding the use of the tool and the results of the screening was also provided. Additionally, nurses were offered the possibility to co-elaborate and implement an interdisciplinary protocol regarding the screening and caring for malnourished patients. The implementation of the new practice was supported by researchers and dietitians. The model was disseminated in other wards of the hospitals who took part in the pilot study. This project was followed by the implementation of nurse-led nutritional teams in the hospital, who could take over the monitoring of the initiated process.

Outcomes and quality of care

The process included systematic screening, full assessment and multidisciplinary, person-centered nutritional care for the elderly. A higher level of awareness about the prevalence and incidence of malnutrition in the wards led to improved nutritional care and systematic evaluation of the interventions. Nurses reported feeling empowered to provide high-quality nutritional care and to interact more effectively with other healthcare providers after the protocol and tools were implemented. They stated that their input was being valued by the other healthcare professionals. Elderly patients expressed satisfaction about the attention provided to the way the food was processed, presented and their preferences taken into account. A key success factor for this project was the systematic identification of stakeholders and continuous engagement during the implementation process through face-to-face meetings. Nurses were ideally positioned to implement innovative practices involving a multidisciplinary team.

⁷ Vellas B, Guigoz Y, Garry P, Nourhashemi F, Bennahum D, Laugue S, Albaredo J. The Mini Nutritional Assessment (MNA) and its use in grading the nutritional state of elderly patients. *Nutrition*, 1999, 15(2):116-122.

Midwifery-led services in a postnatal clinic. Systematic evaluation of perineal wound healing in hospital, Denmark (No. 4)

Background

About 80% of all women who give birth to their first baby sustain minor or major injury to the vulva or the perineum. In Denmark, midwives are responsible for the diagnosis and surgical repairs to trauma not involving the anal sphincter. Midwives are employed by the hospital and provide both antenatal and postnatal services as well as birth assistance.

Aarhus University Hospital services 4500 births annually and encourages early discharge and families return to their homes within 2 to 4 hours after uncomplicated births. Systematic assessment of perineal wound healing has not been part of routine care. A postnatal clinic was introduced to provide a one-stop service at two or three days postpartum. Systematic evaluation of wound healing is included in these services in order to optimize perineal healing after vaginal birth.

Practice development

A specialised midwifery-led postnatal clinic provides a one-stop health visit, including neonatal screening, breast-feeding encouragement, birth experience evaluation and assessment of wound healing after perineal repair. Assessment of wound healing postpartum was previously not performed systematically and the assessment of normal and pathological healing was new to midwives. A specific guideline on wound healing assessment and secondary perineal repair was developed. All Midwives in the clinic were trained in wound healing assessment, postnatal pain management and specialized midwives were trained to perform secondary perineal repair if needed through an e-learning programme which was developed in collaboration with senior obstetricians and urogynaecologists.

A clinical assessment of wound healing was offered for all women who underwent perineal injury. Photos were shared with women to enhance their understanding of the healing process. In case of wound breakdown or suboptimal primary repair, photos and case description with suggestions of improvement were shared with the midwife or doctor responsible for the primary repair.

In the implementation phase a small group of three midwives were responsible for early secondary repairs. This group of midwives were clinically trained to perform secondary repairs by a urogynaecologist with expertise in the field.

An audit of all secondary repairs in terms of anatomical alignment, postoperative pain, wound infection and patient evaluation was performed 7–14 days postoperatively by a clinical midwife with research background. Early secondary repair was previously performed by obstetricians without postoperative assessment.

Outcomes

Midwives and doctors from the delivery ward were offered the opportunity to receive individual feedback on perineal repairs. This task-specific feedback was new to many clinicians, as wound-healing assessment was not provided in the hospital setting previously.

Midwives working in the new postnatal clinic expressed increased work satisfaction as the clinic offers subspecialisation into wound healing assessment as well as breast-feeding support, and birth experience

evaluation. The midwives increased knowledge and shared information through photo documentation and audits of different types of healing.

Wound healing after primary perineal repair performed by midwives was successful in 93% of cases judged by visual assessment from two to three days postpartum. The remaining 7% of wounds were either insufficiently repaired or showed signs of suture break down. Preliminary results indicate high patient satisfaction and anatomically good healing after early secondary repairs.

Supporting families in a Baby Friendly Hospital, Finland (No. 8)

Background

In 1994 a group of midwives gathered to discuss how to better support families in parenthood and get them actively involved in maternity care. As a result, The Haikaranpesä (Stork's Nest, SN) project was set up to offer mothers and families of the Helsinki area a midwife-led birthing unit where the normality of the birth process was emphasized and families were empowered to take an active role. Other priorities in planning the care path were safety and health promotion. In 1996, after extensive background work, a pilot group of 20 families were the first to try out the SN. The project was fully supported by the multidisciplinary team of a large maternity hospital. In 2010, the maternity hospital achieved a Baby Friendly Hospital certificate awarded by Finnish National Institute for Health and Welfare.

Practice development

Midwives have become involved in care for low obstetric risk mothers along the continuum of pregnancy, birth and the postpartum period. Midwives provide antenatal education on birth, relaxation and exercises for mothers as well as baby care, breastfeeding, mental preparedness and sexuality following birth. They also arrange birth planning meetings and fathers' peer groups. Midwives are responsible for care during birth and postpartum care including clinic appointments for those who are discharged early from hospital and those needing support with breastfeeding. Midwives received new training on many topics, including non-pharmacological pain relief methods and how to counsel mothers suffering fear of childbirth. International Board Certified Lactation Consultants (IBCLC) training was completed by two midwives to improve the support for breastfeeding mothers, and they conducted workshops to all midwives in the Helsinki area.

SN had specific guidelines restricting participants to mothers with low obstetric risk. The care path was planned to include antenatal classes, birth planning with a midwife, delivery and postpartum care, all steps involving the partner or the family unit as well. The basic model for the birth plan was adapted from the Swedish model and then further developed in accordance to Finnish recommendations⁸.

Outcomes and quality of care

The model supported mothers arriving to hospital later during labour and being discharged from hospital earlier, resulting in reduced costs for the hospital. Parents' enhanced training and comprehensive follow up care had positive outcomes and there was no increased risk to the new-borns with the new model. Satisfaction among families was 20% greater in SN than in other maternity units within the area. Women in labour were better aware of their preferences regarding childbirth and had more knowledge of the birthing process,

⁸ Klemetti R, Hakulinen-Viitanen T. itiyneuvolaopas. Suosituksia itiyneuvolatoimintaan. The Finnish National Institute for Health and Welfare, 2013.

thus reducing anxiety. Recognizing partners as equal participants has been one of the unit's main principles. 51.6% of all partners stayed in family rooms at the hospital which supported the family in adjusting to the new life situation. Support from partners and more antenatal information improved breastfeeding outcomes. Breastfeeding within the first 2 hours of birth was found in 89.8% of cases compared to 63.3% and 67.3% in the sister units. 80.1% of babies were fully breastfed on discharge compared to 69% in another low risk unit. Student evaluations of SN as a learning environment were very positive.

Midwife-led Antenatal Clinic for Adolescents, Rotunda Hospital, Dublin, Ireland (No. 15)

Background

The benefits of midwife-led care for low-risk women during pregnancy have been demonstrated through previous international research⁹ and this model of care is advocated as an option for the majority of women during pregnancy¹⁰. The audit undertaken prior to the development of the midwife-led clinic demonstrated that a large proportion of adolescents remain low-risk throughout pregnancy and would therefore be suitable for midwife-led care. Many of the obstetric risks associated with pregnancy during adolescence appear to be strongly linked to social factors, such as poor diet and smoking, and can therefore be reduced through high-quality antenatal care.

Practice development

A multidisciplinary antenatal adolescent clinic was established in 2012. The clinic comprises a midwife-led clinic and a consultant-led clinic which run on the same day within the outpatient departments in the Rotunda maternity hospital in Dublin. The establishment of the midwife-led clinic was initiated by a midwife working within the adolescent service.

Adolescents with an uncomplicated pregnancy are offered the option of attending the midwife-led adolescent clinic. Adolescents are designated a named midwife, who takes responsibility in providing the majority of the antenatal care. Upon meeting at their first antenatal appointment, the midwife evaluates the risk status of the adolescent and monitors this continually throughout the pregnancy. Local guidelines have been established within the hospital regarding the adolescent services.

Outcomes and quality of care

A high proportion of the adolescents in the sample were low-risk at the time of the booking visit (81.7%) and more than half of the sample (56.7%) remained low-risk throughout pregnancy. A large proportion (66.7%) of the risk factors occurred after 36 weeks gestation.

The midwife-led clinic benefited adolescents by improving continuity of care during pregnancy and increased opportunities for health promotion and antenatal education. The service also fostered trusting professional relationships and communication between the midwife and the adolescents. This is vital for the provision of effective, high-quality antenatal care for this vulnerable group.

⁹ Sandall J, Soltani H, Gates S et al. Midwife-led continuity models versus other models of care for childbearing women. *Cochrane Database of Systematic Reviews*, 2013 (8).

¹⁰ NICE. Pregnancy and complex social factors: A model for service provision for pregnant women with complex social factors. Royal College of Obstetricians and Gynaecologists, 2010.

The multidisciplinary team was enhanced by effective communication and professional working relationships that foster mutual respect between the professionals. The provision of evidence-based care, tailored to meet the needs of this group of pregnant women resulted in great job satisfaction for midwives. The existence of the midwife-led clinic also reduced the consultant obstetrician's workload within the adolescent service and allowed re-allocation of obstetric time to other hospital departments.

New approach to improve health of families with children, Finland (No. 10)

Background

The way a family functions has major effects on the health and well-being of children. The focus in health examinations in maternity and child health clinics and in school health care has been either on pregnant women or on children's health and well-being. Research revealed the need for wider health examinations, introducing earlier support and strengthening empowerment of families and multiprofessional collaboration. Extensive family health examinations were developed by a working group nominated by the Ministry of Social Affairs and Health in 2007–2009 and piloted in 2009–2010.

Practice development

Altogether seven extensive health examinations were conducted by a public health nurse or a midwife together with a physician during pregnancy, in under school age and in school age children. The role of these professionals was enhanced to cover the assessment of health and well-being of the parents and the whole family. This meant evaluating the psychological and social aspects of the family, including living conditions, income and support networks also became part of the enhanced role. Multiprofessional teamwork and sharing of tasks and information were also learning objectives. These professionals received the necessary support from the day care personnel and teachers. A summary of extensive health examinations was used in evaluating the school environment as a whole.

Extensive health examinations demand theoretical knowledge of family health nursing, health promotion and noncommunicable diseases. Primary skills needed are interaction based on dialogue and partnership, empowerment, early identification of needs and targeting support. Skills to intervene with difficult problems, such as alcohol, drugs and violence are also needed. Skills and competencies were developed via continuous education and a guidebook.

Outcomes and quality of care

Extensive health examinations comprising more than 400,000 examinations a year can have a major effect in the health of children and families. According to a nationwide survey¹¹, public health nurses, midwives and physicians reported that extensive health examinations helped them to identify support needs and potential health problems earlier and allowed them to target support to children and families most in need. Even unidentified problems of children and parents were exposed. Interaction based on dialogue helped parents and personnel discover new viewpoints in the promotion of child health for the benefit of the entire family. Extensive health examinations emphasized the significance of the family in child health

¹¹ Hakulinen-Viitanen T, Hietanen-Peltola M, Bloigu A, Pelkonen M. Äitiys- ja lastenneuvolatoiminta sekä kouluterveydenhuolto. Valtakunnallinen seuranta 2012. Raportti 12/2014. Terveiden ja hyvinvoinninlaitos.

promotion and empowered parents as primary carers of their children. As they improve health habits they helped to decrease noncommunicable diseases.

A solution-focused approach to improve self-esteem in socially withdrawn school children, Norway (No. 20)

Background

Social skills and health in young people can be improved by increasing self-esteem, which helps young people believe in themselves, to become more self-confident, their ability to stand up for themselves, and to reach their goals in school. Socially withdrawn children were reported to have less success in achieving assertive goals.

The role of the school nurse is important in health promotion, involving practices that are supportive and promotive. This intervention study was based on a Solution Focus Approach (SFA) group that was delivered by school nurses to improve self-esteem among socially withdrawn school children. The focus in SFA highlights the children's personal strengths and successes as valuable learning experiences rather than dealing with their experience of deficits and failures.

Practice development

In this study, the school nurses received training on the SFA, and subsequently led all SFA group meetings. The school nurses enhanced their role by supporting vulnerable children in elementary school to believe in their abilities in addition to learning new methods on how to use SFA in groups. The school nurses also received regular support from professional supervisors.

Outcomes and quality of care

The results from this study suggested that the self-esteem of socially withdrawn children aged 12 to 13 can be improved using a school-based intervention with SFA. Compared to the control group, the self-esteem scores among the girls in the experimental group increased significantly at the first post-intervention evaluation. Further, the self-esteem scores increased from the baseline to the second post-intervention evaluation in both experimental and control groups and a larger improvement was seen in the children of the experimental group compared with that of the control group. This method was successful in practice because the children in the intervention groups improved their self-esteem and reached their goals in practice.

This study demonstrated that socially withdrawn children can benefit from a group SFA intervention and reach their goals because they can learn from each other and share their feelings, experiences, and support. The children developed their social competence and skills. These results indicated that the SFA can be suitable for school nurses, in their work with children with special needs.

Collaboration took place among the school nurses, teachers and professors. School nurses reported improved job satisfaction and communication with school staff, and the overall environment among the group members also improved.

Early physical activity and education for patients after lower limb amputation, Russia (No. 29)

Background

For the past three years the number of amputations increased by 56.3%. These patients suffered mobility problems and impaired ability to care for themselves. The Omsk Nurses Association conducted a study on a new care model regarding patients who underwent lower limb amputation. Nurses established and tested the program of early physical rehabilitation focusing on patient education and improvement in their quality of life. The chief physician's order provided the regulatory framework for the implementation of the project.

Practice development

Special nursing positions dedicated to patient training were established for ward nurses. The enhanced role included patient education and support of early mobilization after surgery by means of improving the ability for patient self-care. Nurses taught patients wound care and dressing, individual hygiene while staying in bed, breathing exercises and physical training to enhance early activation and prevention of pressure ulcers. On a daily basis, 30 minutes of working time were allocated for patient teaching.

All ward nurses in the unit attended professional development programs on modern approaches and innovative technologies in professional training at the local centre of post-diploma education.

The head nurse of the unit was trained as a nurse researcher within the project of the Omsk Nurses Association. Nurses also participated in the study by testing the new care model and assessing the health and performance outcomes of the model.

Outcomes and quality of care

The outcomes based on the implementation of the new care model were examined through a multi-centre clinical study. Patients in this program performed physical activity four days earlier and used crutches six days earlier compared to patients in the standard care model. Wounds also healed four days earlier and the care provided in the new model was cost-efficient.

Of the patients surveyed 99.5% were satisfied with the quality of care and the patient education received after surgery. Patients actively participated in care and they were motivated to perform physical exercises, overcome physical barriers and change their life style. The new care model also supported patients adapting to their new life situation and improved the quality of their lives.

Physicians regarded nurses as trusted partners. Positive outcomes strengthened nurses' professional interests and satisfaction and provided evidence on the effectiveness of establishing special nursing positions for patient education.

Re-launch of a freestanding birth centre to promote normal birth, England, United Kingdom (No. 45)

Background

The freestanding birth centre at Chorley and South Ribble District General Hospital was in a poor state, needing to be rejuvenated. The number of women using the birth centre had fallen and midwives were beginning to believe that there was no future for it.

To make the case for re-launching the birth centre, the consultant midwife used evidence^{12, 13} from research and the potential advantages of the new maternity payment structure in the England. Based on this, the Chorley Birth Centre reopened in May 2013.

Practice development

The Chorley Birth Centre provides midwife-led care which promotes normal birth, reduces the number of interventions and involves partners throughout the birth process. Midwives share the philosophy of inspiring women to believe in the normal physiological birth process and taking ownership of their birth experience. The birth centre is run by midwives in a community hospital setting, 14 miles from the main hospital site.

Midwives' skills in normal and water births have been developed. Annual mandatory training has supported staff. In addition, organizational guidelines developed by a multidisciplinary group and guided by the National Institute for Health and Care Excellence were applied.

Outcomes and quality of care

Prior to its re-launch, in December 2012 The birth centre provided care for 1.1% of all births in the local NHS Foundation Trust. This rose to 5.5% in August 2013. Normal birth rates, water births and women using water during labour increased. Of women attending the Chorley Birth Centre, 86% of women had a normal birth, 68% had a water birth and 92% used water during labour. The financial position for the service was improved and will be monitored to provide evidence on further cost savings.

The project increased well-being of the families by promoting normal birth, reducing interventions, including partners in the birth process, providing a healthier start for new-borns and supporting women to resume a normal lifestyle quicker. A 24-hour stay for partners provided the opportunity for more women and their families to be in a relaxed and comfortable environment and have good, satisfying birth experiences. Being an integrated model with midwives working between the community setting and the Chorley Birth Centre, also improved continuity of care.

The Chorley Birth centre has led to increased job satisfaction and improved retention of staff. Midwives have also been working with service users, local newspapers and radio to raise the profile of midwife-led care.

¹² Hollowell J et al. Perinatal and maternal outcomes by planned place of birth for healthy women with low risk pregnancies: the Birthplace in England national prospective cohort study. *British Medical Journal*, 2011;343:d7400.

¹³ Schroeder E et al. Cost effectiveness of alternative planned places of birth in woman at low risk of complications: evidence from the Birthplace in England national prospective cohort study. *British Medical Journal*, 2012;344:e2292.

Weight Management in Pregnancy Intervention 'optiMum' in Tayside, Scotland, United Kingdom (No. 51)

Background

Obesity in pregnancy is known to impact on both the short and long-term health of women, including an increased risk of cardiovascular disease, type 2 diabetes, preterm delivery and birth complications. Maternal obesity can also impact on the wellbeing of the foetus and poses an increased risk of stillbirth or neonatal death, as well as developing chronic conditions in later life, including hypertension for example¹. Maternal obesity has been shown to have a financial cost to the National Health Service (NHS) and logistical issues due to provision of appropriate equipment and safety issues.

In Tayside in 2009, one-third of pregnant women were noted as obese at their booking appointment. Scottish Government funding to support improvement in Maternal and Infant Nutrition provided an opportunity to target obese pregnant women and offer a tailored, supportive evidence-based package of care called 'optiMum' which promotes appropriate weight management through healthy lifestyle counseling during pregnancy and weight loss during the postpartum period. At the time no known interventions in Scotland were available for the management of obese pregnant women.

Practice development

OptiMum was primarily a midwife-led intervention whereby support was provided from an obstetrician and anaesthetist when needed. Nutrition support was provided by the midwife and also by the nutritionist who attends some optiMum clinic sessions.

Midwives were surveyed prior to launching the intervention to identify their training needs, and additional training was provided for example in nutrition and behaviour change. Midwives increased their confidence to identify and counsel women who had a body mass index (BMI) of greater than 40kg/m². Since the launch of optiMum a pathway for obese women accessing maternity services was developed. This pathway further supports midwives to confidently support obese women to manage their weight during pregnancy and ensures that a consistent approach to their care is followed across the Health Board.

Outcomes and quality of care

The number of women seen at optiMum clinics has increased from 85 women in 2010/11 to almost 200 in 2012/13 with the intervention now offered at two sites. In the first year, average weight gain was 7.1 kg which compared to an average pregnancy weight gain of approximately 12 kg. Feedback from women who have attended optiMum has been positive.

The pilot project has now been incorporated into core services in Dundee. NHS Health Scotland has used the optiMum intervention as a case study for other Scottish Health Boards to learn from. OptiMum has been shared widely at international conferences, journals and other media.

Examples of contributions to Health 2020 priority area 2: Tackling Europe's major health challenges: non-communicable and communicable diseases

Fostering Influence: Clinical Expertise and Leadership in Diabetes Nursing, Wales, United Kingdom (No. 53)

Background

The Local Health Board for the North Wales region determined in 2009 that a cost saving initiative should be re-directed to implement a Community Diabetes Lead Nurse role. This was a response to requests for access to an expert diabetes nursing resource within the general practitioner practice and the community setting. From the outset, the responsibility for service development lay with the Lead Diabetes Nursing role, thereby instilling an expectation of clinical leadership and decision-making within the post-holder. A wider consideration of health care delivery was also important, enabling opportunities for specialist clinical leadership to contribute to collaborative approaches for service design and decision-making.

Practice development

The role of Lead Community Diabetes Specialist Nurse had a three-fold focus in clinical leadership: (1) to develop and provide diabetes education opportunities for the community and primary care staff and to designing and implementing a diabetes management curriculum at the post-graduate certificate level validated for any registered health discipline, (2) to facilitate cooperative work alongside community and primary health professionals to support delivering and monitoring a negotiated plan of diabetes care and (3) to contribute to delivering structured education for adults with diabetes. The Lead Diabetes Nurse also represented the Diabetes Specialist Nursing Network in the Diabetes National Service Advisory Group whose purpose was to inform the Welsh Government regarding the delivery of diabetes services and care.

Outcomes and quality of care

The Lead Diabetes Specialist Nurse had a remarkable influence both on clinical and strategic service development. Numerous diabetes joint clinical sessions were undertaken in primary and community settings and independent care establishment. Joint sessions conducted at GP practices contributed to improved access to quality diabetes management and primary care, individualized plans of care, and timely and appropriate specialist referrals when needed. Numerous educational modules in diabetes were also offered for professionals. In addition, a Type 2 diabetes booklet was produced for patients upon diagnosis. Generating evidence on the low delivery rate of structured diabetes education and on the declining numbers of diabetes nursing specialists in Wales also contributed to the Diabetes Delivery Plan for Wales (2013)¹⁴.

Outpatient clinic for children and adolescents with diabetes, Iceland (No. 14)

Background

A team consisting of a physician and a nurse identified an increased need for health education and support in treating diabetes mellitus (DM) among their clients, which include children, adolescents and parents. The team developed an enhanced ambulatory nurse service in hospital which required that nurses develop their knowledge and skills of diabetes education.

¹⁴ Together for Health – A diabetes delivery plan. A Delivery Plan up to 2016 for NHS Wales and its partners. Cardiff: Welsh Government, 2013.

Practice development

An enhanced nursing service was developed, which prioritized multidisciplinary ambulatory care for youth living with DM. The nurse-led service focused particularly on providing information, education and support according to the expressed needs of parents and children.

Skills and competencies for this new role were developed over time through training and continuing education opportunities including several academic degrees at the Bachelor, Master and Nurse Specialist levels. With this training, nurses could observe and measure clients' needs using scientific methods thereby increasing competence in understanding and meeting clients' needs. As part of multidisciplinary teams, nurses conducted scientific research and participated in conferences and workshops. The service was supported through specific guidelines and check lists developed at the clinic. Support from nursing academia was very important in developing the skills to conduct scientific research and writing scientific papers.

Outcomes and quality of care

The enhancement of the nurse's role allowed the nurse to better meet clients' needs. Nursing services were provided from 120 to 130 clients annually. Benefits for clients included increased satisfaction with the education provided and improved coping mechanisms with the support of the clinic. Patients also had better DM treatment compliance which was measured by blood sugar levels.

Several improvements were made to service delivery including improved services to patients, the development of individual and family sessions, motivational interviews and group sessions. Special focus was on psychosocial needs as an important addition to support treatment in DM. This initiative was followed by other nurse-led services which were developed and integrated in the hospitals' model for health care delivery.

Better health outcomes for clients and the system affirmed the importance of this nurse role enhancement. Benefits to the nursing profession included the creation of professional development opportunities and governmental approval of a new nursing role as a specialist in paediatric nursing. Several reports and scientific papers were also produced based on this initiative.¹⁵

Independent practice of diabetic nurse: Better focus on patient needs, Lithuania (No. 19)

Background

Since 1990, classes to promote diabetes education have been established in hospitals with the aim of educating patients to manage the disease. In order to improve service and prevent late complications of diabetes mellitus, hospital nurses needed unified official recognition for their roles in working with diabetic patients in hospitals and primary care. Ensuring direct access for patients from general practitioners (GPs) to diabetic nurses was also essential, especially to reduce unnecessary visits to the endocrinologist physician. Formal continuing professional education with requirements for diabetic nurses was developed and mandated by the Ministry of Health. Coinciding with this change, a separate tariff was introduced for nurse services accounting. As a result of this, diabetic nurses have provided independent services in their offices since July 2011.

¹⁵ Konradsdottir E, Svavarsdottir EK. How effective is a short-term educational and support intervention for families of an adolescent with type 1 diabetes? *Journal for Specialists in Pediatric Nursing*, 2011, 16(4):295–304.

Practice development

With this role expansion, nurses increased their competence in monitoring patients according to their needs, making autonomous decisions, delivering educational programmes, and coordinating patient care in collaboration with GPs and endocrinologist physicians. Nurses have also increased their competence in reporting on nursing activities through better documentation. Nurses are able to book individual patients for visits when necessary, assess and discuss the patient's health status with GPs and endocrinologist physicians and refer them to psychologists. Nurses' work in diabetes care has become more focused on individual patient needs, such as education, foot care and skill development. Nurses are able to demonstrate the scope of their services according to the number of visits and their costs.

Outcomes and quality of care

This change allowed the diabetic care service to be closer to the patient, and established new work places for diabetic nurses in separate offices. The 120 diabetic nurses in the 38 health care institutions now have a licence to provide diabetic care services. This change has led to the removal of endocrinologist physicians from routine prescriptions of diabetic nurse consultations, thereby allowing them to focus on more serious health problems of their patients.

There was greater satisfaction among diabetic nurses and patients, more effective management of patient care, with greater knowledge, skills and education on late complications. Recording of patient information in separate nursing files has also been essential for continuity of care. Diabetic nurses were treated as professionals and their work became more visible. There is now better collaboration between GPs and diabetic nurses.

The Association of Diabetic Nurses and the Ministry of Health continue to have discussions on additional functions for nurses, including the prescription of diagnostic tests. Nursing research on new roles and functions of diabetic nurses has also been initiated at university bachelor and master programs in order to measure the results of these changes and their potential benefits.

Telemedicine for rehabilitation of COPD patients, Denmark (No. 5)

Background

Patients with chronic obstructive pulmonary disease belong to the group of the five most resource-demanding illnesses in Denmark. The disease accounts for 20% of all emergency admissions to the medical wards. After being admitted, COPD patients often have many bed-days and a re-admission frequency of about 24% within a month.

The effectiveness of medical treatment is limited, and many COPD patients must live with reduced levels of function, inactivity, frustration and social isolation. It is important to break this negative spiral and increase the patient's quality of life. The TELEKAT¹⁶ research project focuses on developing new preventive care and treatment methods for chronic respiratory patients in their own homes utilizing tele-homecare technology. Patients are now offered rehabilitation when the clinical symptoms reach a level where they limit the patient's level of function and quality of life. Rehabilitation includes physical training, instruction about the

¹⁶ www.telekat.eu.

disease, nutrition, lung physiotherapy, assistance to stop smoking, etc. and typically occurs as courses of a few weeks duration away from the home in an out-patient setting.

Practice development

An educational programme helped develop practitioners' competencies with the technology and to support patients by interacting and providing care at a distance. Physiotherapists were involved in guiding the patients in the tele-rehabilitation programme and nurses at hospital, district nursing and in general practitioner's offices had their role enhanced to coach the patients in managing their own disease and respond to worsening symptoms in everyday life. New clinical guidelines were developed for tele-rehabilitation of COPD patients. A part of the program included patients measuring their own blood pressure, pulse, spirometer and weight during a 4 months period using the tele-home-care technology. Patients also used a step counter and did home exercises. The patients were educated to be able to act on their own data such as worsening of symptoms in order to avoid readmissions. Video meetings were held between healthcare professionals across sectors in order to coordinate the care and rehabilitation of the COPD patients.

Outcomes and quality of care

COPD patients were empowered to monitor their own health and worsening of symptoms. The majority of the patients expressed better quality of life as they had learned to cope with their disease and worsening of symptoms. The readmission rate was reduced by 54% over a 10 month period¹⁷.

Multidisciplinary team dynamics were developed across sectors and between district nursing, general practitioner offices and hospitals. The project continues in a multicentre randomized control trial iTrain on long term tele-rehabilitation between Norway, Australia and Denmark.

Implementing the role of Case Manager and the Chronic Care Model, Finland (No. 9)

Background

Evidence shows that the care of people with chronic conditions consumes about 78% of all healthcare spending¹⁸. Around 2% to 5% of people with chronic diseases are highly complex patients with more than one chronic condition and a complex mix of health and social problems¹⁹. The Chronic Care Model has shown that good management of patients with chronic diseases and complex needs can greatly improve care, impact resource use and improve patients' quality of life²⁰. Chronic Disease Management was developed as part of implementing the National Development Program for Social Welfare and Health Care. There were several regional projects implemented with municipal health care management support. The focus was on person-centred activities, proactive care, developing disease management by improving pathways and processes to facilitate care coordination within and across organizations as well as developing self-management support strategies.

¹⁷ Dinesen B, Hæsum L, Korsbakke E, Sørensen N, Nielsen C, Grann O, Hejlesen O, Toft E, Ehlers L H. Using preventive home monitoring to reduce hospital admission rates and reduce costs: A case study of telehealth among chronic obstructive pulmonary disease patients. *Journal of Telemedicine and Telecare* 2012;4: 221–225.

¹⁸ Nugent R. Chronic Diseases in Developing Countries. Health and Economic Burdens. Reducing the Impact of Poverty on Health and Human Development: Scientific Approaches *Annals of the New York Academy of Sciences* 2008, 1136:70-79.

¹⁹ Nolte E, McKee M. *Caring for People with Chronic Conditions: A Health System Perspective*. Open University Press, 2008.

²⁰ Zwar N, Harris M, Griffiths R, Roland M, Dennis S, Davies G P, Hasan I.A *Systematic Review of Chronic Disease Management*. Sydney: Australian Primary Health Care Institute, 2006.

Practice development

Developing new roles and ways of working with multidisciplinary teams was key to redesigning services. The nurse's role as a case manager was expanded to include coordinating care and resources and managing caseloads. Certain responsibilities were redistributed between nurses and doctors, and nurse prescribing was applied according to legislative requirements. Uniform training criteria were developed for postgraduate education of case managers in cooperation with health professionals and teachers. Competencies needed included identifying at-risk groups, carrying out health check-ups and follow-up of patients with a complex mix of chronic diseases and service needs. Nurses were also responsible for intensified patient education and support of self-care. The role called for a holistic and creative problem-solving approach to help people manage patients' specific conditions. In addition, diversified information technology skills, ethical knowledge and skills for autonomous decision-making and negotiating were needed.

Outcomes and quality of care

According to indicators for monitoring the effectiveness of the model of Chronic Disease Management, the number of emergency visits made by patients with chronic diseases reduced²¹. Patients' active role and satisfaction with the treatment improved. The self-care guide was generated to support self-management for health care professionals, and self-care tools were introduced to patients. Patient record systems were also developed to improve shared information and facilitate individual patient care planning. Furthermore, interactive electronic services were established to provide patients faster access to services, more choices and support for self-management.

Early discharge and integrated care for COPD patients, St. James's Hospital, Ireland (No. 16)

Background

In response to pressure on hospital beds, an early discharge initiative was set up within St. James's Hospital for patients with exacerbations of chronic obstructive pulmonary disease (COPD). The project initially comprised of the nurse or physiotherapist visiting the patient at home, but has progressively evolved towards a more comprehensive nurse-/physiotherapist-led service, managing all aspects of COPD in the community in an integrated care model, while minimizing in-patient stay.

Practice development

The nurse-/physiotherapist-led services comprise three levels of care:

Level 1: Early discharge – patients are discharged early with hospital-in-the-home care with up to three home visits;

Level 2: Respiratory assessment unit (RAU) evaluation – a nurse/physiotherapist-led clinic for assessment and management of all aspects of the disease with on-going telephone support; and

Level 3: Pulmonary rehabilitation – patients enter a pulmonary rehabilitation programme comprising of education and exercise at outpatient group sessions.

The program has expanded to include two clinical nurse specialists and a larger unit with additional outreach programmes for other respiratory conditions, direct referrals from GPs to avoid admissions, and provision of palliative and supportive care visits, and referral pathways to hospice and long-term assessment

²¹ POTKU. Väli-Suomen POTKU loppuraportti, Linna-Potku. Hämeenlinnan terveystalvelut, 2012.

clinics. Nurses and physiotherapists have expanded their scope of practice through continuous professional development education, mentorship and enhanced competencies which includes taking arterial blood gases and interpreting diagnostic imaging. Clinical practice was based on international, national and local guidelines. The service was supported by the expertise and services of other multidisciplinary teams within the hospital and community, including social workers, respiratory technicians, public health nurses, a community intervention team and a hospice.

Outcomes and quality of care

This service has provided benefits for patients by reducing length of stay and hospital admissions and for hospitals fewer bed days led to cost savings. In particular, results for patients receiving care at the first level early discharge include a reduction in hospital length of stays from 10.5 days to 1.5 days. Similarly level two RAU evaluation has led to better disease control and a 75% reduction in readmission rate at year one²². Level three pulmonary rehabilitation has shown to improve exercise capacity, reduce symptoms and improve the quality of life of enrolled patients²³. With this new service, not only are patients spending less time in hospitals but there is now a central place to refer patients for holistic management.

MOMA- First national call centre for treatment by nurses, Israel (No. 17)

Background

The Israeli healthcare system is facing scarce resources while demands for care of complex chronic conditions are increasing. In response to population needs and to supply quality care as well as controlling costs a new model for disease management was developed. The first national call centre MOMA was established in 2012. The MOMA model applies telehealth for the treatment of a range of chronic conditions.

Practice development

The goal of the model was to monitor and provide care for diverse client groups with chronic conditions, including clients who needed attention day and night, and clients whose limited mobility made it difficult for them to travel to the physician's office. The care was delivered at a primary care level in a multidisciplinary team and the service facilitated coordination between all professionals involved in patient's treatment. Moreover, MOMA served as an integrator along the continuum of care.

MOMA applied a disease management model based on multidisciplinary team work. Using telehealth, care was delivered by MOMA nurses in collaboration with primary physicians. Nurses worked as disease managers alongside the primary physicians who also worked as case managers. MOMA nurses performed follow up visits, monitored patients' conditions and provided patient health education, problem solving and consultation in accordance with the disease management model. MOMA nurses were also authorized to titrate certain medication according to guidelines.

²² Lawlor M, Kealy S, Agnew M, Korn B, Quinn J, Cassidy C, Silke B, O'Connell F, O'Donnell R. Early discharge care with ongoing follow-up support may reduce hospital readmissions in COPD. *International Journal of Chronic Obstructive Pulmonary Disease*, 2009, 4:55–60.

²³ Qaseem et al. Diagnosis and management of stable chronic obstructive pulmonary disease: a clinical practice guideline update from the American College of Physicians, American College of Chest Physicians, American Thoracic Society and European Respiratory Society. *Annals of Internal Medicine*, 2011; 155(3):179–191.

All nurses recruited to the MOMA participated in a comprehensive training program. The program involved telehealth communication skills while a clinical module which was field specific. Detailed protocols were derived from international guidelines and validated by physicians.

Outcomes and quality of care

Initial assessment indicated significant improvement in patients' ability to cope with the disease. Patients felt they had the knowledge for self-treatment and were less worried regarding the disease. Findings showed a significant decline in patient's depression rates and improvement in patient's mental health. A significant improvement was achieved regarding life style factors. Patients complied with drug regimen, controlled diet, and kept a routine of physical exercise.

In most cases (94%) there was coordination between the primary physician and MOMA nurse according to patient's reports. 75% of primary physicians reported they would recommend patients join the MOMA service.

EXAMPLES OF CONTRIBUTIONS TO HEALTH 2020 PRIORITY AREA 3: STRENGTHENING PEOPLE-CENTERED HEALTH SYSTEMS, PUBLIC HEALTH CAPACITY AND EMERGENCY PREPAREDNESS, SURVEILLANCE AND RESPONSE

Cervical Screening Programme by Health Visitor Nurses, Hungary (No. 13)

Background

A public health programme for cervical screening has been in operation since 2004, however, annually approximately 400 deaths are still caused by cervical cancer in Hungary. The Cervical Screening Programme is an organized public health screening, where women between the age of 25 and 65 receive an invitation to screening every 3 years if their test results are negative. Despite these measures, participation of the affected population in the screening programme is still very low (30%).

Practice development

A new pilot Cervical Screening Programme (CSP) started in 2009 in order to increase women's participation in the CSP carried out by Health Visitor Nurses (HVN). This programme is not exclusive to taking cytological smears, sending samples to the laboratory and other screening activities, but also includes health promotion activities such as providing guidance, counselling, and motivation to the patient, visiting the local population and communicating information on lab results. HVNs receive additional accredited training in cervical screening to expand their role and scope of practice.

Outcomes and quality of care

By the end of 2012, 285 HVNs voluntarily attended the CSP training. The programme showed good results and based on this experience, HVNs are able to and capable of successfully completing further training, performing cervical screening, taking appropriate grade smears, contacting and motivating women to take part in the screening programme. HVNs convinced a number of women to participate in the screening programme who had not visited a gynaecologist in 10 or more years.

Involving HVNs in the CSP was not only in alignment with international trends, but personally connected health professionals with the local population living in small settlements and convinced them to participate in the screening. Access to cervical screening improved by making screening available to women living in small settlements and disadvantaged areas, since this population is the least likely to travel to distant gynaecologists or specialist health centres due to lack of time and money, as well as difficulty travelling.

CSP training will be available in the bachelor programme of health visitors from the 2014 fall semester. The legislative amendment (Decree No. 49/2004) regarding HVNs performing cervical screening after possessing the required competence will come into effect in 2015.

Nurse consultations for acute health problems and noncommunicable diseases, Finland (No. 11)

Background

Increasing physician shortages in primary health care, declining access to treatment and growing interest in improving nursing competencies were drivers for developing advanced nursing roles. The Ministry of Social Affairs and Health initiated the advancement of the roles of nurses, public health nurses and midwives (hereby referred to as nurses) as part of the health service reform based on the national social welfare and health policy program adopted by the Finnish Government. The Ministry used state grants for municipal projects on advanced roles of nurses since 2002.

Practice development

New roles of nurses were developed in order to reallocate certain patient groups with acute health problems and noncommunicable diseases from a physician's care to a nurse's care. Nurses consult within the multiprofessional team or work in pairs with physicians in health centres and emergency care units. In some cases, nurses work in nurse-led health stations supported through e-consultation by physicians working in larger health stations.

Nurses have the authority, knowledge and skills to examine, assess, treat and follow up different patient groups. Health promotion, patient education and ensuring patient safety are other essential competences. In these cases, if nurses have passed regulated postgraduate education, they can also re-prescribe medication prescribed by a physician and have prescription authority if the medication is from a predefined national list of authorized medicines. Legislation on nurse prescribing authority came into force in 2010 and on corresponding postgraduate education requirements in 2011. Postgraduate education on nurse prescribing is based on nationally defined curriculum requirements. Joint learning opportunities have been organized with medical students. Evidence-based guidelines available online have been prepared with multidisciplinary collaboration in order to guide nurses' decision-making.

Outcomes and quality of care

Nurse consultations represented almost one-third of acute health visits and almost 60% of the total number of patient visits regarding acute health problems and noncommunicable diseases in out-patient pilot sites.²⁴ Some health stations have reported improved productivity.²⁵ Patients have experienced better access to care as well as satisfaction with counselling and support of self-care provided by nurses. Nurses working in remote health stations supported through physicians' e-consultations were capable of managing 70% of the service demand while referring only 22% of patients to the physician.²⁶ Nurses and physicians also reported improved multiprofessional collaboration and well-being at work.

Improving Pain Management in Nursing Homes in Muenster, Germany (No. 12)

Background

Pain is a common phenomenon among people over the age of 65 and can significantly impact their quality of life. The need for adequate pain management becomes even more apparent as demographic changes occur and more people are expected to suffer from chronic pain especially among nursing home residents. In order to ensure optimal pain care for this population, innovative care delivery models as well as a sophisticated integration of already proven models are needed.

Practice development

Initial role expansion occurred when nurses were taught how to claim specific areas of responsibilities by developing and implementing a nursing care plan in accordance with the National Standard for Pain Management in Nursing²⁷. For this, nurses were invited to participate in specifically designed in-house training workshops, which were based on the results of a preceding needs assessment (Pre-test) that was executed in the context of a health services study²⁸. During the workshops, particular focus was placed on conducting and documenting a comprehensive pain assessment (especially proxy-assessments) and providing information, education and support according to the resident's individual needs.

Additionally, a certain number of nurses enrolled in a special «Pain Nurse» training program. The training was designed to sharpen the nurses' competencies in the area of pain management, to enable nurses to (a) actively co-steer the pain management process in their particular facilities and (b) act as multipliers by disseminating their newly acquired knowledge. Furthermore, project partners from the area of public health care, politics and professional organizations supported awareness-raising among the general public by endorsing the project and by participating in various education and outreach activities.

²⁴ Hukkanen E & Vallimies-Patomäki M. Yhteistyö ja työnjako hoitoon pääsyn turvaamisessa. Sosiaali- ja terveysministeriön selvityksiä 2005:21.

²⁵ Koski J, Elonheimo O, Linna M. Työvoimapula perusterveydenhuollon avotoiminnassa – mitä keinoja avuksi? In Mikkola H, Klavus J, eds. Terveystaloustiede 2004. Helsinki, Stakes, Aiheita 3/2004:21–24.

²⁶ Jaatinen P, Vanhatalo R, Tasanko A. Miten terveysaseman hoitaja toimii, jos terveysasemalle ei ole saatu lääkäriä. Suomen Lääkärilehti [Finnish Medical Journal], 2002, (25–26):2795–2799.

²⁷ Schüssler N, Osterbrink J. Expertenstandard Schmerzmanagement in der Pflege bei akuten Schmerzen. Der Schmerz, 2012;26:2:206–207.

²⁸ Osterbrink J, Hufnagel M, Kutschar P, Mitterlehner B, Kruger C, Bauer Z, Aschauer W, Weichbold M, Sirsch E, Drebenstedt C, Perrar KM, Ewers A. Die Schmerzsituation von Bewohnern in der stationären Altenhilfe. Ergebnisse einer Studie in Münster. Schmerz 2012 Feb;26(1):27–35.

Outcomes and quality of care

The project fostered professional ties between general practitioners and nurses in their effort to provide better care and demonstrated that nurses play a vital role in the provision of adequate pain treatment within the larger framework of pain care. Benefits for the health care system included the collection of epidemiologic data on the pain situation of nursing home residents. While the pre-test results suggested that hardly any of the nursing homes used proxy-assessment tools for nurses to assess pain in the cognitively impaired, the post-test results showed that such tools were eventually implemented in each of the participating nursing homes during the intervention phase. The study results are now used as a basis to develop standardized certification criteria for nursing homes.

By placing the topic of pain on the «public agenda» through targeted outreach and education programs, people can become better informed, which can increase their level of health literacy and support patient empowerment. Furthermore, the role enhancement occurred against the backdrop of an ongoing public discourse regarding the delegation of particular medical acts to nurses.

A nursing pain management group towards a pain-free hospital, Portugal (No. 22)

Background

Efficient pain assessment and pain management would be possible if scientific evidence were translated into nursing practice. In order to change the culture regarding pain in the hospital, education of nurses has to be linked to research and to the development of practice²⁹. Creating a nursing pain management group was crucial to foster evidence-based practice in pain management in a paediatric hospital.

Practice development

A team composed of paediatric specialist nurses and a facilitator from the faculty led the changes in pain management practices in one hospital. Nurses appointed to the pain group implemented the change through a multimodal approach combining education, research and practice development focused on knowledge, skills, attitudes and organization of care. The pain group was responsible for identifying gaps in pain management, collecting evidence from the literature, organizing education for the ward nurses, developing pain assessment and pain management guidelines by negotiating with other professionals, and coaching ward nurses in changing their practice.

Local guidelines for pain assessment and pain management were developed based on scientific evidence, international guidelines and recommendations³⁰. The national regulation describing the nursing career structure at the time and the job description supported a differentiated role for the nurses in the pain management group. Nurses in the pain management group developed personal and professional competencies in searching for evidence from the literature, building standards for nursing practice and driving a planned change. The development of skills in leadership, education, organizing events, interprofessional communication and advocacy were also acknowledged.

²⁹ Ellis JA, O'Connor BV, Cappelli M, Goodman JT, Blouin R, Reid CW. Pain in Hospitalized Pediatric Patients: How Are We Doing. *The Clinical Journal of Pain*, 2002, 18(4), 262-9.

³⁰ Ordem dos Enfermeiros. *Padrões de Qualidade dos Cuidados de Enfermagem*. Lisboa, Ordem dos Enfermeiros, 2001.

Outcomes and quality of care

Internal audits showed an improvement in pain care by facilitating children's access to effective pain management interventions. At the individual level nurses developed knowledge, skills and changed attitudes. In clinical practice the main changes were pain history collected from all hospitalized children upon admission, pain assessed and documented in all children as a fifth vital sign, procedural pain managed through non-pharmacological interventions and use of pain management guidelines, namely for the prevention of procedural pain with anaesthetic cream.

Communication between different wards significantly improved as a result of nurses in the pain group sharing their concerns. An organizational culture of care about pain was created through the mobilization of all professional groups in identifying the gaps, in the training activities, in the definition of policies, standards and guidelines, and in the organization of public events.

Linking nursing practice and research to support Pain management in the Neonatal Intensive Care Unit, Switzerland (No. 40)

Background

Preterm infants hospitalized in a Neonatal Intensive Care Unit (NICU) are exposed to a high number of acutely painful procedures. Poorly managed pain in infants can alter pain processing and can negatively impact physiological, social and neurocognitive developmental outcomes in later life. Despite this knowledge, the relief of pain was poorly performed in most of the clinical NICU settings across Switzerland. In 1996, an ongoing development of practice began in the NICU in Bern, Children's University Clinic, in order to prevent deleterious long-term consequences of these infants

Practice development

The role enhancement has taken place particularly among bedside nurses who have developed a high sensitivity toward the impact of untreated pain in the infant patient population. The developed guidelines primarily defined and established the nurse's role in preventing and assessing pain, evaluating outcomes, providing non-pharmacological and administering pharmacological interventions after prescription and documentation. For the development of the pain assessment tool and guidelines³¹, several systematic literature searches were performed. Several studies were performed by the project group to evaluate the effectiveness of the efforts undertaken.

The growth of professional expertise among the nursing and medical profession was supported by continuous practice development process with regular educational sessions, bedside teaching, supervision of novices by senior staff and participation in research projects. In addition, a multiprofessional pain team provided opportunities to discuss pain issues on a regular basis.

³¹ Cignacco E, Gessler P, Müller R, Hamers JPH. Pain assessment in the neonate using the Bernese Pain Scale for Neonates. *Early Human Development*, 2004,78(2),125-131.

Outcomes and quality of care

A retrospective chart analysis provided the following results³²: Nurses measured and documented pain systematically in 99% of the cases. None of the hospitalized infants were neglected for pain treatment. In 2012, a pain relieving intervention was documented for all infants, which was either a non-pharmacological or a pharmacological intervention. This initiative led to:

- General reduction of the number of painful procedures performed in infants
- Adequate pharmacological and non-pharmacological management of pain
- Reduced risk of infections by intact skin, i.e. less stress/pain
- Support for parents to cope with their stress by active parental involvement in pain management e.g. «facilitated tucking» by parents during endotracheal suctioning
- Increased interdisciplinary communication regarding pain management
- Continuing professional development (since 1996) resulting in a steady intervention

Independent and advanced nursing services in Samara city polyclinic No 15, Russia (No. 30)

Background

The aim of the initiative was to improve the quality of care and provide high quality preventive care by implementing a general practitioner model of care in primary services. This involved establishing an advanced and independent role for nurses to work with general practitioners. New approaches to care provision in primary health care were strongly supported by the administration of the Russian Nurses Association branch in Samara.

Practice development

Independent nursing receptions were established in 1997 for patients with noncommunicable diseases and at risk patient groups. The polyclinic launched a two-level screening program which consisted of the patient being surveyed at home or at the polyclinic, and a targeted screening included blood, blood sugar, cholesterol checks and an oncologic review of identifiable cancers. The remit of the nurses also covered organizing patient education, providing vaccinations, fluorography checks and ECG, monitoring the efficiency of treatment, quality of life and financial constraints, and completing electronic medical forms.

The chief nurse in collaboration with head nurses of the units and medical specialists developed instructions for the independent nursing receptions and patient survey forms. The reception desk assigned the patients to visit nurses if the physician's care was not needed based on orders made by the medical specialists. Nurses completed specialization education and followed available standards of care developed in accordance with the nursing procedure algorithms. Nurses and physicians were also financially incentivized to decrease the rates of sickness in the population and increase the quality of life.

Outcomes and quality of care

Joint work of nurses and physicians promoted the advanced role of nurses and the effectiveness of prevention, symptom management and early detection of noncommunicable diseases. In 2012, 29,486 patients

³² Cignacco E, Hamers JPH, van Lingen RA, Stoffel L, Büchi S, Müller R, Schütz N, Zimmermann L, Nelle M. Neonatal procedural pain exposure and pain management in ventilated preterm infants during the first 14 days of life. *Swiss Medical Weekly*, 2009, (15-16), 139: 226-232.

visited nursing receptions compared to 21,200 patients in 2010. Home based hospital services encountered 4,897 nursing visits with certain medical procedures performed by nurses at home compared to 3,256 visits in 2010. All patients are observed by nurses, but those who need more consultations, diagnostics and treatment are referred to doctors and different units in the polyclinic. The number of patients with asthma observed by the polyclinic increased up to 8 times in the last decade, while the levels of hospitalization decreased 10 times. The number of emergency calls from these patients decreased six times. The number of patients with hypertension observed by the polyclinic increased from 1,700 in 1998 to 12,002 in 2012, while the number of emergency calls by this patient group decreased.

Nurses working with the at risk groups at the patient school «Health Heart» taught 759 patients, who achieved a decrease in their body mass index by 5.2% and decreased their cholesterol levels without using medication by 11.4%. From 1996, the annual number of heart attacks decreased from 236 to 152 and the number of strokes decreased from 264 to 159.

Tuberculosis and HIV controlled treatment coordinated by ward nurses of the dispensary unit, Samara region, Russia (No. 33)

Background

Controlled tuberculosis treatment was coordinated by nurses at the Tuberculosis Dispensary which is the leading institution for providing tuberculosis treatment in Toliatty. Before 2012, HIV-positive patients in the tuberculosis dispensary or their family members had to visit the AIDS center to receive their HIV drugs. An agreement was made between the AIDS centre and the Tuberculosis Dispensary to allow nurses to coordinate the whole process of treatment, including anti-retroviral drugs prescribed by the physicians, because effective treatment of HIV helps to increase the immune status of the patient and therefore is beneficial for the treatment of tuberculosis³³. The federal law on the provision of tuberculosis treatment for HIV positive patients provided the legislative framework for the role enhancement.

Practice development

The head nurse served as a coordinator between the two institutions and prepared information for each patient, based on patient records and laboratory tests given by the nurses for consultation with an infection diseases specialist. Patients signed informed consent and entrusted the prescriptions of HIV drugs to the head nurse. The drugs were then delivered to the head nurse for the provision of controlled treatment.

Chief and head nurses organized on-going training and study materials for the ward nurses on controlled HIV treatment and adherence to treatment. They also organized site visits to learn about multiprofessional team work and provided guidelines on care of HIV positive patients to ward nurses.

Outcomes and quality of care

The advanced nursing role for treating both HIV and tuberculosis resulted in better treatment outcomes for patients. Out of all patients who received treatment in 2012, 79% were discharged with TB bacteria negative test, and in 2013–86% of discharged patients were TB bacteria negative. In 2012 in 66% of patients have had closed their pulmonary cavity, and in 2013 – in 73% of cases.

³³ http://tb-hiv.ru/publikation/collaborative_study3/
http://whqlibdoc.who.int/publications/2007/9789244546956_rus.pdf?ua=1

This project advanced the nursing role in providing independent and valuable input into service development for patients who had both TB and HIV. Ward nurses and the head nurse played an important role in the multiprofessional team, and were recognized as equal partners with different medical specialists and patients, thereby providing complex and person-centered tuberculosis and HIV care and treatment. Nurses gave positive feedback to HIV physicians for timely and accurate antiretroviral therapy.

The work environment was positive in the unit with no reported staff turnover. The ward nurses of the tuberculosis and HIV units had salaries that were 80% higher compared to other tuberculosis units.

Implementation of evidence-based guidelines to establish a Network of Centres committed to using best care practices, Spain (No. 35)

Background

Lack of fully implemented evidence-based health care interventions and variability in clinical practice led to the establishment of a network across eight clinical settings to provide the best available evidence for changing clinical practice. The program is led by the Nursing and Healthcare Research Unit of the Institute of Health Carlos III and the Spanish Collaborating Centre of the Joanna Briggs Institute.

Practice development

A number of evidence-based assessment tools, clinical guidelines and care pathways were implemented in the clinical practice across different settings. The evidence-based guidelines were related to a number of clinical areas as well as other areas such as professionalism in nursing, collaborative practice among nursing teams and developing and sustaining nursing leadership. Nurses were included in committees that were created for each guideline in order to actively engage nurses in the development and implementation process.

Examples of guidelines developed and implemented include:

- Falls and injuries prevention guidelines for older adults
- Assessment and management of pain guidelines
- Pain assessment and management protocol
- Breastfeeding guideline
- Stroke assessment across the continuum of care
- Assessment and management guidelines for diabetic patients with foot ulcers

Nurses were trained in implementing evidence-based care. Patients and caregivers were provided training through individual and joint workshops. The implementation of evidence-based practice was also supported by identifying the variability in practices and processes, and by developing reporting systems and evaluation plans for each guideline.

Outcomes and quality of care

Health and performance outcomes were measured on a monthly basis and the preliminary results have been published³⁴. Access to evidence-based tools was improved and systematic recording was enhanced. The care process was improved and there was a positive effect on a number of health and process outcomes. Patient

³⁴ XVII Nursing Research International Congress. 17th International Nursing Research Conference. Libro de Ponencias. Madrid, Instituto de Salud Carlos III, Unidad de Investigación en Cuidados de Salud (Investén-isciii), 2013.

satisfaction improved and nurses experienced increased professional satisfaction and motivation. Multi-professional work and team work was enhanced. Organizational structures was improved and the use of evidence-based guidelines increased.

National Nursing Research Strategy: Engaging nurses in evidence based practice and research, Spain (No. 37)

Background

Nursing research in clinical settings is not widespread and nurses infrequently participate in conducting research including writing scientific papers and disseminating results. To promote nursing research, a national nursing research strategy has been established and led by the Nursing and Healthcare Research Unit, Institute of Health Carlos III, consisting of professionals, mostly nurses. The Unit strives to bring together the best knowledge to build the scientific foundation for nursing clinical practice to enhance and evaluate practice and outcomes. The Unit has collaboration agreements within the Spanish National Health System with institutions from of all regions, as well as with international institutions.

Practice development

Nurses were included in research as an integral part of their work across different regions and institutions. Nursing research is considered a basic tool to improve nurse competencies in daily practice. Training was provided for nurses to improve their skills in and knowledge of research methodology. Informative sessions related to funding for nursing research were offered across all regions and health institutions. The new nursing role was also supported through different types of platforms and free access to all documents generated by the research unit.

Multidisciplinary team work was enhanced as different types of health professionals and senior researchers worked together in the Steering Committee and the Advisory Group, sharing knowledge at yearly scientific international events. The Steering Committee representing nurses and allied health care professionals from all regions of Spain provided strategic directions in five areas of interest: training, advice, transfer and use of innovation and research coordination. In addition, nurses became members of evaluation committees and other decision-making bodies.

Outcomes and quality of care

The results of nursing research were translated into clinical practices and they were well accepted by other professionals. This initiative improved overall job satisfaction and motivation, as well as multiprofessional and team work.

Nurses improved their skills in critical appraisal and research methodology and their clinical practice is now based on research results. Access to evidence-based tools for clinical practice was promoted and infra-structural arrangements were improved. There was an increase in nursing research projects and nurses were further involved in multidisciplinary and multisite research projects. Additionally, there was an increase in international agreements and research projects established.

Creating a Dementia Friendly Hospital, England, United Kingdom (No. 41)

Background

Acute care for people living with dementia often leads to longer hospital stays, poorer clinical outcomes and patient and carer experience, which often lead to a higher number of complaints. The Royal Wolverhampton Trust set out to change the care for all patients with dementia by creating a dementia friendly hospital to improve the quality of patient care and to improve patient outcomes. This was underpinned by National Health Service England's national strategy, *Compassion in Care*³⁵.

Practice development

A model of care for people with dementia requiring acute hospital in-patient treatment was developed. The initiative introduced a multidisciplinary team dementia outreach service for all acute wards to provide more personalized care for patients with dementia. Led by a consultant nurse, the team was made up of mental health trained nurses, occupational therapist, dietetics, speech and language therapist and advice was offered by a consultant geriatrician. The care provided was person-centred and uniquely at its heart was a care bundle focused on three areas – communication, environment and nutrition and hydration – designed specifically for people with dementia in acute hospitals.

The Trust has also developed a dementia friendly ward for patients with an acute physical illness and dementia friendly environment in the Medical Admissions Unit. This 20-bed ward was designed to help patients engage in activities, increase orientation and feeling of well-being.

Outcomes and quality of care

The project is now mainstreamed into the Trust's normal working practice and the organizational culture has been changed based on the national strategy on compassion in care. Staff is now better prepared to manage patients with dementia as a result of appropriate training and support from the dementia outreach service.

Patients benefit from high quality care in an environment tailored to meet their needs. There have been fewer incidents related to patient behaviour problems because staff now recognize patients' individual care needs and behavioural triggers, using a personalized care plan with managed, regular pain relief where required. The Trust has reduced the number of complaints and has achieved a higher level of patient and care-giver satisfaction based on the patient surveys.

The service has reduced costs for the wider health service and more importantly, improved patient care and patient outcomes. It has reduced emergency readmissions, disability and falls, reduced discharges to residential care, resulting in patients maintaining their independence in the community for longer. The service has also reduced patient's use of anti-psychotic and sedative medication.

³⁵ *Compassion in Practice. Nursing, midwifery and care staff. Our vision and strategy.* London: Department of Health, 2012.

Bereavement Support Midwife Post, Northern Ireland, United Kingdom (No. 46)

Background

The need for dedicated bereavement support for grieving families has been recognized by the Royal College of Obstetricians and Gynaecologists³⁶ and the Perinatal Institute³⁷. The post holder initiated the development of a specialist role based on gaps in the service in Northern Ireland. The Bereavement Support Midwife Post was developed in partnership with the management team, colleagues and bereaved parents. It was accredited by the British Association of Counsellors and Psychotherapists.

Practice development

The bereavement service provides a confidential support for couples grieving the loss of their baby following miscarriage, stillbirth, neonatal death or the loss of an older child. The remit was expanded to childbearing women grieving the loss of a loved one and parents who have received bad news about the well-being of their baby before or after birth. The service covers the maternity unit, the gynaecology ward, the neonatal unit and the children's wards and also incorporates strategic policy involvement at the regional level.

The post promoted the integration of the service with the wider regional health care team, improved communication and ease of contact with patients. The post holder developed pathways of care for each stage of pregnancy loss and the death of a child, which provided a framework of choice for parents and guidance for staff, underpinned by local and national guidelines, policy and law. The role was central to the multidisciplinary team by providing dedicated support, advice and care resources. Bereavement training was also provided to health professionals to ensure that they were skilled and equipped to provide sensitive care. In addition, the post holder established the bereaved parents' «Forget Me Not Group» which had a major influence on enhancing care and service provision.

Outcomes and quality of care

Evaluation of the service demonstrates that input from the bereavement support midwife has been indispensable for the bereaved parents. Almost 1000 women have been referred for support since the post was established. In 2013, 135 bereaved women or couples were offered counselling every two weeks or monthly and 14 women received support throughout their next pregnancy, thereby promoting confidence in returning to the maternity unit to have healthy babies. The safety and satisfaction of the women was enhanced by the easy access to the post holder who acted as a point of contact with other members of the maternity team. The post raised awareness of the needs of grieving women locally, regionally and nationally. Through the work of the «Forget Me Not Group» parents made a presentation to the Trust board on their experience of their care and suggestions for quality improvements. The users of the services were also central to developing a new bereavement suite inside the labour ward.

³⁶ Standards for Maternity Care Standard 20. London: Royal College of Obstetricians and Gynaecologists, 2008.

³⁷ Perinatal Bereavement [website]. Birmingham: Perinatal Institute, 2011 (<http://www.perinatal.nhs.uk/bereavement/standards.htm>, accessed 8 April 2014).

Improving health outcomes for people with learning disabilities, Northern Ireland, United Kingdom (No. 47)

Background

People with a learning disability die 20 years younger and are 58% more likely to die before the age of 50 compared to people in the general population³⁸. People with a learning disability experience unequal access to health services and inequality of service provision, with higher levels of delayed diagnosis and diagnostic overshadowing. To address these inequalities in Northern Ireland, both strategic drivers for change and new approaches to care delivery were introduced. A Direct Enhanced Service (DES) scheme was developed where learning disability nurses as healthcare facilitators support general practitioners (GPs) and practice nurses in the development and implementation of an annual health check and onward referral for appropriate investigation, health promotion and/or treatment. Learning disability nurses also played a key outreach component in providing care for this specific population.

Practice development

An enhanced learning disability nursing role was developed and implemented. The role was predominantly clinical and leadership oriented to assist primary healthcare services implement the DES. The enhanced nursing role centred on coordinating an effective multidisciplinary response to ensure improved access to services, completing validated health assessment/screening tools, and providing necessary follow up on the implementation of individual health action plans towards health improvement.

Outcomes and quality of care

Based on an evaluation, 69% of people with a learning disability in Northern Ireland had received at least one annual health check³⁹. There has also been an increase in the number of GP practices signing up to DES. With improvements in quality of care, people with learning disabilities were identified who were previously unknown to services. Patients also had greater equitable access to primary healthcare and onward referral.

Health facilitators worked alongside primary care staff to provide specific services, bridging the gap among these healthcare professionals. This work promoted staff confidence and patient safety which has led to a more focused and effective health assessment process. Additionally, awareness training has provided staff with the knowledge of health risks associated with specific syndromes and conditions within this population. The DES has also captured the unmet needs of formal and informal carers which could be assessed post-health assessment.

This program ensures that practice is underpinned by the latest evidence-base and expands the nurses' knowledge and skills. Along with greater job satisfaction for learning disability nurses, GPs and practice nurses, the program provides opportunities for nurses to influence change in service delivery and be better recognized for their value.

³⁸ CIPOLD. The Confidential Enquiry into premature deaths of people with learning disabilities (CIPOLD). Final report. Bristol: Norah Fry Research Centre, 2013.

³⁹ Northern Ireland Assembly. Committee for Health, Social Services and Public Safety. Official Report (Hansard). Transforming your care – Learning Disability Services: DHSSPS Briefing, 16 October 2013.

Improving Palliative Care for Heart Failure Patients and their Care-givers, Scotland, United Kingdom (No. 49)

Background

Persons living with advanced heart failure (and other non-malignant conditions) frequently experience unequal access to high quality palliative care, and social and charitable care support at the end of life. Consequently patients with heart failure can have poorer quality of life and worse prognosis than many of their peers living with cancer. The British Heart Foundation, Marie Curie Cancer Care, National Health Service Greater Glasgow and Clyde, and Glasgow Caledonian University are working in partnership to improve palliative care for persons living with advanced heart failure, called the Caring Together Programme⁴⁰.

Practice development

The focus of the Caring Together Programme was to improve multidisciplinary working and collaboration between cardiology and palliative care and voluntary care settings to enhance integrated care for patients and caregivers living with advanced heart failure.

The Heart Failure Specialist Nurse Team, and community, acute and palliative care professionals working within three pilot sites received training awareness education sessions to support earlier patient identification, comprehensive assessment and to facilitate the preferred priorities of care including place of death. Skills and competencies for professionals working within the pilot sites were provided through formal training days, multi-disciplinary team working, shadowing opportunities and attendance at a heart failure supportive palliative care clinic which was used as an educational hub for professionals working locally, within the UK and abroad.

Outcomes and quality of care

The program has benefited patients and caregivers by meeting their unmet palliative care needs in addition to facilitating their preferred care options including place of death. More patients are dying in their preferred place of care. Hospital admissions in the last year of life have either been reduced or avoided completely. Furthermore, the reduction in bed days benefited hospitals with significant cost savings.

Earlier patient identification using specific inclusion criteria led to a comprehensive cardiological and holistic assessment of patient and caregiver needs. Needs were assessed using validated assessment tools and facilitation of care wishes was coordinated by the care manager in partnership with all other service providers. This included access to specialist and/or generalist palliative care as well as social, psychological, spiritual and care-giver support as appropriately indicated. Training blended with multidisciplinary team working encouraged cross fertilization of knowledge and skills between Cardiology and Palliative Care Specialities.

Initially professional attitudes towards palliative care for persons living with advancing heart failure were sceptical. However a mix of passion, enthusiasm and perseverance as well as formal training has resulted in beneficial changes to professional, patient and caregiver outcomes.

⁴⁰ Caring Together [website]. Scotland: Marie Curie Cancer Care, 2014 (<http://www.mariecurie.org.uk/en-GB/Commissioners-and-referrers/Partnerships-and-innovations/Caring-together/>, accessed 8 April 2014).

Nurse Colposcopists and their Positive Impact on the Cervical Screening Programme, Wales, United Kingdom (No. 54)

Background

Increasing numbers of women were being referred for colposcopy, resulting in prolonged waiting times for women and immense pressure for services to meet required standards. In addition, a shortage of colposcopists led to a reliance on locum cover. This resulted in a lack of continuity in care for women and locum doctors were not always up-to-date with the Cervical Screening Wales (CSW) policies and procedures.⁴¹ The introduction of a national colposcopy training programme allowed nurses to attain the same standards of practice as physicians, leading to British Society of Colposcopy and Cervical Pathology (BSCCP) accreditation. The BSCCP, along with the CSW and individual medical colposcopists have been instrumental in supporting the development of nurse colposcopists and clinics in Wales.

Practice development

The formalized training programme comparable to physicians' training allowed nurse colposcopists to manage their own caseloads including assessing, diagnosing, treating and discharging women with cervical abnormalities. Nurse colposcopists had to undergo the same audit requirements and continuing professional development as their medical colleagues.

Colposcopy was performed as part of an out-patient procedure in the hospital setting. Monthly multidisciplinary meetings where complex cases were discussed supported a quality service. Nurses were also supported through national guidelines, a professional network and a website.

Outcomes and quality of care

Nurse colposcopists were able to provide more flexible clinics, covering for medical colleagues if required. Having nurse colposcopists in a service also allowed women to gain confidence in individual members of staff and provide continuity of care. This in turn lowered non-attendance rates, reduced anxiety for women and improved satisfaction with the service. Other benefits included increased acceptability and improved compliance which created a supportive environment for women. Not only did nurse colposcopists have enhanced counselling skills, but they could also spend more time with patients. All nurse colposcopists in Wales were female which increased choice for women.

Practice development opportunities were created for nurses to work at an advanced level. Nurses had their own caseloads, were recognized as experts in the field and as valuable members of the team, which promoted greater job satisfaction. Multidisciplinary team discussion was a requirement for this practice which enabled better diagnosis and the avoidance of over-treatment.

⁴¹ Colposcopy and Programme Management. Guidelines for the NHS Cervical Screening Program Cancer Screening Programmes. National Health Service: London, 2010.

Provision of Home Blood Transfusion and IV Therapy Service, North Wales, United Kingdom (No. 55)

Background

In 2012, an intravenous (IV) Suite was opened at the Maelor Hospital in Wrexham with the support of the Betsi Cadwaladr University Health Board. The aim of the service was to provide an outpatient IV and blood transfusion service that would enable patients to be discharged in a more timely way and allow them to return back to the IV Suite for IV or blood transfusion administration when needed.

The IV Suite staff comprised of an advanced nurse practitioner, two registered nurses and a health care assistant. A consultant microbiologist and physician were also linked to this service. The IV Suite team soon discovered that the service was being utilized by many patients, but that there were also a number of patients who could not attend the IV Suite due to their general condition.

Practice development

The IV Suite nurses developed a programme to link with District Nursing services across a number of localities in order to administer IV antibiotics and blood transfusions in the setting that was most appropriate for the patient and carer. The patient had the option of attending the IV Suite, being visited at home or at a 24-hour care setting. During this time a protocol for the management of IV antibiotics and blood transfusion in the community setting was written and ratified by the Health Board.

The IV Suite team remained as the gatekeeper of the service in order to ensure that all governance arrangements were met and that all patients were linked to a defined medical consultant. The acute hospital medical team were also challenged to work in new ways to ensure clear and on-going communication with the patients' General Practitioner. Acute-based nurses and community nurses worked closely together in the discharge planning and management of patients, along with medical teams from a number of specialities.

Outcomes and quality of care

Since the beginning of the project, the IV Suite team has supported 750 patients, which translated into a savings of 4,339 bed days. The estimated overall cost savings was £1,725,085.

Depending on the patient's general condition, the team could adapt the care provision within various settings. In particular, the team effectively supported palliative patients in their own home. While these patients required blood transfusions, they also requested not to be admitted to hospital for care. It has been very appropriate for this group of patients to be cared for by their families and community team at home. The IV Suite team continue to lead and support this care, jointly with District Nursing services.

The enhanced role of delivering IV services within District Nursing has been extremely positive in engaging community nursing in this area, and in delivering care within patients' own homes and in care homes. The service is supported locally through nurse case management of the most complex patient care needs.

EXAMPLES OF CONTRIBUTIONS TO HEALTH 2020 PRIORITY AREA 4: CREATING RESILIENT COMMUNITIES AND SUPPORTIVE ENVIRONMENTS

Designing interactive ICT-supported health communication to support District Nurses' health promotion and disease prevention efforts in Primary Health Care, Sweden (No. 39)

Background

Information and Communication Technology (ICT) supported health communication tools are increasingly used to promote health and enable people to make healthy choices. However, many of the existing ICT based efforts are narrow in scope, medically oriented and thereby inadequate to address the complexity of lifestyle-related diseases and equity issues in Primary Health Care (PHC) settings. There is a need to design user friendly ICT systems that respond better to the needs and preferences of its users and context for its use. District Nurses working with health promotion and disease prevention strategies in PHC joined researchers to create an interactive internet based, health portal the «Virtual Hälsotorg» or a Health Plaza⁴². Four PHC units in the region took part in the project. The pilot study was conducted in one of them.

Practice development

The «Virtual Hälsotorg» was designed by a multidiscipline research group of professionals and laymen, headed by a district nurse and a Nurse/research student. To ensure that Virtual Hälsotorg responded to the actual needs of the local people and adhered to the PHC policy and programs, other health care professionals, IT-specialists, youth from a high school, pensioners, immigrants and local politicians in the region were used as reference groups to continually monitor and evaluate each prototype. The «Virtual Hälsotorg» consisted of traditional web-based health information from trusted local and national health websites, information on local health promotion initiatives and events, video and audio resources on variety of health topics. In addition it offered interactive functions connected to PHC services through a chat, forum, time booking system and quizzes. Training in IT and web publishing was provided to the district nurses who expressed an interest in the project during the design process.

Outcomes and quality of care

The collaborative design process resulted in a health portal that was needs based, accessible, user friendly and well aligned with the PHC mission. District Nurses expanded their health promotion efforts to hard to reach groups such as youth and immigrant groups, both important target groups for primary prevention. District Nurses applied the acquired eHealth skills and knowledge they gained to establish internet based schools for patients with diabetes, hypertension and asthma.

The pilot study showed that ICT tools, if designed properly, have the ability to enhance health literacy among users. Results from the health literacy test showed an increase in awareness of the availability of health resources on the internet as well as improved skills to access, critically appraise and apply the retrieved health information in everyday life. Increased knowledge on self-care and health management with chronic conditions was also noted among the test persons.

⁴² Jama Mahmud A. Designing ICT-Supported Health Promoting Communication in Primary Health Care. PhD Thesis 2013. School of Health Sciences, Blekinge Institute of Technology.

Enhancing the life chances of children and young people: School nursing services to support local population needs, England, United Kingdom (No. 43)

Background

Recognizing the importance of school nursing in the public health strategy 'Healthy Lives, Healthy People', the UK government committed to developing a new vision for services that reflect the nursing role in public health in the school community. The School Nursing Development Programme focuses on improving the life chances of children and young people through effective preventative services and the provision of early help. The programme has been developed within the context of the Healthy Child Programme 5–19⁴³ recognizing the importance of health and well-being in children and young people, and the key role of school nurses in providing support during the developing years. Yet children and parents were not always clear about the services available⁴⁴.

Practice development

A service model for school nursing was developed based on four levels with the theme of safeguarding. The four levels outline the continuum of support that children and young people can expect to receive from school nursing services and multi-disciplinary working. School nursing is a Universal Service, which also intensifies its delivery offer for children and young people who have more complex and longer-term needs (Universal Plus). For children and young people with multiple needs, school nurse teams are instrumental in coordinating services (Universal Partnership Plus).

The vision of the school nursing team was to provide an integrated service model which understands and promotes the dynamic process of interaction between the child, the family, the school and the community. The new role of the school nurses included increasing the awareness of the impact of caring roles on children and young people, utilizing early identification tools and public health profiling to determine needs, providing expertise with integrated packages of care and working with schools to improve attendance and educational attainment. School nurses also worked in partnership with other agencies and as part of a wider multi-disciplinary team to support the health and well-being of school-aged children.

Outcomes and quality of care

School nursing teams provided a range of skilled activities and communications at the individual, group and community level. School nurses supported improvements for children and young people including improvements in readiness for school, population vaccination coverage, and emotional well-being of looked after children⁴⁵. Furthermore, the project reduced school absences, tooth decay in children aged 5, excess weight and alcohol and drug misuse. To ensure the implementation of the new model in accordance with the wider health policy framework, school nurses worked with a number of stakeholders, such as teachers, local authorities, youth services, colleges and higher education institutes.

⁴³ Healthy Child Programme: from 15- 19 years old. London: Department of Health and Department for Children, Schools and Families, 2009.

⁴⁴ Our school nurse: Young people's view on the role of the school nurse. London: British Youth Council, 2011.

⁴⁵ Public health outcomes framework. London: Department of Health, 2012.

Mobilization of higher education communities to promote healthy settings, Portugal (No. 26)

Background

Newly entered university students (freshmen) experience life transitions during which they are subject to the influences of older peers often leading to immoderate and risky health behaviours. Such situations may produce profound changes in the individual's lives, in their significant others and may have key implications for their well-being and future health. There is a need to mobilize both freshmen and older peers to be engaged individually and collectively in promoting their own health projects. In this project, a toolkit (PEER-IESS) to mobilize higher education communities in promoting healthy settings was developed. It is designed for Nursing Schools (health sciences faculties) that want to use participatory action research to foster a healthier educative community.

Practice development

A group of nursing professors and students identified the health needs of their students' community and prioritized the problems found in order to empower people. This data generated evidence to design «bottom up» local strategies of health promotion, prevention and harm reduction, according to the principles of healthy universities⁴⁶. Health professionals involved in these activities expand their role by engaging in community anticipatory care, instead of traditional treatment of acute/chronic conditions such as depression and anxiety, alcohol and drug abuse, traffic accidents, sexually transmitted diseases, unwanted pregnancies and nutritional disorders.

Each institution organized health promotion activities and community intervention in their own setting and mobilized volunteer students to take on social responsibility to solve health problems.

Nursing schools promoted activities that involved students in exercising nursing skills such as: assessment of health needs, prioritizing education needs, teaching health topics, mobilizing groups, delivering health promotion and evaluating the impact of the interventions. Participants also developed research skills and received credits for all elements of the intervention.

Outcomes and quality of care

Initiated in 2009, there were nine institutions involved. Healthy behaviour of nursing students was promoted by means of participatory action research and a multi-centre and multi-case research project. Indicators of successful transitions included subjective well-being, role mastery and well-being in relationships.

Increased job satisfaction among teachers, nurses, students and stakeholders was found following the «bottom up» strategy. These activities enhanced professional status, especially the social recognition of the role of nurses in mobilizing communities.

⁴⁶ Green LW, Kreuter MW. Health Program Planning: An Educational and Ecological Approach. 4th edition. New York (NY): McGraw-Hill Higher Education, 2005.

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Annex 1. Tables presenting analysis of case studies

Table 16. Main outcomes and key activities in nurse- and midwife-led services

Nurse-led services		Midwife-led services			
Case study (No.)	Outcomes	Key activities	Case study (No.)	Outcomes	Key activities
A nurse-led health station in primary health care in a rural area supported by e-consultation with a physician in the health centre (11)	Nurses managed with the support of e-consultation approximately 70% of the services needs and sent approximately 22% of the patients to the physician	<ul style="list-style-type: none"> Management of the services needs with the support of the physicians' e-consultation Patient referred to the physician if needed 	Midwifery-led services in a postnatal clinic for systematic evaluation of wound healing in hospital (4)	<ul style="list-style-type: none"> High patient satisfaction Anatomically good healing after early secondary repair 	<ul style="list-style-type: none"> Clinical assessment of wound healing and early secondary repair in case of wound break down within the first week postpartum
A nurse-led clinic of ambulatory nursing services in hospital for children and adolescents with diabetes and their families (14)	<ul style="list-style-type: none"> Improved diabetes treatment compliance Increased patient satisfaction with education Improved coping mechanisms 	Providing information, education and support according to the expressed needs of children/ adolescents with DM and their families	Midwife-led birthing unit in the Baby Friendly Hospital (8)	<ul style="list-style-type: none"> Higher awareness of preferences, more knowledge about the birthing process and reduced anxiety among mothers Later arrivals to hospital and earlier discharges No increased risk to the newborn Higher breastfeeding rates Partners at the hospital supported adjustments to the new situation 	<p>Hospital midwives managing care along the continuum for low obstetric risk mothers:</p> <ul style="list-style-type: none"> providing antenatal classes, preparing birth plans with women managing delivery and postpartum care appointments for mothers discharged early and those needing breastfeeding support

Nurse-led services		Midwife-led services			
Case study (No.)	Outcomes	Key activities	Case study (No.)	Outcomes	Key activities
Nurse-/physiotherapist-led service in the respiratory assessment unit in hospital managing all aspects of COPD* (16)	<p>Improved quality of life for patients due to:</p> <ul style="list-style-type: none"> decreased length of stay reduced hospital costs decreased readmission rate by up to 75% Improved performance in the community 	<p>Nurses in collaboration with physiotherapists and consultant GPs manage all aspects of COPD:</p> <ul style="list-style-type: none"> early discharge outpatient clinic assessment telephone support rehabilitation 	Midwife-led antenatal clinic for adolescents in hospital performing risk assessment during uncomplicated pregnancy (15)	<ul style="list-style-type: none"> Care tailored by a multidisciplinary team to meet individual needs Improvements in health promotion, antenatal education and continuity of care Decreased workload for the obstetrician 	<ul style="list-style-type: none"> Midwives performing risk assessment throughout pregnancy Option for midwife to provide all antenatal care
Nurses as coordinators of the controlled TB and HIV treatment in the dispensary unit (33)	<ul style="list-style-type: none"> Increased number of patients receiving coordinated care Decreased number of patients refusing care 	<ul style="list-style-type: none"> Coordinating the whole process of TB and HIV treatment Delivering the drug treatment 	Midwife-led freestanding birth centre in a district hospital promoting normal birth (45)	<ul style="list-style-type: none"> Increased numbers of normal births, water births and women using water in labour The approach reduces interventions, includes partners and leads to a healthier start in life 	<p>Promoting:</p> <ul style="list-style-type: none"> normal birth women and their families having a satisfying birth experience Improved birth environments

Nurse-led services		Midwife-led services			
Case study (No.)	Outcomes	Key activities	Case study (No.)	Outcomes	Key activities
<p>Consultant Nurse leading a multidisciplinary team in a Dementia Friendly Hospital (41)</p>	<p>Improvements in:</p> <ul style="list-style-type: none"> • preparedness to care for patients with dementia <p>Reductions in:</p> <ul style="list-style-type: none"> • antipsychotic and sedative medication • emergency admissions and admissions to residential care • disability, falls and incidents related to behaviour problems • costs for the wider health service 	<ul style="list-style-type: none"> • Dementia outreach service for the wards • An acute dementia ward • Applying a person-centred care package for patients with dementia • Operating a dementia friendly medical admissions area 	<p>Midwife-led clinics for weight management and healthy lifestyle counselling for obese women during pregnancy and post-partum periods (51)</p>	<ul style="list-style-type: none"> • Decrease in pregnancy weight gain • Increased number of women receiving the service • Improved quality of maternity care 	<p>Counselling obese pregnant women on behaviour change, nutrition and weight management during pregnancy and post-partum</p>

* Chronic Obstructive Pulmonary Disease.

** United Kingdom.

Table 17. Main outcomes and key activities based on examples of nurses' and midwives' expanded and supplementary roles

Expanded roles		Supplementary roles			
Case study (No.)	Main outcomes	Key activities	Case study (No.)	Main outcomes	Key activities
Nurse consultations for acute health problems and noncommunicable diseases in primary health care and emergency care (11)	<ul style="list-style-type: none"> Improved access to care Improved productivity Patients satisfied with counselling Improved multi professional collaboration 	<ul style="list-style-type: none"> Certain patient groups reallocated from physicians' to nurses' care Examining, assessing, treating and following up with patient groups Prescribing and re-prescribing 	Nurses implementing nutritional guidelines and discussing nutritional care for older patients in multidisciplinary team in acute geriatric wards (2)	<ul style="list-style-type: none"> Improved person-centred nutritional care More in-depth analysis of patient nutritional status Increased counselling for older patients 	<ul style="list-style-type: none"> Developing and implementing a systematic screening process for newly admitted patients Analyzing the nutritional status and addressing patients at a risk of malnourishment
Cervical screenings performed by health visitor nurses (13)	<ul style="list-style-type: none"> Improved access to care in rural and disadvantaged areas Increased participation in cervical screening Women empowered through health guidance 	<ul style="list-style-type: none"> Cytological smears Educating and counselling patients Contacting and motivating women to take part in the screening program 	Case manager nurses coordinating the care of highly complex patients with noncommunicable diseases in primary health care multidisciplinary teams (9)	<ul style="list-style-type: none"> Care pathways facilitated coordination and early identification of risks Interactive network services and tools supported self-care Emergency visits reduced Patient satisfaction increased 	<ul style="list-style-type: none"> Needs assessment and health check-ups Intensified patient education and support of self-care Managing caseloads Coordinating resources
Special diabetes nurse consultations for patients with diabetes (19)	<ul style="list-style-type: none"> More effective management of patients' knowledge and skills on complications Improved coordination of care Services were brought closer to the patients 	<ul style="list-style-type: none"> Monitoring and making decisions on care Providing patient education Directing patients to other health professionals if needed Coordinating care 	Nurses as disease managers performing follow up visits and providing health education for client groups with chronic conditions through telehealth via a national call centre (17)	<ul style="list-style-type: none"> Improved ability to cope with the disease Depression rates declined Improved compliance with drug regimen, diet and physical exercise Coordinated care 	<ul style="list-style-type: none"> Monitoring patients' condition and providing health education Authorized to titrate certain medications Coordination between professionals involved in care

Expanded roles		Supplementary roles			
Case study (No.)	Main outcomes	Key activities	Case study (No.)	Main outcomes	Key activities
Independent and advanced nursing receptions in primary care clinics for patients with NCDs (30)	<ul style="list-style-type: none"> • More patients with health risks identified • More patients observed by nurses and number of hospitalizations decreased • Fewer emergency calls 	<ul style="list-style-type: none"> • Performing screenings • Monitoring the efficiency of the treatment • Providing home based hospital care • Vaccinations and fluorography campaigns • Teaching patients 	Special nurses as patient teachers for self-care after lower limb amputation in a surgical hospital unit(29)	<ul style="list-style-type: none"> • Physical activity, the use of crutches and faster healing of wounds • Active participation in care and adapting to the new life situation 	<p>Teaching and motivating patients on:</p> <ul style="list-style-type: none"> • caring for wounds • dressing themselves • performing personal hygiene • breathing techniques • early mobilization • preventing pressure ulcers
Independent nursing receptions for children in primary care clinics(32)	<ul style="list-style-type: none"> • Timely services available for patients at nursing receptions • Decrease in physician workload 	<ul style="list-style-type: none"> • Health check-ups and treatment • Preparing and checking laboratory tests • Re-prescribing according to physician's prescription • Completing medical certificates • Teaching patients 	Nurses teaching family members in a stroke unit (31)	<ul style="list-style-type: none"> • Level of knowledge and the quality of home care increased • Need for hospital and social care decreased 	<p>Teaching family members in:</p> <ul style="list-style-type: none"> • skin assessment and control • preventing complications • general and specific areas of care

Expanded roles		Supplementary roles			
Case study (No.)	Main outcomes	Key activities	Case study (No.)	Main outcomes	Key activities
Spain (36): Midwives performing screening and emergency obstetric care in the delivery room and the obstetric emergency room in hospital	<ul style="list-style-type: none"> Reduction in interventions and patient anxiety Improvements in: <ul style="list-style-type: none"> participation and satisfaction of mothers birth positions uninterrupted skin-to-skin contact 	<ul style="list-style-type: none"> Screenings and obstetric decisions on admission, discharge and referrals for women in childbirth Collaborative care with obstetricians for high risk patients 	Nurses as caregiver trainers and coaches (38)	Improvements in: <ul style="list-style-type: none"> caregivers' competence in mobilization, therapeutic regime and nutrition identification of overload risk 	<ul style="list-style-type: none"> Assessing caregivers' capabilities, resources and risk of fatigue Training in patient care skills
Cervical screenings performed by nurse colposcopists in outpatient hospital care(54)	Improved: <ul style="list-style-type: none"> continuity of care counselling services patient satisfaction 	<ul style="list-style-type: none"> Performing colposcopy independently Detecting and diagnosing genital tract abnormalities Making referrals Managing caseloads 	Continenence Specialist Nurses performing for nerve stimulation for women with faecal incontinence in primary care(48)	<ul style="list-style-type: none"> Improved quality of life Successful health outcomes 	Performing percutaneous tibial nerve stimulation for the treatment of faecal incontinence in women

Table 18. Main outcomes and key activities in community-based and home-based practices in nursing and midwifery

Case study (No.)	Main outcomes	Key activities
Nurses assessing activities of daily living and providing home nursing services for older people with chronic diseases (3)	<ul style="list-style-type: none"> Improved provision of home care services and an individual approach to home care Improved cooperation between physicians, visiting nurses and nurses in home care 	<ul style="list-style-type: none"> Assessment of activities of daily living Providing home health care based on the daily living needs of older people
Nurses providing rehabilitation services for patients with COPD through telehealth (5)	<ul style="list-style-type: none"> Patients were empowered and expressed higher quality of life Readmission rate reduced by 54% over a 10-month period Nurses developed new competences in counselling self-management through tele-home-care technology 	<ul style="list-style-type: none"> Using tele-home-care technology as part of a comprehensive rehabilitation program Coaching and supporting patients in managing their own disease and react on worsening in symptoms in everyday life in order to avoid readmissions Video meetings between healthcare professionals across sectors in order to coordinate the care and rehabilitation
Video consultations between hospital based nurses and discharged patients with COPD(6)	<ul style="list-style-type: none"> Tele-health changed the way nurses performed and their professional identity Patients took an active role in observing and measuring their condition Teleconsultation was a safe and effective way to provide care remotely, even if readmissions did not reduce significantly 	<ul style="list-style-type: none"> Teleconsultations performed as structured virtual out-patient visits, using a check-list and based on patients' needs and wishes Providing patients advice on measurements, treatment, managing and living with the disease Organizing quick treatment or homecare in consultation with physicians and home care services, if needed
Nurses providing rehabilitation services for patients with cardiovascular disorders using tele-health (7)	<ul style="list-style-type: none"> Reduced waiting times for rehabilitation, also reducing patients' stress Quality of life improved due to an individual rehabilitation program, involvement of the family and integrated services 	<ul style="list-style-type: none"> Identifying patients' needs for rehabilitation Providing individual telerehabilitation programs to prevent readmissions Supporting active participation of patients and their families in rehabilitation through tele-health

Case study (No.)	Main outcomes	Key activities
<p>Extensive health examinations provided by public health nurses and midwives for children and parents (10)</p>	<ul style="list-style-type: none"> • Unidentified problems found • Earlier identification of support needs and health problems • More appropriate and effective support targeted to children and families most in need • Parents were empowered and health behaviours improved • Parents felt examinations were useful and provided enough support and knowledge 	<ul style="list-style-type: none"> • Assessing health of family members from the viewpoint of psychological and social aspects, living conditions, family income and support networks • Identifying support needs and providing targeted support • Intervening in families with difficult problems
<p>Large scale vaccination against polio operated by public health nurses in family wellness clinics in a short timeframe (18)</p>	<ul style="list-style-type: none"> • Within three months 79% of the national target population was vaccinated, and in some areas 100% coverage was achieved • Ability of public health nurses to deal successfully with a national crisis 	<ul style="list-style-type: none"> • Providing guidance and counselling on the vaccine for professionals and the public • Increasing public willingness to vaccinate children • Providing help through direct channels or the media and various community settings • Vaccinating a massive population efficiently within a tight schedule, while proceeding with their normal duties
<p>Promotion of behavioural changes among socially withdrawn children through Solution Focus Approach group meetings led by school nurses (20)</p>	<p>Increased self-efficacy among socially withdrawn school children</p>	<p>Implementing a solution focused approach to improve self-efficacy among socially withdrawn school children</p>
<p>Public health nurses preventing and treating postpartum depression as part of the redesigned community care model (21)</p>	<ul style="list-style-type: none"> • Supporting parents can make significant differences in their lives and in child development • Improved quality of care 	<ul style="list-style-type: none"> • Identifying mental health problems by using a post-natal depression scale and by providing counselling • Preventive home visits made two weeks postpartum • Supportive counselling sessions for depressed women • Follow up during the first year

Case study (No.)	Main outcomes	Key activities
Peer to peer counselling by nursing students with supervision of nurses or physicians to reduce harm during festivals (23)	<ul style="list-style-type: none"> • 98% decrease in peer educators' binge drinking and drunkenness • More awareness, critical literacy and avoidance of driving under the influence of alcohol among target students 	<ul style="list-style-type: none"> • Interviewing students and prioritizing educational needs • Assessing drinking patterns • Establishing relationships based on dialogue • Teaching self-assessment of blood alcohol levels and reducing sexual risk behaviours
Teachers and nursing students promoting healthy settings through participatory action research (26)	<ul style="list-style-type: none"> • Subjective well-being and role mastery enhanced • Recognition of the role of nurses in mobilizing communities 	<ul style="list-style-type: none"> • A trained group of students, teachers, staff and community stakeholders mobilizing the community to create healthy nursing schools • Analyzing and documenting the needs of communities
Professors and postgraduate degree students in midwifery in collaboration with a midwife in a primary health care centre providing educational sessions in childbirth and parenthood for pregnant women and couples (27)	<ul style="list-style-type: none"> • Better prepared for the birth giving experience and care of the newborn • Couples went through the pregnancy peacefully and felt very close to their baby • The conjugal relationship strengthened, allowing the father to feel very involved during pregnancy • Reinforced the relationship of the couple 	<p>Providing:</p> <ul style="list-style-type: none"> • theoretical and practical education for pregnant women and/or couples on the preparation for childbirth and parenthood • pre- and post-natal individual session (Haptonomy-follow-up) on the affective relationship between parents and children <p>Monitoring and evaluating the impact of the strategies</p>
Teachers and nursing students in collaboration with nurses providing peer education in partner violence for young people (28)	<ul style="list-style-type: none"> • Significant change in knowledge and attitudes • Effective impact on preventing violence in dating relationships among young people 	<ul style="list-style-type: none"> • Implementing an intervention program to raise awareness among adolescents and young people of intimate partner violence • Providing primary prevention by means of workshops and peer education
District nurses in collaboration with other professionals and community members developed an interactive ICT supported health channel connecting primary health care and the homes of the local community (39)	<ul style="list-style-type: none"> • A needs based, accessible and usable health channel that is well aligned with PHC mission • Transferable e-health skills applicable in other areas such as internet based schools for patients with chronic diseases • Enhanced eHealth literacy and awareness of available electronic health resources among community members and health personnel. 	<ul style="list-style-type: none"> • Collaboratively designing, testing, evaluation and improving of different version of prototypes of the health channel • Piloting the final prototype and testing its accessibility, usability and ability to enhance health promotion. • Mobilizing and building alliances for broader public health strategies in schools and neighborhoods

Case study (No.)	Main outcomes	Key activities
<p>A new model for school nursing to meet the present and future needs of school-aged children and young people (43)</p>	<p>Improved:</p> <ul style="list-style-type: none"> • readiness for school • vaccination coverage • emotional well-being of looked after children <p>Reduced:</p> <ul style="list-style-type: none"> • school absences • excess weight in 4 to 5 and 10 to 11 year olds • under 18 conception rates • chlamydia prevalence in 15 to 24 year olds • smoking prevalence in 15 year olds • alcohol and drug misuse 	<ul style="list-style-type: none"> • Implementing a four level service model for school nursing • Support children and young people with multiple and complex needs through multidisciplinary working • Focus on engaging and listening to children and young people • School nursing teams coordinating services
<p>Health visitors working in a multi-agency team towards an early intervention agenda for families, children and young people aged 0 to 19 (44)</p>	<p>Reduced:</p> <ul style="list-style-type: none"> • smoking and alcohol use • school exclusions and absences <p>Improved:</p> <ul style="list-style-type: none"> • mental health 	<ul style="list-style-type: none"> • Health visitors reach out to families and provide support, with a special focus on domestic violence awareness and child development • Health visitors working one-on-one with families for 12–16 weeks and using a common assessment framework • Leading teams and mentoring team members
<p>Team of specialist nurses providing palliative care for heart failure patients in collaboration with community, acute and palliative care professionals (49)</p>	<ul style="list-style-type: none"> • Earlier patient identification, meeting unmet care needs • Preferred care options including place of death • Reduced and avoided hospital admissions • Reduction in bed days resulting in cost savings for the hospital 	<ul style="list-style-type: none"> • Comprehensive cardiological and holistic assessment of patient and caregiver needs by using validated tools • Facilitating care wishes coordinated by care managers in partnership with other service providers
<p>Virtual consultation on community based falls between the nurse case manager in district nursing services and the advanced nurse practitioner in an outpatient department of a rehabilitation unit (52)</p>	<ul style="list-style-type: none"> • Early assessment of patients' falls • Early advice and planning of investigations in primary care • Better use of outpatient appointments resulted in shorter waiting lists 	<ul style="list-style-type: none"> • Providing consultations through video conferencing between community and hospital • Providing early advice and planning at the local level • Patients involved in the process of assessing and planning their care

Case study (No.)	Main outcomes	Key activities
<p>Advanced nurse practitioner and nurses collaborating with district nurses to provide IV and blood transfusion services in an outpatient suite, patients' homes and 24-hour care settings (55)</p>	<ul style="list-style-type: none"> • More timely discharge and return to the IV and blood transfusion suite • The IV suite team as a gate keeper of the service arrangements • Reduction in bed days 	<ul style="list-style-type: none"> • Provision of IV antibiotics and blood transfusion through outpatient services • Ensuring all governance arrangements were met and all patients were linked with a defined medical consultant

Annex 2. WHO template for reporting country case studies

Title and country of the case study	
Foundation	Driver for change
	Role expansion
	Initiator of the service change
	Area of health care
	Stakeholders
	Evidence-based practice
	Other (please define): _____
Process	Skills and competencies developed
	Management support
	Multidisciplinary team support
	Guidelines, legislation and regulatory framework
	Other (please define): _____
Benefits	Performance outcomes
	Improved quality of care
	Professional climate
	Multidisciplinary team dynamic
	Other (please define): _____
Personal reflection:	
Contact person: Name, job title, institution and country	
E-mail:	