REGISTERED NURSE EDUCATION IN NORTH MACEDONIA:
A ROADMAP TO CHANGE
ABSTRACT

Around the globe, the nursing profession plays a key role in supporting improved population health outcomes. However, it is recognized in many countries that until the nursing profession and its individual members are recognized, developed and respected, the full potential of the nursing contribution will not be achieved. Not until nurses are empowered and supported will they be able to lead significant change in health policy, service commissioning, health-care design and delivery, and the education of the profession’s members. This feasibility study has identified a groundswell of support for nurses but has overwhelmingly highlighted the importance of raising the academic standard and rigour of nurse education. For nurses to lead as clinicians, managers, educators, researchers and policy-makers, new entrants to the profession as well as existing nurses must have the opportunity to develop in-depth knowledge and understanding, and the right skills to shape health care. It is imperative that nurses become effective members of the multidisciplinary health-care team, where they are listened to and their contribution to the care of patients is valued. Nurse leadership roles have in many cases yet to be created in North Macedonia, but will be essential to increase the pace of change, following the roadmap suggested in this study.

KEYWORDS

EDUCATION
NURSING
DIPLOMA PROGRAMMES
RESEARCH
WORLD HEALTH ORGANIZATION

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Registered nurse education in North Macedonia: a roadmap for change
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### Abbreviations

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<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>CINAHL</td>
<td>Cumulative Index to Nursing and Allied Health Literature</td>
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<tr>
<td>COVID-19</td>
<td>novel coronavirus disease</td>
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<td>CU SPRINT</td>
<td>Coventry University SPRINT</td>
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<td>EFN</td>
<td>European Federation of Nurse Associations</td>
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<td>EQF</td>
<td>European Qualification Framework</td>
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<td>EU</td>
<td>European Union</td>
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<td>ICN</td>
<td>International Council of Nurses</td>
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<td>IQR</td>
<td>interquartile range</td>
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<tr>
<td>MSc</td>
<td>Master of Science</td>
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<td>NIHR</td>
<td>National Institute for Health Research</td>
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<tr>
<td>NMC</td>
<td>Nursing and Midwifery Council (United Kingdom)</td>
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<tr>
<td>RPL</td>
<td>recognition of prior learning</td>
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<tr>
<td>SWOT</td>
<td>strengths, weaknesses, opportunities and threats</td>
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<tr>
<td>UKCC</td>
<td>United Kingdom Central Council for Nursing, Midwifery and Health Visiting</td>
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Foreword from the Minister of Health

Since the onset of the COVID-19 pandemic, nurses in North Macedonia have shown their strength and resilience while working on the front line of the pandemic. They showed their readiness to invest and sacrifice themselves tirelessly for the life and health of their fellow citizens and the good of the community. This recent health crisis has clearly demonstrated the importance of health workforce readiness and relevant fit-for-purpose skills to respond to the challenges brought about by the pandemic, while maintaining and responding to the health needs of the people and communities with conditions not related to COVID-19.

A series of system-wide interventions and reforms has been initiated for better health protection and quality of health services. At the basis of the health reform, initiated in 2019 in North Macedonia, is a renewed primary care model, whereby nurses would be recognized as full professionals on their own merit and would gradually take on an expanded role, increasing the scope of their practice in terms of prevention, health education and patient care. The first step towards this was the establishment of a national nursing working group in November 2019 to oversee and coordinate the implementation of the segment of the reform related to nurses. Since then, with the support of WHO, 430 primary care nurses have undertaken the first tailored course for primary care nurses, aligned with the country’s new model of primary health care and adapted to the challenges and needs emerging from the COVID-19 pandemic. In addition, since 2018 around 200 nurses have been employed in the public health sector and nurses’ salaries have been increased between 20% and 23% for various types of nurses.

However, the non-standardized nursing education and categorization of nursing roles – along with lack of recognition of nursing competencies and the demands of the prolonged COVID-19 crisis – suggest the need for accelerated solutions to increase the number of adequately trained nurses with recognized competencies. Thus, with the support of WHO and Coventry University, we initiated this feasibility study to consider and explore the feasibility and prerequisites for creating a robust, accelerated nursing diploma that is adapted to the health demands in North Macedonia.

The study clarifies the key transformations needed for the development of nursing in North Macedonia, taking into account the local political, cultural, legal and fiscal contexts. It identifies the legislative and regulatory changes required to properly underpin training and practice, and also considers the capacity and capability of local educators to provide improved and concentrated training.

Ultimately, we look forward to working together with the key stakeholders, universities and faculties, professional associations and patient organizations to design and roll out a package of interventions for advancing the role and education of nurses in the North Macedonian health system, resulting in better quality care provision and improving the health outcomes of people and communities.

Venko Filipche
Minister of Health, North Macedonia
Foreword from WHO Country Office North Macedonia

This report about registered nurse education in North Macedonia is the first in the country to consider opportunities to transform national education of nurses, with a more modern and stronger health system after the COVID-19 crisis. It is in part an appropriate way to mark the WHO Year of Health and Care Workers in 2021, but most important in this collaborative and consultative venture is the enabling options it offers and through which it will be possible to move forward towards establishing a nursing workforce that is better supported, protected, motivated and equipped to always deliver safe care.

Over the months of the COVID-19 pandemic many nurses have been exposed to risk and some have made the ultimate sacrifice in the service of others. They have demonstrated clearly that they are vital health workers, contributing fully to the achievement of universal health coverage and the Sustainable Development Goals, even in extremely difficult circumstances. From the bottom of our hearts, we appreciate their hard work and dedication to improving the health and lives of others.

It is impossible to overstate just how important the renewed roles and competencies of nurses are in primary and other health care services. When well-trained and valued, nurses can be very efficient in providing a wide range of essential services, especially when it comes to protecting and caring for the health of women, children, older people, those suffering from chronic conditions and many other vulnerable people. Investing in high-quality nursing education and training represents the first cornerstone in building a greater nursing profession, for leadership and autonomy within health care teams and in providing an enabling work environment that is free from stigma and discrimination.

Despite the important role nurses play, there is a national shortage, and difficulty retaining them in North Macedonia. More students would actively seek the nursing profession if presented with flexible education and career ladder that can lead to senior positions, under purposeful national workforce planning, management and regulations. It would be more effective to have nursing education be led and provided by competent nurse role-model educators and trainers, alongside ensuring well-resourced education and training institutions.

My message is clear: now is the time to invest in nurses and midwives for improved population health and a better future in North Macedonia. The WHO report *State of the world’s nursing 2020* informs about the significant benefit to be gained from such investment and provides evidence-based policy priorities to help maximize the potential of nurses. At the World Health Assembly in May 2021, Member States adopted a global resolution on the strategic directions for nursing and midwifery. North Macedonia is one of the first countries to start focusing on developing nursing education and the profession.

I would like to offer my thanks to the Minister of Health of North Macedonia, Dr Venko Filipce, for this pioneering partnership with WHO, as well as British Ambassador Rachel Galloway and her team, who encouraged and financially supported the national and Coventry University technical teams to complete this work with close technical support from the WHO Country Office in North Macedonia and the Regional Office for Europe.

This study has allowed us to consider and explore the feasibility and prerequisites for creating a robust, accelerated (and accreditable) nursing diploma adapted to the health demands in the country. Key steps are

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identified for the short and longer terms to address the legal, health system and education barriers facing the nursing profession. The work was carried out in a consultative manner involving the Ministry of Health, the Ministry of Education and Science, universities and secondary schools, nursing associations and patient organizations. We look forward to continuing to work with our partners to make these plans a reality.

The publication of this roadmap presents a much-needed opportunity to discuss the future of nursing at the national level and also in the Western Balkan Region. Now it is essential to use the findings and recommendations to bring about the required changes to maximize the full potential of nurses in North Macedonia.

Jihane Tawilah
WHO Representative to North Macedonia
Executive summary

Feasibility study: using Delphi and SPRINT methodology to inform a plan of enhancement and reform for nurse education in North Macedonia

Study aim

The feasibility study aimed to:

- outline key areas of priority for the development of nursing in North Macedonia;
- develop a repertoire of solution-focused approaches to advance nursing education, professional development and capacity-building, while also supporting growth in the nursing workforce;
- provide local in-country stakeholders with a roadmap and template to influence change, including the feasibility of different educational progression routes for nurses in North Macedonia.

Methods

The study used the following approaches:

- a literature review to expose the context of the study;
- a two-round priority-setting survey (Delphi survey) with input from 25 participants;
- a two-day focus group activity (using SPRINT methodology) with input from 17 participants.

Key findings

Respondents to the Delphi survey agreed with an absolute majority on:

- the importance of establishing how the quality of nursing education is assessed;
- the fact that nurses need additional practical skills and nursing competencies;
- the idea that it is important to look at who teaches nurses and midwives;
- the importance of professional development and leadership.

Key findings from the SPRINT discussions related to: the vision for nursing; views on nursing careers; aspirations for nurse education and nurse competencies; support for nurses in the workplace; the need for nursing leadership; and legal and regulatory requirements in the nursing field. The overarching view favoured swift reform of nurse education to move from a vocational secondary-school model to a higher-education model with degree-level study, further enabling academic and career progression. Participants expressed that they wanted a profession that was regulated, respected and built upon degree-level educational foundations, opening up a career that would be valued and have scope for further development.
Key recommendations

- Developing and implementing an accelerated programme for upskilling nurse educators using the WHO Nurse Educator Core Competencies (WHO, 2016) was recommended. Educators may first need an accelerated diploma and/or top-up degree incorporating a teaching qualification. Upskilled educators would then provide high-quality higher education to the future profession. Those with an existing academic degree could do the teaching qualification at a postgraduate level.

- Implementing leadership training and development for nurse educators and senior clinical nurses was recommended in North Macedonia to further develop the professional status of the profession and to work on cultural/societal views of nursing in order to improve recruitment and retention of nurses.

- Developing a bridging course (an accelerated diploma) for the existing nursing workforce was recommended, enhancing their knowledge and practice to compare favourably with EU Directive 2005/36/EC and aligning nurse education in North Macedonia with other Balkan countries (European Parliament & Council of the European Union, 2005).

- It was recommended that a new higher-education model of nurse education be developed that meets EU Directive 2005/36/EC and provides a professional graduate workforce that is fit for purpose in a modern health economy. This would contribute to the desired health outcomes of North Macedonia and could begin with the implementation of a three-year direct-entry advanced diploma for new students entering nursing (ideally to be uplifted to a three-year degree in nursing, once legislation has been changed).

- It was recommended that the titles of Registered Nurse and Registered Midwife should be protected by law.

- Establishing a regulatory body for nursing and midwifery was recommended to provide national representation, professional recognition and professional equity with other Balkan countries.
1. Introduction

This report provides an overview of a two-month feasibility study undertaken in February–March 2021 by Coventry University on behalf of and in collaboration with WHO Regional Office for Europe, to examine the feasibility of reforming nurse education and nurse professional development, while simultaneously capacity-building and supporting growth in the nursing workforce. The project employed numerous data-collection methods and opinion-seeking activities to gain insight into the possibilities for enhancing nurse education in North Macedonia. The collaborative project team identified key activities which need to be completed to enable nurse education to reform, including short-, medium- and long-term goals set out within a 10-year roadmap.

2. Background

North Macedonia – like many other European countries – is facing significant health system challenges, including the increasing demand for health care in a fiscally constrained environment. Challenges emerge from many causes: the rising proportion of ageing citizens with multiple chronic conditions and complex social situations; rapid diffusion of new technologies; increasing complexity of care; migration of nurses and other health care staff; and ever-more-stringent financial constraints. In this context it is increasingly important to maximize the skills and expertise of the health care workforce. At the same time, health-care delivery must continue to evolve, with more community, home-based, holistic and people-centred services, and an increased focus on prevention, while adapting to use technology to the health system’s advantage.

North Macedonia is planning significant health service changes to enhance the health system. While the positive role of nurses and midwives is accepted globally, there are disparities in the value and role of nurses everywhere, and particularly in North Macedonia. Nursing roles, education, training and development, regulation, leadership and the profession’s general operational employment situation face multiple barriers related to legal, policy and regulatory issues, amidst a culture that fails to recognize the autonomous nature and value of the nursing role (Groenewegen, Bryar & Sanchez Martinez, 2019a).

Nurses globally play a key role in the effective delivery of health services and need the skills, knowledge and competencies to not only provide effective care but also to influence and inform policy- and decision-making. This is even more important in the current climate, both locally and globally, and remains a crucial focus of support for WHO in line with the (2015) Sustainable Development Goals (SDGs). SDG 3 in particular is key, stating that countries should “Ensure healthy lives and promote well-being for all at all ages”. The
contribution of nursing and midwifery to achieving the SDGs is also outlined in the so-called triple impact report (APPG, 2016).

Nurse education in most European countries comes under the overall umbrella of post-compulsory education and training; that is, education that takes place after the completion of compulsory schooling (Quinn, 2000). The principles of nurse education are based on the theory and practice of adult learning and as such differ significantly from that of secondary-school education (Dyson, 2018). Initial nursing or midwifery education aims to prepare individuals to fill a role in the professional workforce, whereby they will be called upon to help strengthen health systems, meet population needs and protect the public (WHO, 2006). Salminen et al. (2010) state that the main mission of nursing education is to train competent nurses with the knowledge, attitudes and skills required for maintaining and promoting health within the community or targeted geographical location. High-quality education programmes that meet the European/global standard are therefore imperative.

In 2019 the Ministry of Health of North Macedonia requested support from WHO to carry out a situational assessment and to support the development of a nursing and midwifery strategy. The aim was to support the development of nursing roles, to improve the quality of nurse education and instigate the professionalization of nursing, in line with the health reform strategy (Groenewegen, Bryar & Sanchez Martinez, 2019a).

Building on the 2019 report, WHO requested a team from Coventry University School of Nursing, Midwifery and Health to complete a feasibility study to examine possible options for reforming nurse education in North Macedonia.

3. Aims of the feasibility study

The feasibility study aimed to:

- outline key areas of priority for the development of nursing in North Macedonia;
- develop a repertoire of solution-focused approaches to advance nursing education, professional development and capacity-building, while also supporting growth in the nursing workforce;
- provide local in-country stakeholders with a roadmap and template to influence change, including the feasibility of different educational progression routes for nurses in North Macedonia.
4. Methods

This project applied a range of methods divided into 3 stages, as described in the flowchart shown in Fig. 4.1. It included:

- thematic analysis of secondary data from WHO reports
- a two-round Delphi survey (including triangulation with WHO data)
- a SPRINT event that incorporated semi-structured and unstructured group discussions.

Ethical approval for this study was granted by the University Research Ethics Committee at Coventry University (reference number P119851). All participants provided informed consent to take part, at the beginning of the process, as part of the online survey. All data were handled in accordance with United Kingdom data protection regulations.

**Fig. 4.1. Project flowchart**

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<th>Stage 3</th>
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<td>Delphy Round 1</td>
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<td>Tabulation of topics and</td>
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<td>Design of Delphi online survey</td>
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<tr>
<td></td>
<td>Topic discussion</td>
<td>Report writing</td>
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</table>

**Timeline**

- 0-1 week
- 2-4 week
- 4-8 week

Note. SWOT: strengths, weaknesses, opportunities and threats.
4.1. Stage 1. Thematic analysis of secondary data

A thematic analysis was carried out of the previous consultations and reports by WHO in North Macedonia (2017–2019). The team extracted all barriers and weaknesses previously identified in the reports about the design and implementation of nurse education reform and created a comprehensive table of potential barriers. In addition, the strengths, weaknesses, opportunities, and threats were identified using a SWOT analysis of the situation (Terrados, Almonacid & Perez-Higuera, 2009).

4.2. Stage 2. Delphi survey

A two-round Delphi survey was performed based on the list of items/themes identified in Stage 1. The Delphi method or technique is considered a robust and transparent process and it has been used in topic prioritization in previous scientific studies and policy development (Saritas, Taymaz & Tumer, 2007; Tetzlaff, Moher & Chan, 2012; Wilenius & Tirkkonen, 1997). Stevenson (2010) states that the Delphi survey aims to “distil the judgement of experts through successive iterations of a questionnaire. Feedback from each round is disseminated to the panel participants to be taken into consideration for the next round. The process can reveal the convergence of opinions and identify conflicting views” (Stevenson, 2010:3). The size of the panel can vary from 4 to over 1000. However, it has been suggested that 12 is a suitable minimum number of panel members. The panel size decision is empirical and pragmatic and should take into consideration factors such as time and cost. Representation is assessed by the qualities of the expert panel rather than its numbers (Thangaratinam & Redmann, 2005).

A panel of nurses, midwives, medical doctors, service users, educators, and policy-makers – made up of key stakeholders identified by WHO colleagues – were given a Jisc online survey including a list of topics, a cover letter explaining the purpose of the survey and a consent form to sign in order to take part in the survey. Participants were asked to independently rank the topics according to their importance for the development and implementation of an advanced nursing diploma on a 1–9 scale (1–3 not important; 4–6 important but not critical; 7–9 critical), add comments about the topics and suggest any additional topic to be considered in a second round of the Delphi survey if necessary. The topics/statements included in the Delphi survey Round 1 were divided into the four domains identified in Stage 1: education factors, cultural factors, service delivery and practice, and policy and law.

For each topic/statement, participants were given the option to select “don’t know” as an alternative response. This option was added because some stakeholders might not feel confident to provide feedback and rank the relevance of particular topics. Furthermore, this enabled the identification of domains that
were particularly unclear and required additional attention. A free-text response was available to participants within each of the survey domains, providing the opportunity to elaborate or explain responses.

In Round 1 information on age, gender, professional role, years of employment and work setting (clinic, hospital etc) were also collected. Participants were asked to indicate whether they would like to take part in the workshop discussions (known as SPRINTS). All participants were anonymized to a generic job title and all reasonable care was taken to ensure that participants could not be identified from the generic title given.

**Statistical data analysis**

The median and mean were used as measures of location and the standard deviation and interquartile range (IQR) as measures of dispersion. An IQR < 2 indicated consensus/agreement. The percentage of responses for each category of relevance was also estimated: important (1–3), important but not critical (4–6), and critical (7–9). In Round 2 the panel was asked to reconsider the rankings based on the overall panel score. New medians and IQR were calculated. Analyses were conducted using IBM® SPSS® software for Windows version 26.

**Reaching consensus**

Traditionally, Delphi surveys are iterated until a consensus among all participants is reached, usually based on the IQR values. There is also a variation in the literature requiring that the opinion be held by three quarters of the participants to be considered a consensus (Al Saleh, 2009). However, both approaches can potentially result in the loss of valid points, and in dropping out of participants who feel that their opinions are not being acknowledged. A more recent approach has been proposed to address the stability of the responses (Von der Grach, 2012): if the responses are not changing significantly, then it can be considered that the survey is complete. Capturing the information from the remaining disagreements may be more important than forcing an unnatural consensus. From previous experience, the team anticipated that two rounds would be sufficient. In cases where the IQR remained above 2, consensus was considered to be achieved at > 75% of responses for one particular category (important/important but not critical/critical). We also examined whether responses remained consistent across Round 1 and Round 2 despite some level of disagreement based on statistical values.

In Round 2 each participant received a survey with six topics from Round 1 showing some level of disagreement. These were presented alongside participants own responses, as well as the average rating for the group to each topic/statement. All “don’t know” responses were excluded from the group response. In this round, participants were asked to reconsider their responses in light of the group’s responses only for
the items showing disagreement or borderline disagreement. Round 2 also included 7 new statements derived from the free-text responses to Round 1. Furthermore, the free-text responses from Round 1 helped to clarify and frame the new statements added in Round 2. There was no option for free-text responses in Round 2.

The top (most relevant) 4 topics from Delphi Round 1 and Round 2 were considered in the SPRINTS (Stage 3). All participants were informed about the key findings from Delphi survey Round 1 and Round 2.

4.3. Stage 3. The SPRINT

The Coventry University SPRINT (CU SPRINT) is a version of the Google Ventures Sprint focusing on higher education. Designed by Knapp, Zeratsky and Kowitz (2016), the Google Ventures Sprint is used by companies and organizations across the globe to rapidly solve problems and develop products. The CU SPRINT is typically designed to allow course teams the time, space, and resource to radically reconsider the course they are offering, starting backwards from the ideal graduate/customer. In its fullest form, the CU SPRINT takes place over a five-day period and should provide completed course documentation, a prototype design, and stakeholder feedback by the end of the process.

Given the tight time frame for this feasibility study, for the purpose of the project, a micro SPRINT model was adopted. This is a compressed delivery model of the CU SPRINT methodology, allowing teams to solve problems and develop ideas within a two-day time frame. Eight hours of SPRINT activity were undertaken across two days, completing several sequential in-depth discussions and interactive activities, first on one particular topic and then another, led by a moderator (problem-solving strategy). The micro SPRINTS were led by a North Macedonian moderator and facilitated by skilled university staff. SPRINTS were conducted remotely using Zoom videoconferencing technology, with pre-set questions and discussion points, padlets, AnswerGarden word clouds, Microsoft Forms, Google Docs, and YouTube videos.

Due to the required brevity of the study timescale, WHO Regional Office for Europe advised that a mixed stakeholder approach would maximize attendance and be most achievable. See Table 4.1 for the activities and topics that were explored during the SPRINT events.

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2 A padlet is a digital tool that works as a notice board, allowing participants to add notes on a common page simultaneously.
3 AnswerGarden is an online minimalistic feedback tool for brief brainstorming feedback on a topic in the form of word clouds.
Table 4.1. Outline of SPRINT activities

**Pre-SPRINT activities**
- **Padlet activity:** What do you hope to get out of the SPRINT?
- **AnswerGarden activity** (5 minutes): What characteristics and skills do you want your newly qualified nurses to have now and for the future?
- **Nursing case study**
- **Watch the video** (1:30) “Nurses Day 2020: these are the hands” [https://www.youtube.com/watch?v=WJSihphvLw](https://www.youtube.com/watch?v=WJSihphvLw)
- **Watch the video** (1:40) “What will the nurse of the future look like? #nurse2030” [https://www.youtube.com/watch?v=fAc9D5zPJH0](https://www.youtube.com/watch?v=fAc9D5zPJH0)

**Purpose of the event**
- Create a vision for the profession of nursing and nurses in North Macedonia
- Set out key steps that must be achieved to realize the vision for nursing

**Day one**

**Presentation** from the research team
Overview of the Delphi survey; SPRINT plan; review of padlet activity

**TOPIC 1. What is the vision for health care in North Macedonia?**

**Padlet activity:** What are the key population health challenges in North Macedonia?
Talk about these discussion points in your group when completing the padlet activity
- What are the health-care priorities in North Macedonia?
- What is the vision for “health care” in North Macedonia?
- What kinds of services are needed and wanted?
- Where is nursing now and where does it need to be to meet population health challenges?
- How quickly do we need to achieve the vision for health care in North Macedonia?

**TOPIC 2. Creating a vision for nursing**
Introduction to the topic and review of the pre-SPRINT AnswerGarden word cloud
- What characteristics and skills do you want our newly qualified nurses to have, now and in the future?
- How is the profession of nursing perceived now, and how do you want it to be viewed?
- What is the role of the nurse in North Macedonia and what do you want it to be?
- Answer these prompts:
  1. “The profession of nursing in North Macedonia will be....................”
  2. “Nurses in North Macedonia will be........................................”
  3. “Nursing as a career in North Macedonia will be.......................”
  4. “Nursing education will..........................................................”


**Group 1 Nursing competencies**
Use these discussion points when completing the padlet activity
- Are the nursing competencies set out already?
- Who sets the nursing competencies?
- Who should set the nursing competencies?
- Do you want to change the setting of nursing competencies?
- What approaches can you use to define the competencies?
- Who can help us within the global nursing profession with this activity?

**Group 2 Nurse education**
Use these discussion points when completing the padlet activity
- How do you want nurses to be educated?
What teaching and learning approaches do you think should be used?
How important is digital literacy?
Where will education for nurses be provided?
Who pays for nurses’ education?

Group 3 Education for qualified nurses already in the workforce
Use these discussion points when completing the padlet activity
Do qualified nurses need to keep learning?
How do qualified nurses keep learning?
What development is needed to create nurse educators?
What learning needs do nurse educators have?
What are the benefits of enhanced nurse education?
What practical steps can we use to increase education input for qualified nurses in the workforce?

Watch the video “I am a nurse – National Nurses Week” (3:07)
https://www.youtube.com/watch?v=4pelFulusSk

TOPIC 4. What needs to change to achieve the vision for nursing and nurse education?
Group 1 In your opinion, what needs to change in relation to:
- education
- policy
- laws
Group 2 In your opinion, what needs to change in relation to:
- cultural factors
- professional practice
- health services design

TOPIC 5. Leadership for – and within – nursing
Padlet activity 1
- What does the strategic leadership of nursing need to look like?
- What local leadership structures do we need to be in place?

Padlet activity 2
- Who are your nursing leaders?
- What kind of leadership is needed for nursing and within nursing?
- How can nurses gain more influence?
- How can nursing leadership (as described) be supported?
- How do we develop leadership in the existing nursing workforce?
- How can we develop the leadership of those in the nursing diploma?

Day Two
Watch the video “Always caring, always nursing – 100 years of professional pride NMC” (4:34)
https://www.youtube.com/watch?v=ZI_JNDBB92Y&feature=youtu.be

TOPIC 6. Education
Google Docs activity
What does the new training programme look like for Nurses?
Prompts:
- What level will the new programme be (e.g., advanced diploma/degree level)?
- What is the future for the existing secondary-school certificate?
- What will the clinical training requirements look like?

TOPIC 7. Professional regulation of nursing
Prompts
TOPIC 8. Changing the law relating to nurse education

Prompts
- What steps need to be taken to achieve a change in the law?
- Who can make this change?
- What help can others give you?
- Will everyone believe a change in the law is needed?
- How will you persuade others that a change in the law is needed?

Note. NMC: Nursing and Midwifery Council.

The main language used during discussions was Macedonian and simultaneous translation was provided for the United Kingdom-based researchers. The research team used note-taking observers to collect data not recorded on the electronic notation platforms. The use of word clouds and virtual file-sharing facilitated the collation of notes from the SPRINT, enabling organization and subdivision of data into meaningful segments and themes after being downloaded and translated to English.

5. Results

5.1. Stage 1. Literature review

For the purposes of the project, reviewers identified papers for possible inclusion by combining searches of electronic databases, hand searches of reference lists of papers and contact with experts in the field. Databases searched included the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Medline, and the British Nursing Index (see Table 5.1). The searches used subject headings and free-text searches related to nurse education in North Macedonia (including references to The former Yugoslav Republic of Macedonia). Two of the primary sources of information were provided to the project team by WHO Regional Office for Europe, allowing access to two key reports on health-care systems, workforce, and educational requirements of the existing workforce (Groenewegen, Bryar & Sanchez Martinez, 2019a, 2019b).

Table 5.1. Articles consulted in the literature review

<table>
<thead>
<tr>
<th>Study</th>
<th>Study purpose</th>
<th>Method</th>
<th>Time frame/sample size</th>
<th>Relevant findings for the study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Briggs A (1972). Report of the Committee on Nursing, Chairman:</td>
<td>To review the model of nurse</td>
<td>Mixed methodology,</td>
<td>2 years</td>
<td>A useful comparison with parallels to what is</td>
</tr>
<tr>
<td>Reference</td>
<td>Description</td>
<td>Methodology</td>
<td>Comparison</td>
<td>Notes</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td>-------------</td>
<td>------------</td>
<td>-------</td>
</tr>
<tr>
<td>Lahtinen P, Leino-Kilpi H, Salminen L (2014). Nursing education in the European higher education area—variations in implementation. Nurse Educ Today 34(6):1040–1047</td>
<td>To statistically analyse nursing education in Europe, based on the quantitative determinants essential in describing the implementation of nursing education</td>
<td>A systematic literary review design was used; data collection was conducted based on key quantitative determinants used to describe the implementation of nursing education</td>
<td>n/a</td>
<td>Comparison of nurse education in North Macedonia with 44 other countries in Europe</td>
</tr>
<tr>
<td>Lazarevik V, Kasapinov B (2015). Predictors of patients’ satisfaction with health care services in three Balkan countries (Macedonia, Bulgaria and Serbia): a cross country</td>
<td>To look at patient satisfaction across three Balkan countries in order to find predictors</td>
<td>A web-based survey among the population in North Macedonia, Serbia and Bulgaria, using a 1848 respondents after eligibility criteria</td>
<td>An insight into patient culture and patient views towards health care and health workers in North Macedonia</td>
<td></td>
</tr>
<tr>
<td>Source</td>
<td>Title of study</td>
<td>Methodology</td>
<td>Sample Size/Participants</td>
<td>Focus of study</td>
</tr>
<tr>
<td>--------</td>
<td>----------------</td>
<td>-------------</td>
<td>--------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Martinez Roldan J, Sanchez Martinez M (2018).</td>
<td>Improving quality of primary care in the Former Yugoslav Republic of Macedonia. Skopje: WHO Country Office North Macedonia</td>
<td>Mixed methodology using literature review, focus groups of stakeholders and observational studies.</td>
<td>n/a</td>
<td>The implications of changes to the primary care model in North Macedonia for the education of nurses and midwives</td>
</tr>
<tr>
<td>Mijakoski D, Karadzinska-Bislimovska J, Basarowska V, Montgomery A, Panagopoulou E, Stoleski S, et al. (2015).</td>
<td>Burnout, engagement, and organizational culture: differences between physicians and nurses. Open Access Maced J Med Sci. 3(3):506–513</td>
<td>To examine associations between burnout, job engagement, work demands, and organizational culture, and the differences between doctors and nurses</td>
<td>Maslach Burnout Inventory and Utrecht Work Engagement Scale were used to assess burnout and job engagement; work demands and organizational culture were measured with the Hospital Experience Scale and Competing Values Framework, respectively</td>
<td>An insight into the cultural differences between nursing and medical staff in North Macedonia</td>
</tr>
<tr>
<td>Nikolovska M (2004).</td>
<td>Employment, education, and emigration: the FYR of Macedonia. Eur J High Educ. 29(3):319–328</td>
<td>Focusing primarily on providing evidence for the migration and outflow of skilled labour, the article looks in more depth at the reasons for brain drain, at the current policies of the country to tackle it, and gives some practical recommendations for policy-makers</td>
<td>Mixed methodology</td>
<td>Insight into the problems faced with the retention of young people in North Macedonia</td>
</tr>
</tbody>
</table>
This literature review was conducted with the purpose of identifying key themes and domains to enable a SWOT analysis for the project, the design of the Delphi study and the initial design of the SPRINT. The SWOT identified the internal/in-country strengths and opportunities for taking the feasibility study recommendations forward (see Fig. 5.1).

The key domains identified were:

1. education
2. culture
3. service delivery
4. policy/law.
**Fig. 5.1. SWOT analysis from the available data**

**STRENGTHS**
- WHO has substantial experience in assisting countries to improve their health outcomes and education for health-care professionals.
- There is a desire within the Ministry of Health in North Macedonia to improve primary care and to ensure health care services are properly integrated.

**WEAKNESSES**
- Health care is not well integrated.
- Role of nurse is not universally respected or valued.
- Nurse education is limited due to legislature.
- Content of nurse education is not of a standard that would meet EU Directive 2005/36/EC*.
- Resources in primary care are lacking.
- The focus is on administrative activities rather than health outcomes.

**OPPORTUNITIES**
- The country desires EU membership and would have to adhere to EU Directive 2005/36/EC* in terms of general nurse education.
- Within the Ministry of Health there is a desire for improvement. This feasibility study seeks to harness that desire and outline what is deliverable and within what timescales.

**THREATS**
- Parliament may not agree with changes and may not vote in favour of new legislation.
- The medical community may not approve of the increased education and autonomy of nurses.
- There is a lack of resources and funding available to make the necessary changes.


Source: authors’ own compilation (Coventry University).
5.2. Stage 2. Delphi survey results

A non-probability, purposive sample of 41 participants were invited via email to take part in this Delphi survey. Sampling was purposive to ensure that invited participants met the inclusion criteria and included at least one stakeholder from the four main groups: (1) nurses and midwives, (2) other health-care professionals (e.g., medical doctors), (3) educators and (4) policy-makers. All participants were required to be 18 years or older, fluent Macedonian speakers and involved in previous discussions regarding the development of nursing education in North Macedonia. The invited participants were members of the Macedonian Association of Nurses and Midwives (n = 12); staff of health institutions (n = 8); staff of education institutions (n = 11); members of patient organizations or nongovernmental organizations (n = 4); and representatives of the Ministry of Health (n = 1) and the Ministry of Education and Science (n = 5).

Study sample

In total, 25 stakeholders (of the 41 invited) took part in Round 1 (response rate: 61%) (see Table 5.2). Participants were given three days to complete the survey. All respondents were senior staff, had been working in their field for ≥ 6 years, and the majority were female (88%). “Nurse” was the role stated by the highest percentage of participants (30.8%), followed by educators (26.9%) and medical doctors (23.1%).

Table 5.2. Distribution of professional roles and place of employment among 25 participants of Delphi survey Round 1

<table>
<thead>
<tr>
<th>Job Title / Role</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse</td>
<td>8</td>
<td>30.8</td>
</tr>
<tr>
<td>Midwife</td>
<td>2</td>
<td>7.7</td>
</tr>
<tr>
<td>Medical doctor</td>
<td>6</td>
<td>23.1</td>
</tr>
<tr>
<td>Educator</td>
<td>7</td>
<td>26.9</td>
</tr>
<tr>
<td>Consultant</td>
<td>1</td>
<td>3.8</td>
</tr>
<tr>
<td>Manager</td>
<td>1</td>
<td>3.8</td>
</tr>
<tr>
<td>Advisor</td>
<td>1</td>
<td>3.8</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>11.5</td>
</tr>
<tr>
<td><strong>Place of employment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public hospital</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Private hospital</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Primary care</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Patronage nursing</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Public health</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Primary or secondary school</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>College or university</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Government</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Organizations</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

Note. This is a multi-answer question. It represents the percentage of respondents who selected each answer option (e.g. 100% would represent that all respondents to this question chose that option).
In Round 2, 18 participants completed the survey (out of the 25 in Round 1: 72% response rate). Professional role distribution was consistent across the two rounds, with only a slightly lower percentage of nurses (27.8%), educators (22.2%) and medical doctors (22.2%) in Round 2 compared to Round 1. The gender distribution was also consistent, with a slightly lower percentage of female respondents (81.3%) in Round 2.

Relevance of the topics and consensus

As can be seen from the full results (presented in Annex 1) there was a high level of agreement on all included items. All items were also considered relevant or critical to the development of nurse education in North Macedonia, with scores between 7 and 9 in Round 1. The maximum score allowed for any item was 9.

Out of the 44 items/statements included in Round 1, only one topic under the “Service delivery and practice” domain showed any disagreement, based on the IQR values (IQR >2): the topic was “Understand what health outcomes are wanted for the population (IQR = 2.5)”. Five additional topics showed borderline disagreement (IQR = 2). One of these was related to the education domain, three were related to the cultural domain and one related to the policy/legal domain. These six topics were included in Round 2.

Consensus was achieved for two of the six topics in Round 2. However, two other topics remained as borderline disagreement and two showed disagreement (Table 5.3). Although consensus according to the IQR values was not reached for all topics in Round 2, more than 75% of participants scored the majority of topics between 7 and 9 (Table 5.4). This showed that despite some level of disagreement, on average all topics were rated as relevant in both rounds. Round 2 also included seven new topics suggested by the participants in Round 1. On average, all new topics were considered relevant or critical (scoring 7–9) and a consensus was reached for all new items, except for one (“What are the current challenges to clinical practice for nurses and midwives in the Western Balkans due to a deficit in training?”), which showed a borderline disagreement (See Table 5.5 for details).

Based on the full results (see Annex 1 in Section 10.1) from Round 1 and Round 2 the highly relevant topics were the need to:

1. Incorporate more practical knowledge and experience into nursing and midwifery education, along with transfer of skills from more experienced nurses (mean score: 8.9);
2. establish how the quality of nursing education is assessed (mean: 8.8);
3. revise existing nursing competencies (mean: 8.7);
4. establish who currently delivers education for nurses and midwives (mean: 8.7);
5. establish who is responsible for nursing education (mean: 8.6);
6. identify which subjects are vital for the curriculum (mean: 8.6);
7. identify training needs to handle equipment and technology in nursing services (mean: 8.6);
8. address the lack of clinical placements and practical education offered currently (mean: 8.6);
9. promote and enhance professional development for nurses (mean: 8.6);
10. define the roles of nurses and midwives in service delivery (e.g. in primary care, community-based setting or hospitals) (mean: 8.6);
11. establish who is responsible for setting competencies for nursing (mean: 8.6); and
12. understand what health-care model is visualized for the future in North Macedonia (mean: 8.6).

These 12 topics can be grouped into four main themes: (1) practical experience and practical training; (2) professional competencies; (3) promotion of professional development and leadership; (4) assessment of the quality of education and establishment of educationally qualified providers.
### Table 5.3. Delphi survey Round 1 and Round 2: descriptive statistics of “disagreement” items

<table>
<thead>
<tr>
<th>Topics</th>
<th>Round 1</th>
<th></th>
<th></th>
<th>IQR1</th>
<th>Round 2</th>
<th></th>
<th></th>
<th>IQR2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify what type of education provision is needed now (e.g. diploma, undergraduate degree, postgraduate degree, etc.)</td>
<td>22</td>
<td>8.5</td>
<td>7.0</td>
<td>1.43</td>
<td>18</td>
<td>8.5</td>
<td>7.6</td>
<td>1.91</td>
</tr>
<tr>
<td>Assess teaching capability and capacity of current education providers</td>
<td>25</td>
<td>9.0</td>
<td>8.0</td>
<td>1.58</td>
<td>2.0 borderline</td>
<td>18</td>
<td>7.0</td>
<td>7.1</td>
</tr>
<tr>
<td>Decide if a regulatory body for nursing is required. How could this be implemented?</td>
<td>24</td>
<td>9.0</td>
<td>7.8</td>
<td>1.95</td>
<td>2.0 borderline</td>
<td>18</td>
<td>8.5</td>
<td>7.8</td>
</tr>
<tr>
<td>Identify channels for promoting professional recognition and boosting morale</td>
<td>25</td>
<td>9.0</td>
<td>8.0</td>
<td>1.29</td>
<td>2.0 borderline</td>
<td>18</td>
<td>9.0</td>
<td>8.4</td>
</tr>
<tr>
<td>Understand what health outcomes are wanted for the population</td>
<td>25</td>
<td>8.0</td>
<td>7.8</td>
<td>1.29</td>
<td>2.5 disagreement</td>
<td>18</td>
<td>8.5</td>
<td>8.3</td>
</tr>
<tr>
<td>Establish what plans exist for professional growth and progression?</td>
<td>25</td>
<td>9.0</td>
<td>8.0</td>
<td>1.46</td>
<td>2.0 borderline</td>
<td>18</td>
<td>8.5</td>
<td>8.2</td>
</tr>
</tbody>
</table>

Notes. agreement: IQR = < 2; borderline IQR = 2; disagreement IQR > 2; Median 1–3 not important; 4–6 important but not critical; 7–9 critical; SD: standard deviation.

### Table 5.4. Distribution of responses according to each category of relevance in Delphi survey Round 2 for six “disagreement” items in Round 1

<table>
<thead>
<tr>
<th>Topics</th>
<th>1–3 %</th>
<th>4–6 %</th>
<th>7–9 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify what type of education provision is needed now (e.g. diploma, undergraduate degree, postgraduate degree, etc.)</td>
<td>5.6</td>
<td>16.6</td>
<td>77.8</td>
</tr>
<tr>
<td>Assess teaching capability and capacity of current education providers</td>
<td>5.6</td>
<td>27.8</td>
<td>66.6</td>
</tr>
<tr>
<td>Decide if a regulatory body for nursing is required. How could this be implemented?</td>
<td>5.6</td>
<td>5.6</td>
<td>88.8</td>
</tr>
<tr>
<td>Identify channels for promoting professional recognition and boosting morale</td>
<td>0</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Understand what health outcomes are wanted for the population</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Establish what plans exist for professional growth and progression?</td>
<td>0%</td>
<td>5.6%</td>
<td>94.4%</td>
</tr>
</tbody>
</table>
### Table 5.5. Descriptive statistics for the new topics included in the Delphi survey Round 2

<table>
<thead>
<tr>
<th>Topics</th>
<th>N</th>
<th>Median</th>
<th>Mean</th>
<th>SD</th>
<th>IQR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish the current challenges to clinical practice for nurses and midwives in the Western Balkans due to a deficit in training</td>
<td>18</td>
<td>8.0</td>
<td>7.8</td>
<td>1.50</td>
<td>2.0</td>
</tr>
<tr>
<td>Involve nurses in clinical decision-making</td>
<td>18</td>
<td>9.0</td>
<td>8.1</td>
<td>1.51</td>
<td>1.5</td>
</tr>
<tr>
<td>Address the need for capacity-building, training, and sharing good practice from other countries to nurse tutors and clinical teachers from North Macedonia</td>
<td>18</td>
<td>9.0</td>
<td>8.4</td>
<td>0.92</td>
<td>1.0</td>
</tr>
<tr>
<td>Include health care in the curriculum delivered by qualified nurse teachers</td>
<td>18</td>
<td>9.0</td>
<td>8.4</td>
<td>1.46</td>
<td>1.0</td>
</tr>
<tr>
<td>Establish how the quality of nursing education is assessed.</td>
<td>18</td>
<td>9.0</td>
<td>8.8</td>
<td>0.73</td>
<td>0</td>
</tr>
<tr>
<td>Address the lack of clinical placement and practical education offered currently</td>
<td>18</td>
<td>9.0</td>
<td>8.6</td>
<td>0.86</td>
<td>1.0</td>
</tr>
<tr>
<td>Incorporate more practical knowledge and experience into nursing and midwifery education, along with transfer of skills from more experienced nurses</td>
<td>18</td>
<td>9.0</td>
<td>8.9</td>
<td>0.32</td>
<td>0</td>
</tr>
</tbody>
</table>

**Notes.** agreement: IQR = < 2; borderline IQR = 2; disagreement IQR > 2; Median 1–3 not important; 4–6 important but not critical; 7–9 critical; SD: standard deviation.
5.3. Stage 3. SPRINT findings

Of the 41 key stakeholders invited, 17 attended day one of the micro SPRINT and 13 attended both days. With proper scrutiny and interpretation, the information, perceptions, opinions and attitudes expressed by the stakeholders during the SPRINTS yielded valuable insights not available from other sources. The key themes and priorities highlighted during the SPRINT were presented at an event to validate the participation findings and confirm the veracity and correctness of reporting. Tables A1–A4 in Annex 2 (Section 10.2) provide a summary of the main discussions that occurred during the SPRINTS.

Fig. 5.2 shows the AnswerGarden word clouds in Macedonian and English language, outlining what qualities the SPRINT participants would like to see in the nurse of the future.

**Fig. 5.2. AnswerGarden word clouds – nursing qualities in the future (Macedonian and English language responses by SPRINT participants)**
Using the content of the SPRINT discussions, it has been possible to map out a vision for nursing. Participants wanted a nursing profession that would be autonomous, self-regulating, with well-educated, competent, skilled and respected members who continuously upgrade their knowledge and skills to enable them to provide universal health coverage to those in need. They hoped for a profession that would offer progressive career opportunities, fair salaries and for nurses to be educated by nurses. They also wanted the profession to be protected by legislation and a regulatory chamber to be established in order to ensure standards and professionalism. There was a clear desire for work to commence swiftly, with all groups of stakeholders working together in collaboration to make these aspirations a reality.

In terms of education for nurses, the pervasive view was that nurses should be educated to degree level with three years of study to convey the required knowledge, skills and competencies set out by a Chamber of Nurses, with reference to the International Council of Nurses (ICN) and European Union (EU) nursing standards. The secondary-school nursing course was valued, but participants felt it should focus on preparing nursing assistants more systematically, with education that leads to qualified nurse status being delivered to students aged over 18 years. Continuing education for qualified nurses was considered essential, particularly to develop nurse educators and also to introduce the concept of nurse leadership, which emerged as an underdeveloped aspect of the profession. Specialization in nursing was discussed as being key to progress.

The findings could be distilled into the following key perspectives on the priority areas in reforming nurse education. It was found to be important to:

- develop a programme for nursing assistants, with access to nursing/midwifery training upon completion;
- develop nursing and midwifery education programmes that meet the requirements of EU Directive 2005/36/EC, with degree-level qualification most highly valued (European Parliament & Council of the European Union, 2005);
- develop new/revised competencies for nursing and midwifery education;
- develop a career pathway for nurses and midwives in North Macedonia, including a bridging course for existing nurses;
- implement a new law to recognize the roles of registered nurse and registered midwife;
- establish nurses as the educators for the future nursing workforce;
- implement leadership training for senior nurses in clinical practice and education settings; and
- highlight the need to establish a regulatory Chamber of Nurses.
**Fig. 5.3. An excerpt from the SPRINT padlet activity on nurse education: what, where, when, who, how**

<table>
<thead>
<tr>
<th>Breakout room 1: Nursing Competencies</th>
<th>Breakout room 2: Nurse Education</th>
<th>Breakout room 3: Education for Qualified Nurses in the Workforce</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Who should set the nursing competencies?</strong></td>
<td><strong>How important is digital literacy?</strong></td>
<td><strong>Do qualified nurses need to keep learning?</strong></td>
</tr>
<tr>
<td>4 comments</td>
<td>7 comments</td>
<td>4 comments</td>
</tr>
<tr>
<td><strong>Anonymous 4mo</strong> The educational institutions and the nurses associations in collaboration with the Camber of Nurses</td>
<td><strong>Anonymous 4mo</strong> Digital literacy is particularly important because a significant proportion of the health statistics records are already kept electronically</td>
<td><strong>Anonymous 4mo</strong> Yes</td>
</tr>
<tr>
<td><strong>Anonymous 4mo</strong> The Ministry of Health in collaboration with the Camber of Nurses</td>
<td><strong>Anonymous 4mo</strong> It is very important; in the new programmes there is a subject entitled ‘Medical statistics and informatics’</td>
<td><strong>Anonymous 4mo</strong> Absolutely; in medicine the learning is lifelong</td>
</tr>
<tr>
<td><strong>Anonymous 4mo</strong> The educational institutions, Ministry of Health, Association of Nurses and Midwives, and working groups that will verify the proposed competencies</td>
<td><strong>Anonymous 4mo</strong> Important component</td>
<td><strong>Anonymous 4mo</strong> Although it is hard, medical nurses should undertake part-time education programmes</td>
</tr>
<tr>
<td><strong>Anonymous 4mo</strong> Multisectoral: Ministry of Education and Science, Ministry of Health and the professional associations</td>
<td><strong>Anonymous 4mo</strong> Very important, but not to study about business and economy</td>
<td><strong>Anonymous 4mo</strong> Absolutely</td>
</tr>
<tr>
<td>Add comment</td>
<td><strong>Anonymous 4mo</strong> Research should be part of nursing education</td>
<td>Add comment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Are the nursing competencies set out already?</strong></th>
<th><strong>How do you want nurses to be educated?</strong></th>
<th><strong>How do qualified nurses keep learning?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>4 comments</td>
<td>1 comment</td>
<td>4 comments</td>
</tr>
<tr>
<td><strong>Anonymous 4mo</strong> No</td>
<td><strong>Anonymous 4mo</strong> The competencies of nurses with completed secondary school education</td>
<td><strong>Anonymous 4mo</strong> No</td>
</tr>
<tr>
<td><strong>Anonymous 4mo</strong> The competencies are set only in the education arena</td>
<td></td>
<td><strong>Anonymous 4mo</strong> Absolutely; in medicine the learning is lifelong</td>
</tr>
<tr>
<td><strong>Anonymous 4mo</strong> No</td>
<td></td>
<td><strong>Anonymous 4mo</strong> Although it is hard, medical nurses should undertake part-time education programmes</td>
</tr>
<tr>
<td><strong>Anonymous 4mo</strong> Not completely</td>
<td></td>
<td><strong>Anonymous 4mo</strong> Absolutely</td>
</tr>
</tbody>
</table>

**Breakout room 1: Nursing Competencies**

**Breakout room 2: Nurse Education**

**Breakout room 3: Education for Qualified Nurses in the Workforce**

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Registered nurse education in North Macedonia: a roadmap for change
6. Study limitations

This feasibility study yielded a rich dataset, from which it has been possible to derive a set of suggested changes to the current nurse education system. However, it is important to take into account the limitations to this study, as detailed here.

- The literature review was hampered by the lack of available data within the databases consulted. The research team were therefore reliant on two primary sources of information provided to the project team by WHO Regional Office for Europe (Groenewegen, Bryar & Sanchez Martinez, 2019a, 2019b). Given more time, other relevant literature may have been found, though little seems to have been published about nursing in North Macedonia.

- The Delphi study gathered consensus on a range of topics relevant to developing nursing and midwifery education in North Macedonia. However, the size and composition of the expert panel may not be representative of all potential stakeholder groups. Nevertheless, one of the main strengths of this research is that the final sample size was more than double the lower limit threshold of 12 contributors for both rounds (Murphy et al., 1998). Given the geographic barriers imposed by the novel coronavirus disease (COVID-19) pandemic, the Delphi consensus technique, which can be conducted online, was an appropriate tool for bringing together these views.

- While one of the strengths of the study was its ability to access a network of senior staff representing the Ministry of Health, the Ministry of Education and Science, the Association of Nurses and Midwives, various charities and education institutions, some research team members were either members of these organizations or heavily involved with them, which may have introduced some response bias.

- The response rates for each round of the Delphi study were 61% and 72% for Round 1 and Round 2, respectively. Based on guidance from the National Institute for Health Research (NIHR) Health Technology Assessment for this methodology (Murphy et al., 1998), a drop-out rate of 20% was anticipated over the two rounds of consensus development; the actual drop-out rate (28%) was higher than expected. However, participants were requested to complete the survey within a restricted time frame of 3 days; taking the time limit into consideration, an outstanding participation rate was achieved. The percentage of stakeholders who took part in the Delphi study also attending the SPRINT was 68%. This was attributed to the inability to attend due to work commitments. A Doodle poll had been used to find the dates with the greatest number of stakeholders available and those dates were used for the two-day event.
• The initial plan was for the SPRINT to be conducted over a 3–4 day period. However, work pressures for North Macedonian participants meant that this was not practical, and the activity was conducted in eight hours across two days. With more time, more detailed information could have been collected and the research team could have gained a deeper understanding of the issues being raised. In addition, the SPRINT participants were identified and contacted by the WHO Regional Office for Europe, which limited the number of people who had the potential to attend. That said, we believe those who took part were key informants for the study topic.

• It is possible that some SPRINT participants did not feel able to verbalize their views within the online group discussions. However, anonymized electronic platforms were used to collect thoughts, opinions and feelings on the various topics, which will have moderated this limitation.

7. Discussion of the results

From the study findings presented in the previous sections and in detail in the Annexes (Chapter 10), a gap analysis was created (see Table 7.1) to set out the difference between the current situation and the desired situation for nurse education in North Macedonia. The analysis highlights the differences between where nursing is now and where this study has shown nursing needs to be (and people closely associated with the profession want it to be) in order to contribute to the health care needs of the population.

The Gap Analysis indicates the need to develop a nursing leadership group, with members drawn from practical and education settings who can work with other stakeholders to achieve significant changes over the coming years. The participants of this study represent an important critical mass of support for reforming and enhancing nurse education. It was evident that the group held significant levels of expertise, knowledge and motivation to support and push through the changes required, although support from additional key leaders, stakeholder groups and external supporters was seen as desirable.

There was clear agreement from the Delphi survey and SPRINT participants that nurses need additional practical skills and nursing competencies. If North Macedonia wishes to join the EU, pre-qualification education must be standardized to meet EU requirements for nurse education. In addition to this requirement, nursing competencies and skills must be related to population health needs and priorities. To ensure a positive impact on population health, needs and outcomes, nurses must be educated and equipped with the right skills, knowledge, understanding and behaviours. It is also important to recognize that population health is not static, and changes occur over time and in certain demographic groups. For this reason, nursing curricula must be dynamic, responsive and able to respond to emerging future needs.
Changes in society must also be reflected in nurse education, such as recognizing and responding to the emphasis on digital and technological development.

**Table 7.1. Gap analysis from the study**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Current</th>
<th>Proposed</th>
</tr>
</thead>
</table>
| Education              | Nurses qualify at age 18–19 years, compared to 21 years in most other European countries. The current model of education does not meet EU Directive 2005/36/EC for general nurses (European Parliament & Council of the European Union, 2005). The requirement is 873 hours of clinical practice versus 2300 hours required by the EU directive (20.1% of training versus 50.0% of training). Out of 8894 trained nurses in North Macedonia (in 2017), 7538 were secondary-school educated without further training/development and only 989 were trained at university level (vocational degree). Nurses are not allowed by law to teach nurses in higher-education settings. | Nurse education should be relocated to universities/higher-education institutions: this would meet EU requirements and prepare professional, autonomous nurses. Graduate-level education has a positive impact on patient mortality (Gkantaras et al., 2016) and results in higher quality patient care (McHugh & Lake, 2010). The stakeholders involved in the SPRINT raised the need for:  
- the legislation governing nurse education to be changed: nursing to become an academic degree allowing progression to higher degree levels (as endorsed in the WHO Munich Declaration of 2000) (WHO Regional Office for Europe, 2000);  
- an education programme to prepare nurses as nurse lecturers, resulting in capable and qualified nurses teaching the next generation of nurses. |
| Cultural factors       | **The SPRINT attendees reported:**  
- low cultural status of nurses in North Macedonia;  
- inconsistencies between the perception of the profession of nursing and the reality in practice;  
- current high attrition rate, with male students using it as a means of access to higher education;  
- a shortage of nurses – due to worsen with the ageing demographic of trained nurses;  
- nurses leaving North Macedonia to other countries in Europe to obtain access to higher education or better working conditions. | **The SPRINT attendees raised the need for:**  
- nurse leadership training for nurses in key strategic positions in clinical practice and education;  
- work with the Ministry of Health to be facilitated, in order to develop and sustain a work environment conducive to higher levels of job satisfaction, aid recruitment into the profession (Wallis & Kennedy, 2013), and increase quality of care (Zaghini et al., 2020).  
**Positive regional comparison**  
Slovenia has seen a marked increase in the number of registered nurses since the introduction of degree-level education and the professionalization of nursing (Rafferty et al., 2019). |
| Service delivery and practice | **Stakeholders stated that:**  
- the current nurse education model does not prepare nurses for the needs of the service and population and is a legacy of the Yugoslavian system from several decades ago;  
- the scope of nursing practice could be extended through a more educated workforce, thus helping to deliver better primary and acute care;  
- they wanted to see a career pathway and a plan to upskill the existing workforce to meet the needs of the current and future health economy. | **Stakeholders stated they need:**  
- nurses that have graduated, with the practical skills and experience underpinned by knowledge, to meet the needs of the current and future health-care economy;  
- registered nurses who are able to work autonomously in acute or primary care settings within an extended scope of practice – this would enable the Ministry of Health to meet health outcomes targets for the coming decades in a cost-effective manner (Woo, Lee & Tam, 2017);  
- a clear career ladder with progression opportunities/pathways. |
The titles of registered nurse and registered midwife are not protected by law and are not widely used in North Macedonia. Nurses cannot by law teach student nurses—they can only be so-called clinical instructors. The mechanism does not currently exist for nurses to study for an academic degree and go on to further postgraduate study in nursing.

**SPRINT attendees wanted:**
- the law changed to protect professional titles and to reflect a nurse or midwife that has been educated to the level required by EU Directive 2005/36/EC;
- the law changed to allow nursing degrees to be counted as academic degrees, enabling progression to postgraduate study—this would meet the Government’s commitment to the WHO Munich Declaration.

Respondents were in significant agreement that it was important to look at who teaches nurses and midwives. Several critical factors affecting education quality should be taken into consideration, as listed here.

- Educators need to be well prepared for their role, as well as knowledgeable about the nursing/midwifery practice needed now and in the future.
- Teaching qualifications and formal preparation for an educator role are vital to develop nursing faculty.
- Degree-level, Master’s-level and doctoral education are needed to support learning, faculty and research for best practice in nursing.
- Skills, knowledge and understanding of teaching practice can be learnt from others, but education is constantly evolving, with much greater emphasis on online learning and digital skills development than in the past.
- The philosophy underpinning education is important and influences the teaching, learning and assessment strategies selected within a given professional course.
- Teaching, learning and assessment strategies selected can either encourage or inhibit independent and autonomous learning and professional practice.
- Education for professional practice must be underpinned by the best evidence and up-to-date research.
- There is a wealth of evidence to support the use of simulation techniques, both face to face and online, for the rapid acquisition of skills and practical knowledge.
- Qualified nurses supporting students in practice need ongoing support and development. Preparation for the education role in practice can enable nurses to teach, demonstrate, support and assess student nurses more effectively.

Respondents to the survey strongly agreed about the importance of establishing how to assess the quality of nursing education: it is first essential to agree on the so-called gold standard expected of pre-registration and post-registration courses—this would set out the expected aims and learning outcomes required of approved nurse education provision at pre-registration and post-registration levels. It would detail the skills, knowledge, understanding and behaviours required to achieve the status of qualified nurse (or specialist
post-registered nurse) and the number of practice hours and exposure to other nursing fields needed to meet EU nurse education standards.

Once the standards expected of nurse education have been set out, it would be worthwhile developing a framework for assessing education quality. This framework could be used to structure local and national evaluation of the quality of nursing education. It could focus, in different ways, on:

- education for the development of qualified nurses (pre-registration); and
- education for the existing nurse workforce (post-registration).

Frameworks for assessing educational quality may already exist in North Macedonia, but these need to be applied to a nursing context. If existing frameworks are not suitable, a review could be undertaken of the approaches used in other neighbouring countries or those that seem most relevant to the North Macedonian context. Several themes could contribute to the development of a new, unique framework for assessing education quality (see Table 7.2).

Table 7.2. Relevant themes for a framework for assessing education quality

<table>
<thead>
<tr>
<th>Pre-registration nurse education</th>
<th>Post-registration nurse education</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student-related indicators</strong></td>
<td><strong>Patient and family indicators</strong></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>Satisfaction</td>
</tr>
<tr>
<td>Pass/fail rates</td>
<td>Confidence in staff</td>
</tr>
<tr>
<td>Completion</td>
<td>Feeling cared about and feeling safe</td>
</tr>
<tr>
<td>Attrition</td>
<td>Information</td>
</tr>
<tr>
<td>Complaints</td>
<td></td>
</tr>
<tr>
<td><strong>Nurse-related indicators</strong></td>
<td><strong>Outcome data</strong></td>
</tr>
<tr>
<td>Pass rates for student practice placements</td>
<td>Mortality</td>
</tr>
<tr>
<td>Nurse satisfaction with their education role</td>
<td>Length of stay for inpatients</td>
</tr>
<tr>
<td>Nurse engagement with their education role</td>
<td></td>
</tr>
<tr>
<td><strong>Educator indicators</strong></td>
<td><strong>Patient safety indicators</strong></td>
</tr>
<tr>
<td>Teacher preparation and qualification</td>
<td>Essential nursing care needs of patients being met 24 hours per day; monitoring, for example, nutrition, fluids, oral hygiene and pain</td>
</tr>
<tr>
<td>Education level of nurse educator</td>
<td>More effective response to deteriorating patients</td>
</tr>
<tr>
<td></td>
<td>A reduction in harmful incidents, such as falls, pressure ulcers, infections or medication errors</td>
</tr>
<tr>
<td><strong>Patient indicators</strong></td>
<td><strong>Service indicators</strong></td>
</tr>
<tr>
<td>Patient compliments, complaints or feedback on student performance</td>
<td>Accidents and incidents</td>
</tr>
<tr>
<td></td>
<td>Complaints</td>
</tr>
<tr>
<td></td>
<td>Nurse recruitment and retention data</td>
</tr>
<tr>
<td></td>
<td>Nurses in leadership and decision-making roles</td>
</tr>
<tr>
<td><strong>Employer indicators</strong></td>
<td><strong>Evidence-based practice</strong></td>
</tr>
<tr>
<td>Employability of newly qualified nurses</td>
<td>Use of best practice and evidence</td>
</tr>
<tr>
<td>Capability and effectiveness of newly qualified nurses</td>
<td>Auditing against nursing guidelines and protocols</td>
</tr>
</tbody>
</table>
8. Recommendations

Due to the complexity of reforming professional nursing education the recommendations have been divided into those that do not require a change to existing law and those that do require changing the law.

The research team suggests that changes 1–6 are immediately feasible, and will provide some initial positive solutions within the nurse education reform plan. Ideally, these changes would be temporary steps in a wider and more ambitious programme of focused nurse education reform. Recommendations 7–14 are suggested preferred goals, but these will require a change in the law and so are likely to require more time for implementation.

Fig. 8.1 and Table 8.1 provide further detail about the recommendations.
Fig. 8.1. Academic progression in North Macedonia: current and proposed step changes

Current situation:
Secondary-school nursing certificate → Vocational degree → Specialization → Current end of academic progression pathway

Proposed progression for existing nurses from 2022:
Secondary-school nursing certificate → Accelerated diploma → Top-up degree → Master’s degree → PhD/Professional doctorate

Proposed new programme for all students entering nursing from 2023:
Advanced diploma in nursing → Top-up degree → Master’s degree → PhD/Professional doctorate

Proposed new programme for all students entering nursing from 2025/2026:
Pre-registration nursing degree → Master’s degree → PhD/Professional doctorate

Registered nurse education in North Macedonia: a roadmap for change
8.1. Changes that are immediately feasible from 2022

1. Dedicated curriculum working group

A curriculum working group should be established immediately to analyse current qualifications related to nursing, mapping and comparing against relevant curriculum benchmarks and comparators in North Macedonia. The preferred benchmarks and comparators need to be selected by the curriculum working group. Opportunities for existing nurses and educators to seek official recognition of prior learning (RPL) should be explored. This group will work together to design all indicated courses required to service the first five years of the nurse education reform plan.

2. Leadership development programme

Working with WHO, the ICN and academic partners, a leadership programme for nurse leaders in practice and education should be developed to enable them to lead the complex change processes involved in moving nurse education into the higher-education domain and enabling graduates from these programmes to make use of their extended scope in practice.

3. Nurse educator development programme

For nurses to be taught by nurses, further development and support of nurse educators is required. These teachers are currently certified nurses (some with further education) and are only allowed to teach practical skills. They should be able to undertake a nurse educator development programme, enabling them to go on to form the nurse lecturer workforce, which should also include practitioners with higher-education qualifications.

4. Accelerated nursing diploma

A bridging programme is needed for those qualified nurses who want to develop their scope of practice. The programme will take the form of an accelerated diploma, which would bring already qualified nurses up to level-5 academic qualification. Once the law has been changed, qualified nurses will be able to undertake a level-6 top-up degree instead (see Table 8.1 for an overview of these qualification levels). This would allow nurses in the existing workforce to meet the requirements of EU Directive 2005/36/EC (European Parliament & Council of the European Union, 2005), increase their scope of practice and extend their role, while also helping the North Macedonian Ministry of Health to meet its health outcome targets and boosting the country’s health economy.
5. Advanced diploma
From 2022, pre-registration nurse education could be delivered through an advanced diploma in nursing, undertaken as full-time study for three years. Ideally, this would be uplifted to a three-year nursing degree once the necessary changes in the law have been made (see Section 8.2) and a qualified nurse educator workforce is available. The advanced diploma would be taught at post-secondary education level, as a higher-education course. This would begin the steps required to meet the WHO Munich Declaration of 2000 (WHO Regional Office for Europe, 2000), of which North Macedonia was a signatory. This Declaration committed to moving nursing and midwifery into the higher-education sphere, with opportunities to study up to and including at postgraduate level. The health-care economy would benefit from more graduate-level trained nurses, in particular in view of the positive impact of graduate education on patient mortality (Gkantaras et al., 2016) and higher quality patient care (McHugh & Lake, 2010).

To achieve this, the curriculum working group (see point 1 above) should develop a direct entry pre-registration advanced diploma (and later, the first-level degree in nursing) that would meet the requirements of the EU Directive 2005/36/EC on the recognition of professional qualifications (European Parliament & Council of the European Union, 2005). This would assist the country in its ability to join the EU. The working group would include a range of stakeholder representatives.

6. Access to a higher-education health-care course
We recommend the current secondary-school nursing course becomes a so-called blue-ribbon course for access to higher education in medicine, nursing, midwifery and health-care courses. The course would have a combined qualification of trained nursing assistant; students who graduate from this programme could decide to enter the local health economy directly as a trained nurse assistant or to continue in education to become a nurse, midwife, doctor or other health-care professional. To allow for this change, and with the least impact on existing students, the recommendation is to consider ending the graduation of nurses from medical and vocational secondary schools in 2025, converting these programmes to award the title of nursing assistant from the 2022 entry.

One of the stakeholders’ recommendations is that there should be a form of partnership between the vocational and medical secondary schools and the schools/departments of nursing and midwifery (within current medical faculties) so that the schools provide feeder programmes for pre-registration nursing and midwifery courses. To achieve this, a working group should be set up, with all relevant stakeholders, including existing medical and vocational secondary-school staff and university staff in North Macedonia.
The following recommendations (7–14) will require a change to existing legislation but this should be happening in parallel with the changes that do not require legislative change (1–6 above).

8.2. Changes that require the law to be changed, taking them beyond 2022

7. Introduction of graduate-level entry and postgraduate progression into the profession

The Ministry of Education and Science would need to work with the Ministry of Health and the Ministry of Labour and Social Policy to change legislation to convert vocational nursing degrees to academic degrees, thus allowing for progression to postgraduate study, which is currently not possible. This would also meet the terms of the WHO Munich Declaration of 2000 (WHO Regional Office for Europe, 2000) of which North Macedonia was a signatory, committing to enabling opportunities for nurses to study up to and including at postgraduate level.

8. Reclassification of the nursing degree course

The Law needs to be changed in 2021 to enable nursing degrees to be classified as academic degrees.

9. Introduction of a top-up degree programme for existing trained nurses

Existing nursing staff would be given access to a top-up degree programme, which would allow them to develop transferable skills that can be applied directly within their place of work, contributing to the local health-care economy. This programme should be made available to all qualified nurses, but it would be up to each individual whether they take up the programme or not. Through this study programme, nurses will be able to develop a critical, evidence-based approach to practice; engage with lifelong learning; demonstrate critical competence in clinical practice, care and programme management; and gain competencies in clinical practice leadership and development. The content can be delivered through elective academic (credit-bearing) modules, personalized to meet the nurses’ individual fields of practice.

10. Nurse educator development programme: law change

Existing nurse teaching staff could (if they wish) undertake a postgraduate teaching certificate/diploma/degree/Master of Science (MSc) (or equivalent) to allow them to teach the degree programme at a university. This would require legislative changes, as currently teaching at a university requires a doctoral qualification.

11. Phasing out high school nursing programme

It is recommended that the graduation of nurses from medical and vocational secondary schools should finish in 2025 and entry into these programmes should be stopped from 2022 (allowing students entering
these high schools in 2021 to complete their studies in this setting). These students could then complete the accelerated diploma or top-up degree programme, qualifying as registered nurses.

12. Graduate-level only entry to the profession from 2025
The changes described above would mean that from 2025 all nursing students would undertake a pre-registration nursing degree at a university, taught by nurses, meeting EU directives, and creating an all-graduate profession.

13. Protecting the title of registered nurse and registered midwife
Currently, no legislative protection exists for the titles of registered nurse or midwife in North Macedonia. Internationally, nursing and midwifery are modern and dynamic professions, with caring for people at their heart. North Macedonia needs to show the nurses and midwives of tomorrow that they will have the potential to enjoy careers that are full of opportunity, underpinned by professional recognition. All stakeholders who engaged with the study highlighted how important it is that the role and title of registered nurse and registered midwife are protected, to show commitment to supporting these professions.

As seen in Slovenia, enhancing the professionalization of nursing and midwifery can attract people to the profession. Taking the steps outlined above will contribute to altering the outdated perceptions of nursing and transforming cultural perceptions of nursing and midwifery careers. Modernizing and professionalizing nursing and midwifery will help recruit and retain the next generation of nurses and midwives at a time when the current workforce is shrinking due to an ageing workforce and migration to other European countries.

14. Establishing a Chamber of Nurses
The stakeholders in the study who included nurses, midwives and nurse educators unanimously argued for the establishment of a Chamber of Nurses and Midwives in North Macedonia. They want a regulatory chamber that maintains the register of nurses and midwives who meet the country’s requirements for registration. Some, though not all, of the nursing stakeholders suggested a new role of nurse assistant could also be regulated by the Chamber. They suggested that the requirements of the new professional education should be jointly set between the new Chamber, the Ministry of Health, and the Ministry of Education and Science. The Chamber would therefore be able to influence the knowledge, skills and behaviours required for entry into their register. The stakeholders want the Chamber to be involved in the development and promotion of practice standards that are required to be maintained in order to remain on the register. This would promote lifelong learning and build professionalism within nursing and midwifery in North Macedonia.
<table>
<thead>
<tr>
<th>Name and Type of Qualification</th>
<th>Level Description</th>
<th>Aimed at</th>
<th>Suggested duration delivery model</th>
<th>Proposed date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching top-up degree/diploma</td>
<td>Undergraduate diploma / degree top-up</td>
<td>Course to provide nurse educators, without a first degree, with the relevant pedagogical, theoretical, and practical development and education to teach nursing</td>
<td>Existing nurse educators teaching secondary-school programmes and clinical nurses with higher-education qualifications</td>
<td>1–2 years, part time, with work-based learning, dependent on RPL of existing qualifications and experience</td>
</tr>
<tr>
<td>Accelerated top-up diploma</td>
<td>Undergraduate diploma</td>
<td>Bridging course to upskill nurses educated to secondary-school level to the standard of diploma, and meeting the requirements of EU Directive 2005/36/EC*</td>
<td>Nurses who have completed a secondary-school nursing programme</td>
<td>2 years, part time, with work-based learning</td>
</tr>
<tr>
<td>Advanced nursing diploma</td>
<td>Undergraduate diploma</td>
<td>Direct-entry programme for students educated to post-secondary level; course is designed to meet the requirements of EU Directive 2005/36/EC*</td>
<td>All post-secondary education students</td>
<td>3 years, full time</td>
</tr>
<tr>
<td>Postgraduate teaching certificate</td>
<td>Postgraduate</td>
<td>Teaching qualification designed to meet the WHO Nurse Educator requirements</td>
<td>Degree-educated nurse educators</td>
<td>1 year, part time, with work-based learning</td>
</tr>
<tr>
<td>Bachelor’s degree in nursing studies</td>
<td>Undergraduate degree</td>
<td>Direct-entry degree programme for students educated to post-secondary level; course is designed to meet the requirements of EU Directive 2005/36/EC*</td>
<td>All students educated to post-secondary level</td>
<td>3 years, full time</td>
</tr>
<tr>
<td>Top-up degree in nursing studies</td>
<td>Undergraduate degree</td>
<td>A top-up degree programme for nurses with the accelerated diploma or advanced diploma to bring them up to the level of degree-educated nurses, allowing for further academic progression</td>
<td>Diploma-educated nurses</td>
<td>1 year, part time, with work-based learning</td>
</tr>
<tr>
<td>Master’s degree in nursing</td>
<td>Postgraduate</td>
<td>Taught Master’s degree in nursing, conforming to the requirements of the WHO Munich Declaration</td>
<td>Degree-educated nurses</td>
<td>1 year, full time / 2 years, part time</td>
</tr>
</tbody>
</table>

The potential outline/roadmap for years 1–10 is shown in Fig. 8.2.

Fig. 8.2. Ten-year roadmap

- Establish a curriculum development working group to look at the curriculum of the new programme
- Establish a curriculum development working group to create a new nursing assistant programme which will give access to the new pre-registration programme
- Ministry of Education and Ministry of Education and Science to draft a new law on pre-registration education of nurses, to include the legal protection of the titles of registered nurse and registered midwife
- Leadership training to be offered to nurses in strategic health-care or education posts
- Overarching project group to be established, with agreed reporting mechanisms, project plans for each stream, timeline, and outcomes

Year one

- Pre-registration advanced diploma, nursing assistant and bridging course to be submitted for joint approval by the Ministry of Health and the Ministry of Education and Science
- Establish new schools of nursing and midwifery in higher education; recruit and train staff for these schools
- Existing workforce in secondary schools to prepare for nursing assistant programmes coming online and phasing out (with overlap) of the teaching of secondary-school nursing programmes
- Existing teaching staff to be given access to Postgraduate Certificate teaching qualifications
- Logistical planning for roll-out of workforce development in years three to five by the operational arm of the project group (including service delivery impact considerations)

Year two

- First nurse assistant, pre-registration nursing and bridging courses commence with the autumn intake of students
- Curriculum development group to commence work on the curricula of the new pre-registration degree, the top-up degree and MSc programmes
- Workforce development group to demonstrate new career pathway for nursing and midwifery; including revised job descriptions, with grades and salaries commensurate to level of training and grade of nurse

Year three

- Bridging course nurses re-enter the workforce as registered nurses
- Degree, top-up degree and MSc programmes to be submitted for joint approval by the relevant ministries
- Activities and outputs for nurse academics to be researched
- Nurse academics commence writing nursing textbooks
- Development of PhD and professional Doctorate programmes

Years four & five

- Pre-registration advanced diploma nurses enter the workforce
- Approval of PhD programmes by the ministries
- Recruitment to PhD programmes
- Nurse researchers to develop evidence base for practice

Years six to ten
The actions specific to the education, science and health ministries for years 1–5 of the roadmap are detailed in figures 8.3 to 8.6.

**Fig. 8.3. Year one**

- Establish a curriculum development working group to look at the curriculum of the new programme
- Establish a curriculum development working group to create a new nursing assistant programme which will give access to the new pre-registration programme
- Ministry of Education and Ministry of Education and Science to draft a new law on pre-registration education of nurses, to include the legal protection of the titles of registered nurse and registered midwife
- Leadership training to be offered to nurses in strategic health care or education posts
- Overarching project group to be established, with: agreed reporting mechanisms, project plans for each stream, timeline, and outcomes

**Fig. 8.4. Year two**

- Pre-registration advanced diploma, nursing assistant and bridging course to be submitted for joint approval by the Ministry of Health and the Ministry of Education and Science
- Establish new schools of nursing and midwifery in higher education; recruit and train staff for these schools
- Existing workforce in secondary schools to prepare for nursing assistant programmes coming online and phasing out (with overlap) of the teaching of secondary-school nursing programmes
- Existing teaching staff to be given access to Postgraduate Certificate teaching qualifications
- Logistical planning for roll-out of workforce development in years three to five by the operational arm of the project group (including service delivery impact considerations)
**Year three**

- First nurse assistant, pre-registration nursing and bridging courses commence with the autumn intake of students
- Curriculum development group to commence work on the curricula of the new pre-registration degree, the top-up degree and MSc programmes
- Workforce development group to demonstrate new career pathway for nursing and midwifery; including revised job descriptions, with grades and salaries commensurate to level of training and grade of nurse

**Years four & five**

- Bridging course nurses re-enter the workforce as registered nurses
- Degree, top-up degree and MSc programmes to be submitted for joint approval by the relevant ministries
- Activities and outputs for nurse academics to be researched
- Nurse academics commence writing nursing textbooks
- Development of PhD and professional Doctorate programmes
9. References


## 10. Annexes

### 10.1. Annex 1. Delphi survey data

Table 10.1. Descriptive data on the relevance of items included in the Delphi surveys 1 and 2

<table>
<thead>
<tr>
<th>Number of participants</th>
<th>Domain 1: Education</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>Q10 Revise existing nursing competencies</td>
<td>8.7</td>
</tr>
<tr>
<td>25</td>
<td>Q14 Establish who is responsible for nursing education.</td>
<td>8.6</td>
</tr>
<tr>
<td>25</td>
<td>Q22 Identify which subjects are vital for the curriculum</td>
<td>8.6</td>
</tr>
<tr>
<td>25</td>
<td>Q19 Promote and enhance professional development for nurses</td>
<td>8.6</td>
</tr>
<tr>
<td>25</td>
<td>Q24 Provide clinical placement(s) and nursing practice placement(s)</td>
<td>8.5</td>
</tr>
<tr>
<td>25</td>
<td>Q21 Define what future nursing education should look like</td>
<td>8.5</td>
</tr>
<tr>
<td>25</td>
<td>Q11 Design an enhanced education programme for nursing</td>
<td>8.5</td>
</tr>
<tr>
<td>25</td>
<td>Q13 Develop new resources for learning and practice</td>
<td>8.4</td>
</tr>
<tr>
<td>24</td>
<td>Q16 Change the law to allow nurses to be educated at advanced diploma and degree level</td>
<td>8.3</td>
</tr>
<tr>
<td>24</td>
<td>Q18 Define pre- and post-professional registration standards</td>
<td>8.3</td>
</tr>
<tr>
<td>25</td>
<td>Q12 Incorporate the views of nurses and midwives when designing education programmes</td>
<td>8.3</td>
</tr>
<tr>
<td>25</td>
<td>Q23 Decide if the curriculum must meet the EU directive requirements</td>
<td>8.3</td>
</tr>
<tr>
<td>25</td>
<td>Q20 Facilitate the progression of nurses and midwives in education</td>
<td>8.1</td>
</tr>
<tr>
<td>25</td>
<td>Q17 Change in the law to allow nurses and midwives as lecturers in higher education</td>
<td>8.1</td>
</tr>
<tr>
<td>24</td>
<td>Q25 Assess the teaching capability and capacity of current education providers</td>
<td>7.9</td>
</tr>
<tr>
<td>25</td>
<td>Q15 Identify what type of education provision is needed now (e.g. diploma, undergraduate degree, postgraduate degree, etc.)</td>
<td>7.6*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of participants</th>
<th>Domain 2: Culture</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>Q37 Understand what model for health care is visualized for the future in North Macedonia</td>
<td>8.6</td>
</tr>
<tr>
<td>25</td>
<td>Q32 Establish channels and pathways for decision-making concerning the profession</td>
<td>8.4</td>
</tr>
<tr>
<td>25</td>
<td>Q28 Promote professional recognition of nurses and midwives</td>
<td>8.4</td>
</tr>
<tr>
<td>23</td>
<td>Q34 Identify who advocates for better working conditions and salary increases</td>
<td>8.2</td>
</tr>
<tr>
<td>24</td>
<td>Q33 Define who represents the profession at the local, region and national levels</td>
<td>8.2</td>
</tr>
<tr>
<td>25</td>
<td>Q36 Promote recruitment and retention of registered nurses to address the shortfall in the nursing and midwifery workforce in North Macedonia</td>
<td>8.2</td>
</tr>
<tr>
<td>25</td>
<td>Q31 Define who supports and protects nurses and midwives</td>
<td>8.1</td>
</tr>
<tr>
<td>25</td>
<td>Q35 Identify channels for promoting professional recognition and boosting morale</td>
<td>8.4*</td>
</tr>
<tr>
<td>24</td>
<td>Q30 Define who leads and regulates the profession</td>
<td>7.9</td>
</tr>
<tr>
<td>18</td>
<td>Q29 Decide if a regulatory body for nursing is required. How could this be implemented? (Please add your comments in the box below)</td>
<td>7.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of participants</th>
<th>Domain 3: Service delivery and practice</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>Q42 Define the roles of nurses and midwives in service delivery (e.g. in primary care, community-based setting or hospitals)</td>
<td>8.6</td>
</tr>
<tr>
<td>25</td>
<td>Q47 Identify training needs to handle equipment and technology</td>
<td>8.6</td>
</tr>
<tr>
<td>25</td>
<td>Q46 Identify gaps in the provision of specialized continued education for nurses and midwives</td>
<td>8.4</td>
</tr>
<tr>
<td>24</td>
<td>Q44 Explore gaps in the existing clinical guidelines, clinical pathways and care planning</td>
<td>8.4</td>
</tr>
<tr>
<td>24</td>
<td>Q45 Explore the roles of specialist nurses in different settings</td>
<td>8.4</td>
</tr>
<tr>
<td>Q43</td>
<td>Explore care pathways for specific conditions (e.g. pathway for chronic and long-term conditions in primary care)</td>
<td>25</td>
</tr>
<tr>
<td>Q48</td>
<td>Identify factors that hinder effective and efficient work (e.g. administration, paperwork, equipment, facilities, etc.)</td>
<td>25</td>
</tr>
<tr>
<td>Q41</td>
<td>Understand the direction and focus of the health care delivered by nurses and midwives in North Macedonia</td>
<td>25</td>
</tr>
<tr>
<td>Q40</td>
<td>Understand what health outcomes are wanted for the population</td>
<td>25</td>
</tr>
</tbody>
</table>

**Domain 4: Legal aspects and policy**

| Q58 | Who currently delivers education for nurses and midwives? | 24 | 8.7 |
| Q59 | Who is responsible for setting competencies for nursing? | 23 | 8.6 |
| Q60 | Who is responsible for professional regulation and accountability? | 22 | 8.5 |
| Q53 | Explore current policies and regulations which hinder nurses and midwives from working effectively | 25 | 8.4 |
| Q57 | What are the current government plans for education and training of nurses and midwives? | 22 | 8.2 |
| Q56 | What is the current workforce planning? | 23 | 8.2 |
| Q51 | Consider the current national health strategy | 24 | 8.1 |
| Q52 | Understand what health outcomes are wanted for the population | 24 | 8.1 |
| Q54 | What are the plans for professional growth and progression? | 25 | 18* | 8.0 | 8.2* |
| Q55 | What are the funding and resources available? | 24 | 8.0 |

*values are referring to the Delphi survey 2
10.2. Annex 2. Translation of the electronic activities from SPRINT day one, by topic

Table A1. Vision for health care in North Macedonia

<table>
<thead>
<tr>
<th>Stakeholder answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question one: What is the vision for health care?</td>
</tr>
<tr>
<td>- Clearly defined competencies. Nurses find their place in health care.</td>
</tr>
<tr>
<td>- Care tailored to the needs of the patient – led by well-educated nurses.</td>
</tr>
<tr>
<td>- Chronic noncommunicable diseases such as stroke and heart disease, malignant neoplasms, air pollution, mental health.</td>
</tr>
<tr>
<td>- Strategy for nursing.</td>
</tr>
<tr>
<td>- Nurses to be respected and to respect themselves.</td>
</tr>
<tr>
<td>- Recognizing the education of nurses – clear career pathway. Direction for nurses.</td>
</tr>
<tr>
<td>- More competencies, to be more independent, to expand health-care service provision.</td>
</tr>
<tr>
<td>- Increased training as appropriate. Address inequalities at primary health care level.</td>
</tr>
<tr>
<td>- More involved in health promotion and education – something doctors do not have time to do.</td>
</tr>
<tr>
<td>- Is there a shortage of nurses? Is there a shortage of other health professionals?</td>
</tr>
<tr>
<td>- Are there clear inequalities in health and health care? Is the focus on health care for treatment or prevention?</td>
</tr>
<tr>
<td>- The nurse role is currently marginalized, has no place among the professions, no support from above, and at the same time the nurses themselves are not valued enough.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stakeholder answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question two: What are the key population challenges in North Macedonia?</td>
</tr>
<tr>
<td>- Equity in rural areas, vulnerable groups of people, disabled people, etc.</td>
</tr>
<tr>
<td>- Strengthening of primary care.</td>
</tr>
<tr>
<td>- Coordination of care at primary level.</td>
</tr>
<tr>
<td>- Developing nurse specialties at community level according to community need.</td>
</tr>
<tr>
<td>- In North Macedonia it is necessary to achieve universal health care for all.</td>
</tr>
<tr>
<td>- Health care of elderly people and palliative care.</td>
</tr>
<tr>
<td>- Reproductive health of the population and health care of mothers and children.</td>
</tr>
<tr>
<td>- More chronic diseases, mental illnesses, air pollution, poverty, job losses.</td>
</tr>
<tr>
<td>- Strengthening of preventive health care – including education, screenings.</td>
</tr>
<tr>
<td>- There is a shortage of nurses, thus complicating the work of home-care nurses.</td>
</tr>
<tr>
<td>- Children – breastfeeding, immunization, development and growth.</td>
</tr>
<tr>
<td>- Nutrition.</td>
</tr>
<tr>
<td>- Care of elderly people – well-being, mental health, care for dementia patients, palliative care.</td>
</tr>
<tr>
<td>- Public health – obesity, lack of healthy nutrition, high level of cigarettes smoking, alcohol consumption, physical inactivity.</td>
</tr>
<tr>
<td>- Chronic noncommunicable diseases and other diseases, economic situation, poor population.</td>
</tr>
</tbody>
</table>
- Accelerating progress towards universal health coverage and ensuring equitable access to health care by increasing the number of nurses in public health and improving their knowledge and skills.
- Health inequalities – mothers, women’s health, access to health care.
- The focus is on treatment and very little attention is paid to prevention.
- There are huge health inequalities in the country; the whole focus is on the city of Skopje, while in some of the other cities there are only minimal health care possibilities, especially in rural areas.

<table>
<thead>
<tr>
<th>Question three: What do you need to do to get there?</th>
<th>Stakeholder responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Health inequalities – mothers, women’s health, access to health care.</td>
<td>• The education of nurses in the subject of health care is provided by doctors; even in the health care field, nurses can only be moderators of some parts of the practical classes.</td>
</tr>
<tr>
<td>• The focus is on treatment and very little attention is paid to prevention.</td>
<td>• There is a lack of nurses and doctors, which, due to the pandemic, has added extra strain to the already difficult situation of health workers. The shortage is constant and many nurses and doctors migrated to western countries, such as Germany, because they are better paid and valued.</td>
</tr>
<tr>
<td>• There are huge health inequalities in the country; the whole focus is on the city of Skopje, while in some of the other cities there are only minimal health care possibilities, especially in rural areas.</td>
<td>• Nursing is not currently at the desired level; the Ministry of Education and Science is aligned with European standards and directives through various educational projects and programmes, ensuring harmony with the EU (Bologna Accord). The Ministry of Health has not followed this trend and made changes at the same pace. So far, there are no career opportunities for nurses with higher education and, since 2002 (when nurses were first permitted to study vocational degrees), no career pathway exists for nurses working in home care or the hospital system. Simply put, there is no official career development in place for highly educated nurses.</td>
</tr>
<tr>
<td>• Impece health literacy of our population (it is very low).</td>
<td>• Improve health literacy of our population (it is very low).</td>
</tr>
<tr>
<td>• Establish a Chamber of Nurses.</td>
<td>• Establish a Chamber of Nurses.</td>
</tr>
<tr>
<td>• Strengthen the nursing role (leadership).</td>
<td>• Strengthen the nursing role (leadership).</td>
</tr>
<tr>
<td>• Define competencies – recognition of nursing education by health authorities.</td>
<td>• Define competencies – recognition of nursing education by health authorities.</td>
</tr>
<tr>
<td>• Develop and strengthen nursing faculty education.</td>
<td>• Develop and strengthen nursing faculty education.</td>
</tr>
<tr>
<td>• There is a need for all nurses to have the same competencies; a university accreditation programme. Accreditation is not included in job requirements. Consider other universities in other countries; make links with other countries’ education systems (Bulgaria, Croatia, Germany).</td>
<td>• There is a need for all nurses to have the same competencies; a university accreditation programme. Accreditation is not included in job requirements. Consider other universities in other countries; make links with other countries’ education systems (Bulgaria, Croatia, Germany).</td>
</tr>
<tr>
<td>• System changes. Opportunities for nurses to be teachers. Nurses are grouped together with other health workers; instead, they should be viewed as a separate, regulated profession.</td>
<td>• System changes. Opportunities for nurses to be teachers. Nurses are grouped together with other health workers; instead, they should be viewed as a separate, regulated profession.</td>
</tr>
<tr>
<td>• Higher education levels do not exist for nurse education.</td>
<td>• Higher education levels do not exist for nurse education.</td>
</tr>
<tr>
<td>• Opportunities for nurses to go into teaching in universities.</td>
<td>• Opportunities for nurses to go into teaching in universities.</td>
</tr>
<tr>
<td>• Some time ago the Chamber of Nurses became active but it has insufficient powers.</td>
<td>• Some time ago the Chamber of Nurses became active but it has insufficient powers.</td>
</tr>
</tbody>
</table>
### TOPIC 2: Vision of nursing

#### Breakout room one

The profession of nursing in North Macedonia will be ...

- A unified, attractive profession, regulated by statute according to competencies, rules and regulations and based on the level of education and workplace tasks.
- Respected, recognized and valued by the system and internationally, with clear roles and defined responsibilities.
- Able to provide comprehensive universal health care to patients according to their needs.
- Precise and neat.
- Able to decide on issues of interest.
- Overseen by a unified Chamber of Nurses that will provide guidance, including a register of nurses according to education and needs, and a body that will equalize the education of nurses with associations from other countries; not only a body within the Ministry of Health but also its own body to which all nurses can turn.

Nurses in North Macedonia will be ...

- Respected in the workplace as a way to retain nurses’ value and have a linear progression pathway, with opportunities for promotion and professional development.
- Joint leaders.
- Independent in decision-making on nursing affairs.
- Equal members of the team.
- Registered nurses.

Nursing as a career in North Macedonia will be ...

- Overseen by a unified Chamber of Nurses that will protect the interests of nurses and raise the quality of nursing.
- Valued and have linear progression, with opportunities for promotion and professional development.
- Strengthened by the introduction of diagnosis by nurses into the process of health care.
- Improved by defining competencies and responsibilities according to level of education and changing the name of the profession itself according to the level of education.

#### Breakout room two

The profession of nursing in North Macedonia will be ...

- An autonomous, self-regulating profession that will continuously upgrade knowledge and skills, following the development of technology, which will educate future generations of nurses.
- A well-paid and attractive profession for the younger generations, with the opportunity to advance in the workplace.
- A profession regulated by law and with a unified educational programme.
- Valued and respected.

Nurses in North Macedonia will be ...

- Recognized for their expertise, education, professionalism; further educated in their field; part of a self-regulating profession with the opportunity to be independently responsible for their work.
- Educators for future generations of nurses.
- Endowed with suitable competencies to be able to provide health services appropriate to the needs of different groups of the population in North Macedonia.
- Providers of adequate health care with safe and effective methods and procedures to promote the health of the population.

Nursing as a career in North Macedonia will be ...

- Enhanced by the possibility to academically upgrade with the opportunity for teaching titles such as Doctor of nursing.
- A well-paid and attractive profession for future generations.
- An autonomous and self-regulating profession with the opportunity to advance in the workplace.
### Nursing education will ...

- Increase practical teaching.
- Define teaching standards; to be more practical and oriented to the State’s needs.
- Define the standards of educators.
- Align educational programmes and regulations with EU standards and competencies to be recognized by the EU.
- Introduce diagnosis by nurses into the process of health care.
- Transform nursing education from vocational to academic studies in order to provide the opportunity for Master’s degrees and Doctorates in nursing sciences.
- Work to harmonize the views of the Ministry of Health and the Ministry of Education and Science.
- Ensure continuing education of nurses (with a plan and accreditation).
- Develop such that nurses will be allowed to teach.

### Nursing education will ...

- Become more academic, with the possibility of further advancement (postgraduate and doctoral studies).
- Distinguish between secondary-school certificated nurses and nurses educated to vocational degree level; everyone will know their work tasks and competencies acquired via their educational level.
- Progress to faculties of nursing that are led by nurses and overall education will be conducted by experienced and qualified nurses (nurses will educate nurses).
- Provide continuing education and upgrading of knowledge and skills.
- Enable nurses to be competent to provide a wider range of health services, according to the needs of the population and the situation within the health system.
- Be based on unified curricula for all educational levels, regardless of which school or faculty the knowledge was acquired from.
- Ensure greater control over clinical practice by introducing the position of nurse educator, who will have the task of coordinating the clinical practice of future nurses and will provide continuous medical education to nurses already employed (new practice developments as well as for the renewal of existing knowledge).

Note. EU: European Union.

### Table A3. Nurse education

#### TOPIC 3: Nurse education subgroup

<table>
<thead>
<tr>
<th>How do you want nurses to be educated?</th>
<th>Clearly determine the competencies of nurses with secondary-school diplomas and those for nurses who have completed university education. When these competencies are clearly defined, then the curricula for education of nurses in secondary schools and at universities can be prepared accordingly.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Work should be done on clearly defined competencies according to the level of education; of course, it should be introduced gradually.</td>
</tr>
<tr>
<td></td>
<td>Academic education of nurses is needed. The secondary-school course should become the access point for the nursing course. A modern, state-of-the-art education, an increase in practical teaching, better skills, more problem-based and interactive learning, developing autonomous practice.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What teaching and learning approaches do you think should be used?</th>
<th>I think that the secondary-level medical education should be reformed, because the subjects covered and taught (including death) are too traumatic and stressful for young learners. They should start nursing when they are older (18+ years).</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Higher education should include more clinical skills training under the guidance of graduate-trained educators.</td>
</tr>
<tr>
<td></td>
<td>Appropriate distribution of theoretical and practical teaching.</td>
</tr>
<tr>
<td></td>
<td>Additional compulsory on-the-job education for each newly employed nurse.</td>
</tr>
<tr>
<td></td>
<td>More practical instruction, focusing on problem-based learning, guidance, case studies, community-based fieldwork, professionalism, ethics, and empathy.</td>
</tr>
<tr>
<td></td>
<td>Aligning programmes in North Macedonia with those in the EU.</td>
</tr>
</tbody>
</table>
### Where will education for nurses be provided?
- Mentoring work, connecting schools of nursing with vocational secondary schools. Secondary schools to become feeder schools for the schools of nursing.
- In colleges. In my opinion, current part-time nursing courses should be abolished. The secondary-level medical (high) school must remain; the basic programmes (for example nursing assistant) can be taught there.

### Who pays for nursing education?
- It should be for Ministry of Education and Science to regulate part of the reforms in the funding of higher-education institutions.
- Nurses are self-funded at higher-education level.
- The Ministry of Education and Science sets quotas and the amount of fees for undergraduate and postgraduate courses.
- Should be private; nurses themselves currently fund their education. The State should provide means; currently secondary-level medical education is covered by the State because secondary-level education is compulsory.

### Are the nursing competencies set out already?
- Competencies are established only in education; not overall.

### Who should set the nursing competencies?
- Educational institutions and nurses’ and midwives’ associations.
- The Ministry of Health in close cooperation with the Chamber of Nurses.
- Educational institutions, the Ministry of Health through the Association of Nurses and Midwives, and working groups that will determine their credibility.
- Multisectoral approach, with input from the Ministry of Education and Science, and relevant health and vocational associations.

### Who sets the nursing competencies?
- Educational institutions; secondary schools state which competencies they have acquired. On paper they are defined, by obtaining diplomas, but they are not recognized in the nurses’ roles in the workplace.
- Competencies are included as an integral part of the study programme’s accreditation process. It is necessary for the Chamber of Nurses (with representatives of the ICN) to determine the competencies.

### Do you want to change the setting of nursing competencies?
- The prescribed competencies are not in line with the competencies of the EU Directive on the recognition of professional qualifications (2005/36/EC); mandatory competencies should be designated according to the level of education of nurses.

### Who can help us within the global nursing profession with this activity?
- WHO, the ICN, other associations from around the region, which had the same problems as experienced in North Macedonia.
- EFN and the global nursing community, through the Ministry of Education and Science.
- International organizations and associations.
- Competencies should be defined according to national needs.

### What approaches can you use to define the competencies?
- Research and analysis and a multisectoral working group.
- The starting point should be the global competencies of the ICN, then to make a working group that would determine the competencies.
- The State should develop a strategy for the roles of nurses within different levels of health care, as well as their roles in different medical activities. For that purpose, the curricula for education of nurses should be reviewed, to determine which new competencies should be assigned to nurses according to their level of education.

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Notes. EFN: European Federation of Nurse Associations. ICN: International Council of Nurses.
Table A4. Changes needed to achieve the vision for nursing

<table>
<thead>
<tr>
<th>Group 1</th>
<th>What, in your opinion, should change in relation to achieving the vision for nursing in North Macedonia?</th>
</tr>
</thead>
</table>
| **Education** | • Change the curriculum according to the EU Directive on the recognition of professional qualifications (2005/36/EC).  
• Decide on the level at which the nurses will be educated and where we want to go as a country in terms of education; to stay isolated and educate nurses only to secondary level or to follow the EU and educate highly competent professionals in the field of nursing. |
| **Policy** | • Lobby the political parties, do research on the status of nurses in the health care sector and strategize for nursing.  
• Determine, within the national health strategy, the need to expand the competencies of nurses and strengthen the role of nursing in providing health care to the population.  
• Point out to political parties the involvement of women in political parties; establish what is the role of the nurse and highlight that the State would benefit from educating highly qualified nurses.  
• Plan competencies based on data on the health workforce and the health needs of the population (migration of health workers, population ageing, infant mortality, etc.). |
| **Laws** | • Recognize nurse education in state legislation. It is necessary to provide academic education to the regulated professions, including nurses and midwives.  
• Change or supplement the Law on Higher Education.  
• Introduce amendments to the Law on Health Care regarding the competencies of nurses or a special law on nursing.  
• Change the legislation on higher education, to separate nurses and midwives within the Law on Health Care into the category of service providers; i.e. not included with other health professionals.  
• Draft a law on nurses and midwives, or include changes in the Law on Health Care.  
• Adopt a law on continuing professional development of nurses, following the example of the relevant law on doctors.  
• Amend the law and introduce a special law or bylaw to regulate the profession. |

<table>
<thead>
<tr>
<th>Group 2</th>
<th>What, in your opinion, should change in relation to achieving the vision for nursing in North Macedonia?</th>
</tr>
</thead>
</table>
| **Cultural factors** | • We do not have a problem with acceptance, but pronounced differences when it comes to other ethnic groups, e.g. male nurses or technicians, and accepting the rules in hospitals (the rule is two people visiting a patient but very often a wider family arrives to visit; patient rights stipulate the appointment of three people who could have access to information).  
• People not having the courage to continue with specialist study.  
• Strengthening and training of nurses as equal members of the team.  
• Recognition of the competencies of nurses by doctors.  
• Standardization of education to increase respect for nurses.  
• Disrespect for the nursing profession; nursing is a profession and nurses are not handmaidens to doctors.  
• Should not distinguish patients according to national or religious ethnicity.  
• In all health-care education nationally we should introduce the subject “Cultural and structural competencies of health professionals”. We should organize workshops for employees in health care, not only for students. |
| **Professional practice** | • Defining competencies according to the level of education.  
• Autonomous clinical practice.  
• Mentoring in professional practice.  
• De-bureaucratization of professional practice with the aim of a wider scope of clinical practice for nurses. |
| **Designing health services** | • Increasing the number of nurses according to the number of doctors, and the number of beds according to the need for health care.  
• Defining a standard number of nurses according to the need for health care.  
• Reducing the number of referrals to Skopje from smaller places.  
• Greater independence for nurses in their role as service providers. |
Table A5. Education for qualified nurses

<table>
<thead>
<tr>
<th>Topic 3: Education for existing qualified nurses</th>
</tr>
</thead>
</table>
| 1. Do qualified nurses need to keep learning? | • Absolutely, in medicine learning is lifelong.  
  • Although it is hard, nurses need to be educated beyond the standard levels. |
| 2. How do qualified nurses keep learning? | • Introduce a system of continuing medical education, similar to the example of doctors.  
  • Introduce a system of on-the-job learning, especially for newly employed nurses (preceptorship).  
  • Provide continuing education and accredit the training.  
  • Change nurses’ attitudes and normalize the process of continuing education/revalidation.  
  • Introduce accreditation of training as additional motivation.  
  • Implement compulsory education for licence extension/renewal.  
  • Introduce registration of nurses. |
| 3. What development is needed to create nurse educators? | • Involve nurses in the higher-education process, by providing RPL.  
  • The legislation on higher education should be changed because nurses have no alternative pathway, e.g. to be a lecturer you need to have completed academic studies and have a Master’s degree.  
  • Nurses have extensive experience to take into consideration.  
  • Educator training |
| 4. What learning needs do nurse educators have? | • They may need training from other nurse educators on how teaching is conducted. |

Note. RPL: recognition of prior learning.

Table A6. Leadership for nursing

<table>
<thead>
<tr>
<th>Perspectives on nursing leadership</th>
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</table>
| 1. Local leadership | • Local leadership is party oriented.  
  • Professionalism is not rewarded.  
  • Change of leaders by change of government and party structures.  
  • This practice should not continue. Not everyone can be a leader.  
  • Competition among nursing associations.  
  • There should be a function in any city where there may be awards for nurses to stimulate better and more successful nursing work. |
| 2. Local and national leadership | • Should unite, focus the team.  
  • Should have more knowledge and skills and personal qualities of the team members  
  • Recognize the quality of each team member, to support and upgrade the profession.  
  • Placement of staff according to knowledge and capacity.  
  • Lack of political will to create a Chamber of Nurses.  
  • Institutionalization of the involvement of professional associations in decision-making.  
  • Nurse leaders need more education in leadership so that they can solve the problems and can lead.  
  • More nurses within the Ministry of Health.  
  • Ministry of Health has a key role. |
| 3. National leadership | • Currently not recognized as leaders – difficult to become a nurse leader. Easier to become a political leader.  
  • Should be included in policy-making for the health system.  
  • Should be able to lead themselves.  
  • Should be able to choose new types of care.  
  • Establish how to increase nurses’ knowledge and implement the findings to achieve the global goals. |
- Involve education providers in creating education and policies.
- There should be no personal prejudices; work for the common interest.
- Continuity is needed in cooperation between institutions.
- Constant change in politics; no continuity.

**Leadership for, and within, nursing**

4. **Who / where are your nursing leaders?**
   - Vocational secondary-school teachers.
   - Role models for what a nurse should look like.
   - Some principal actors who are designated to focus on competencies and knowledge.
   - Lack of national leadership recognition; some local efforts.
   - Some retired nurses.

5. **What kind of leadership is needed for nursing and within nursing?**
   - Democratic leadership.
   - Leaders should be elected by staff, not through politics.
   - Teaching small workshops, starting small, with nurses onwards.

6. **How can more nurses gain influence?**
   - Educating patients about nurse leadership / changing perspectives.
   - Increasing knowledge.
   - Through professional and life experience.
   - Increasing professionalism.
   - Nurses’ self-confidence comes from knowledge and experience gained in the workplace.
   - By gaining respect in the working environment.
   - Strengthening and directing nurses to better use their knowledge, skills, and expertise.

7. **How can nursing leadership be supported?**
   - Identify nurses who have leadership skills.
   - Leadership in the curriculum must be agreed with the Ministry of Education and Science.
   - Ministry of Health needs to give support to allow nurses a leadership role in health care.
   - Not only at work; support is needed from associations but also from the Ministry of Health.
   - For the introduction of changes, it is necessary to have support in the form of political will.

8. **How do we develop leadership in the existing workforce?**
   - Develop a leadership curriculum.
   - At city level, establish joint leadership, to then be able to meet the needs or achievements required at state level.
   - Increase nursing salaries.
   - Respect for each other and doctors is an important motivation.
   - Provide autonomy in the workplace and decision-making in work processes.
   - Reward nurses working in COVID-19* centres.

9. **How can we develop the leadership of those undertaking the nursing diploma?**
   - Establish leadership role modelling, and provide education on leadership skills.
   - Education and exchange of experiences.
   - Care team to have a team leader nurse with higher education.
   - This is included in the law, but not implemented in practice.
   - Provide leadership opportunities for nurses.
   - Provide opportunities for professional development and financial progression in the career.
   - Recognize the level of education and experience of the nurses and ensure they are appropriately financially rewarded.

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### Table A7. Nursing course design

#### Section 2: Course design

1. **What level will the new programme be at? E.g. advanced diploma/degree**
   - 3 years of academic studies with the possibility of academic advancement for the best
   - 3 years of studies + 1 year specialization + 1 year Master’s degree-level academic study
   - 3 years of professional studies + 1 year of specialization
   - Or 3 years of professional studies + 2 years of Master’s-level study + doctoral study
   - 3 years of academic study
   - Should have two new educational levels: first at level VII A and doctoral studies at level VIII

2. **How long would a diploma be?**
   - 3 years of basic studies with the possibility of + 2 years of Master’s-level and + 3 years of doctoral study
   - 3 + 2 + 3 years of doctoral studies
   - 3 or 4 years + Master’s-level study
   - 3 years of academic studies + 2 years of Master’s-level study + 3 years of doctoral study

3. **What kind of modules would be included in a nursing diploma?**
   - Modules oriented towards specific topics
   - Health promotion, patient education, disease prevention, communication skills, leadership
   - Modules for health care or obstetric care
   - Patient care, health promotion
   - Health care process implemented in all levels of nursing care from primary to advanced level, nursing diagnoses, pharmacology, nursing procedures and interventions related to diagnosis by nurses

4. **Would the diploma course have clinical placement modules?**
   - Modules for practical teaching in all areas of care
   - Yes, with precisely defined skills, attitudes and knowledge to be acquired with projects and work assignments
   - Yes, it is necessary to have precisely defined modules for practice in health care or obstetric care
   - The course must include internship modules, just as those full-time programmes do
   - Yes, clinical practice training should be provided for nurses and midwives
   - Practical lessons to be given under the supervision of nursing educators

5. **How long would placements ideally be?**
   - At least half of the planned classes; maybe two thirds of the planned classes
   - 50% practice in 3-year studies and specialization; and 80% practice for Master’s degree level, with projects
   - Internships should be set according to the EU Directive on the recognition of professional qualifications (2205/36/EC)
   - Practices should be regulated according to EU Directive 2005/36/EC

6. **What is the future for the existing secondary-school certificate?**
   - Diploma for health technicians’ assistants in nursing
   - Nurse/care technician
   - The secondary-school course should not be closed, and all who graduate there should acquire the title of assistant nurse
   - Assistant nurse/technician
   - The course should be of the highest quality
### Section 3: Professional regulation

#### 1. What can be learnt from existing regulatory systems in North Macedonia? E.g. medical regulation
- The existing regulatory system does not regulate the sectoral professions at all. They are called health workers.
- A Chamber of Nurses should be established.
- The Law on Health Care does not regulate nurses and midwives; there is a category of health workers with secondary, higher, and higher professional education.
- The current law should be corrected and a new law on health care should be prepared with a special emphasis on health professionals.
- The law is too broad and does not regulate the section on nurses at all; on the contrary, it restricts the nurse from being an educator or a mentor.

#### 2. Are existing models of regulation suitable for nursing?
- There is no regulation at all.
- There is no regulation for the nursing profession.
- So far, I have not seen regulation for the nursing profession.
- There is no existing model for regulation.

#### 3. Can anything be learnt from nursing regulators across the globe?
- In nearby countries the profession is regulated; also through chambers of nurses that license their members and re-license them.
- Croatia is a sisterhood.
- Much can be learned; support is needed from the Ministry of Health.
- The Slovenian model is interesting.

#### 4. What steps need to be taken to create a Chamber of Nurses?
- First change the law that currently does not allow the existence of such a Chamber.
- It is necessary to change the Law on Health Care to establish a Chamber of Nurses and Midwives.
- Change the current law.

#### 5. What do you want the Chamber of Nurses to do?
- Function as a public authority, like the chambers of medicine, dentistry, and pharmacy, as well as the chambers in Slovenia, Croatia, and the Council of England.
- Registration of nurses and issuing of licences.
- The Chamber of Nurses should have powers over the employment of nurses (who have priority) and rights of nurses.
- Registration of all nurses, issuing of licences and other things within a Chamber’s remit.
- Registration of new nurses and issuing of licences, renewal of licences, legal aid for nurses in dispute, etc.

#### 6. Who could advise this group on developing the Chamber of Nurses?
- Lawyers from the Ministry of Health, the Ministry of Education and Science, and chambers from the countries that have gone through this process.
- Experts from other countries.
- Experienced nurses from North Macedonia and around the world; the EFN.
- Experts from European countries, experienced nurses from North Macedonia, and experts from the Ministry of Health.
- Experienced nurses from within the country and abroad.

#### 7. What will the governance structure be?
- Presidency, committees.
- Statute, chairman, committees, etc.
- Define powers, statute, presidency of the various bodies involved, committees.
- First establish a solid statute; formation of bodies and committees; drafting rules for work, licensing, renewal of licences, and competencies. Also, it is important to establish how the Chamber will be financed: it is very important that the initial steps are financed either by the Ministry of Health or by some other organization, such as WHO.
- Create a statute, form of an assembly, elect of a president and deputies, establish practices for licensing of nurses and other things within a Chamber’s remit (for example other medical or pharmaceutical chambers).
Table A9. Changing the law

<table>
<thead>
<tr>
<th>Section 4: Changing the law relating to nurse education</th>
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<tbody>
<tr>
<td>1. <strong>What steps need to be taken to achieve a change in the law?</strong></td>
</tr>
<tr>
<td>• Amendment of the Law on Higher Education. It is important not to wait for the accession negotiations for the country’s EU membership; to complete our homework and for nurses to be educated at an academic and not professional level.</td>
</tr>
<tr>
<td>• Changes are needed in the Law on Health Care and the Law on Higher Education.</td>
</tr>
<tr>
<td>• The first step is for the legal changes to be initiated by the Ministry of Health; a law regulating the nursing profession is needed.</td>
</tr>
<tr>
<td>• A brand new application for amendment of the existing law.</td>
</tr>
<tr>
<td>• Adoption of a new law on nursing and midwifery activities.</td>
</tr>
<tr>
<td>• Changes should be made such that the education involves more hours of practical training.</td>
</tr>
<tr>
<td>• Law for nurses and midwives should be created.</td>
</tr>
<tr>
<td>• Legal changes on nurse education should reflect the workplace environment and practices, to teach nurses with vocational education.</td>
</tr>
<tr>
<td>• In the Law on Health Care, in the section for the category of health workers, nurses and midwives are placed in the category with other health workers.</td>
</tr>
<tr>
<td>• In the Law on Health Care there is no article on the possibility of specialization.</td>
</tr>
<tr>
<td>• To regulate the profession, nurses are united together with other health professionals with secondary, higher, and higher vocational education; and there is no opportunity to establish a Chamber of Nurses.</td>
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<tr>
<td>• Submit an initiative to the Assembly of the Republic of North Macedonia.</td>
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Table A10. Feedback on the feasibility study

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<th>Feedback on the feasibility study</th>
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<tbody>
<tr>
<td>1. <strong>What is one thing you have enjoyed about the feasibility study?</strong></td>
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<tr>
<td>• Beautiful exchange of opinions and interaction.</td>
</tr>
<tr>
<td>• There were many discussions that were useful.</td>
</tr>
<tr>
<td>• The opportunity to express our opinion and be heard.</td>
</tr>
<tr>
<td>• Exchange of opinions and ideas about nursing.</td>
</tr>
<tr>
<td>• Different ideas that serve to promote the nursing profession.</td>
</tr>
<tr>
<td>2. <strong>What is one thing that has altered/adjusted your opinion through the discussions?</strong></td>
</tr>
<tr>
<td>• That we must wait longer – who knows how long – until [EU] accession negotiations open, which is very disappointing.</td>
</tr>
<tr>
<td>• I sincerely hope that the project will be successful and fruitful.</td>
</tr>
<tr>
<td>• We need to insist more to achieve the goal of establishing a Chamber of Nurses in North Macedonia.</td>
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<tr>
<td>• The participants insist that substantial changes in the law are really needed to improve nursing education.</td>
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<tr>
<td>3. <strong>What is one thing you would like to see happen in the next three years?</strong></td>
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<tr>
<td>• Change legislation and shape adequate nursing educational programmes.</td>
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<tr>
<td>• Advance the nursing profession in North Macedonia.</td>
</tr>
<tr>
<td>• Adoption of a law for nurses and the formation of a Chamber of Nurses.</td>
</tr>
<tr>
<td>• Regulate the status of nurse and ensure equal rights in every aspect with the nurses of other countries.</td>
</tr>
<tr>
<td>• In the next three years I want to see the legal changes for nurses/technicians.</td>
</tr>
<tr>
<td>4. <strong>Is there anything you would change about the SPRINT process?</strong></td>
</tr>
<tr>
<td>• Nothing; it was fine.</td>
</tr>
<tr>
<td>• I hope the process will be fast and expeditious.</td>
</tr>
<tr>
<td>• I think not.</td>
</tr>
<tr>
<td>• No, everything was OK.</td>
</tr>
<tr>
<td>5. <strong>Any other comments/feedback?</strong></td>
</tr>
<tr>
<td>• To continue with such joint projects.</td>
</tr>
<tr>
<td>• Thank you for your support.</td>
</tr>
<tr>
<td>• I would like to have examples of how a nurse in the United Kingdom works, with what level of education, and whether there are job classifications according to education.</td>
</tr>
<tr>
<td>• It was my pleasure to participate in this productive meeting.</td>
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