


Advanced practice nursing in Europe—Results from a pan-European survey of 35 countries

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Abstract

Aim: To report the results of a mapping exercise by the European Federation of Nurses on current advanced practice nursing frameworks and developments across Europe.

Design: Online, cross-sectional, questionnaire study.

Methods: An online questionnaire was distributed among 35 national nurses' associations across Europe in March 2021. The questionnaire solicited input on 60 items concerning key features of advanced practice nursing, intending to map existing developments and better understand the current state of advanced practice nursing in Europe. Data analysis used descriptive statistics, including counts and percentages, tabulation; open-text responses were handled with thematic synthesis techniques.

Results: The definition, sense-making and operationalization of advanced practice nursing vary across Europe. Important variations were noted in the definition and requirements of advanced practice nursing, resulting in different views on the competencies and scope of practice associated with this role. Importantly, the level of education and training required to qualify and practice as an advanced practice nurse varies across European countries. Furthermore, only 11 countries reported the existence of a national legislation establishing minimum educational requirements.

Conclusion: Significant variation exists in how countries define advanced practice nursing and how it is regulated at academic and practice levels. More research is needed to clarify whether this variation results from designing models of advanced practice nursing that work in different contexts; and what impact a standardized regulatory framework could have to grow the volume of advanced practice nurses across Europe.

Impact: The current paper exposes the lack of clarity on the development and implementation of advanced practice nursing across Europe. We found significant variation in the definition, recognition, regulation and education of advanced practice nurses. Our data are essential to policymakers, professional associations and employers to ensure a coordinated and systematic effort in the consistency and ongoing development of advanced practice nurses across Europe.

Patient or Public Contribution: No patient or public contribution applied; the participants were national nurses' associations.

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KEYWORDS

advanced practice nursing, APN, health care, nurses, nursing care, policy

1 | INTRODUCTION

The increasing and changing health needs of patients and service users have required many countries to increase their support for novel ways of organizing and delivering health care (Maier et al., 2017). Within the context of the COVID-19 pandemic, which sparked budgetary restrictions and spikes in demand for health care, advanced practice nurses are recognized as a means of both cost containment and quality enhancement (Diez-Sampedro et al., 2020; Health Education England, 2020).

Nursing at an advanced practice level sits at the apex of the care continuum. Although there is ambiguity in nomenclature across jurisdictions, this important advanced role has demonstrated to promote high-quality clinical care, such as through intensive follow-up for patients with chronic illness, while simultaneously containing provider-related costs (Huws et al., 2008; Rosa et al., 2020). In addition to improving the quality of care—by avoiding unnecessary complications and hospitalizations and enhancing evidence-based practice—the development of advanced roles can lead to better recruitment and retention rates in nursing at a time when provider burnout is running high (Kroezen et al., 2015).

This article reports on results from a European Federation of Nurses (EFN) mapping exercise of current APN frameworks across Europe; details on the EFN work in this space is available online (https://efn.eu/?page_id=15936). The results reveal significant progress, great opportunities and persisting challenges regarding advanced practice nursing (APN) in Europe. We draw from this data to outline key messages on APN in Europe that can inform policy-makers, higher education institutions and employers about the successful development and deployment of APN in Europe.

2 | BACKGROUND

In many countries, advanced practice nurses represent one of the most rapid growing professions in health (Bureau of Labor Statistics, 2022). They are essential for innovating healthcare systems, improving access to care and achieving better health outcomes for people while reducing healthcare costs (Maier et al., 2017; Rafferty et al., 2015). The International Council of Nurses (ICN, 2020) noted that availability of advanced practice nurses is growing, yet this growth remains inadequate to meet global demand. The ageing of the population and rise of chronic and non-communicable diseases lead to more complex care trajectories, which traditional systems for health are ill-equipped to manage.

For the purposes of this article, we adopt the commonly used definition of advanced practice nurse (ICN, 2020) to refer to a

nurse, either generalist or specialist, who through masters education has acquired the expert knowledge base, complex decision-making skills and clinical competencies required to perform as a nurse at an advanced practice level. Given the lack of consensus on the scope and reach of APN internationally, the ICN clarifies that the specific characteristics of advanced practice are shaped by the national and local context in which nurses are credentialed to practice.

Given growing evidence pointing to high-quality care being positively associated with highly educated, dedicated and skilled nurses, there are strong arguments for significant patient benefit. In a seminal review by Delamair and Lafortune (2010), the development of APN is claimed to strengthen the accessibility, safety, efficiency and quality of health care. There have been rapid developments in promoting APN given the shifting health and illness landscape and rising demand that requires managing with reducing funds (DiCenso et al., 2010). APN has been shown to make a positive impact on health service organization and delivery, as well as management of health care. For example, they have been shown to improve efficiency, evidence-based enhancement of patient care and health outcomes; ultimately contributing to health systems' sustainability (Evans et al., 2020). Besides a way to improve healthcare quality, the implementation and integration of APN in health systems reduces clinician-related costs and improves nurse recruitment and retention rates through providing nurses with career development pathways (Buchan et al., 2013).

Globally, international organizations have long been proponents for the benefits of APN such as in reports by the Organization for Economic Cooperation and Development (OECD) and the ICN (Delamair & Lafortune, 2010; International Council of Nurses, 2020). For the Members of the European Federation of Nurses Associations (EFN), the advancement of nursing practice for the betterment of healthcare provision—both in terms of nurse education and scope of practice—has been a sustained priority, culminating in the publication of the EFN Competency Framework (EFN, 2015a) and Advanced Practice Guidelines as part of the European Union project ENS4Care (EFN, 2015b). Intending to ensure systematic and evidence-based developments in APN, the EFN members collectively published the EFN Workforce Matrix 3+1 (EFN, 2017). The 'Matrix' foregrounds discussions concerning the different categories of nursing by offering clarity on definitions, descriptors of competencies and minimum requirements for general care nurses, specialist nurses and advanced practice nurses (EFN, 2017).

Despite the aforementioned evidence reviews, promising case studies and prominent examples of APN development, the consistency of implementation across Europe remains unclear. The current survey reported herewith sought to address this knowledge gap, and update and consolidate the EFN Members' work on APN

over the years; to assess progress to date and identify avenues for future efforts to focus on concerning development of APN across Europe.

3 | THE STUDY

3.1 | Aim

To report results of a pan-European mapping exercise on current APN frameworks and developments across Europe, the details of which are summarized herewith with further information available online (https://efn.eu/?page_id=15936). In doing so, we sought to answer the following question: What is the state of APN development across national levels in Europe?

3.2 | Design

A cross-sectional, descriptive survey design informed data acquisition for this study (available on request).

3.3 | Sample

Following a total population sampling approach, data for the current article originated from all the members of the EFN, representing 35 National Nurses' Associations from countries across Europe (https://efn.eu/?page_id=802), that responded to the survey in March 2021. The EFN representative of each association was invited by the EFN office via email to respond to the online survey, which was hosted on SurveyMonkey.

3.4 | Data collection

An online questionnaire was developed by the EFN Working Group, which consists of APN experts from across Europe, following an iterative approach of item development until consensus was reached. The final questionnaire comprised 60 closed- and open-ended items, soliciting mainly categorical (nominal data), concerning key features of APN: definitions, standards, current developments, education, policy and regulatory frameworks. Both closed- and open-ended questions were used; the questionnaire is available from the EFN office on reasonable request. The final questionnaire's face and content validity was assured by consulting with the wider EFN membership.

3.5 | Data analysis

Survey data included closed- and open-ended responses to questions, collated in an online form. Following data cleansing in Excel,

data were summarized through descriptive statistics, including counts and percentages, tabulation and graphical techniques (Bowling, 2014). Textual data from open-text comments were aggregated following a thematic analysis approach (Dixon-Woods et al., 2005).

3.6 | Ethical considerations

Anonymity of participation was assured in the analysis and published accounts. Participation was voluntary, with the information provided via a recruitment email circulated among the EFN membership. This online survey was identified as service improvement work and on consultation was deemed unsuitable for formal research ethics board review. Submission of the online questionnaire implied consent.

4 | RESULTS

Thirty-five ($n=35$) national nurses' associations, representing a response rate of 100% of EFN members, responded to the survey. The results are presented next, grouped under three key topic areas: current status of advanced practice nursing in Europe, recognition of advanced practice nurses and education for advanced practice nurses.

4.1 | Advanced practice nursing in Europe

More than half (57%, $n=20$) of EFN members reported that advanced practice nurses were already established in their country (Table 1). However, we uncovered significant variation in how implementation has taken place. For instance, although advanced practice nurses were not formally regulated in Finland, nurse practitioner (NP) and clinical nurse specialist (CNS) roles were established and recognized in practice.

Of the 15 countries without established APNs, most ($n=10$) were currently in the process of establishing this practice (see Table 1). The countries in question were Belgium, Bulgaria, Croatia,

TABLE 1 Advanced practice nursing in Europe: overview of recognition status and educational requirements.

Is APN established in your country?	
	Country
Yes	Albania, Austria, Denmark, Estonia, Finland, France, FRY Macedonia, Hungary, Iceland, Ireland, Lithuania, Malta, Netherlands, Norway, Poland, Slovakia, Slovenia, Sweden, Switzerland and the United Kingdom
No	Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Germany, Greece, Italy, Latvia, Luxembourg, Montenegro, Portugal, Romania, Serbia and Spain

Cyprus, Germany, Montenegro, Portugal, Romania, Serbia and Spain. However, only Belgium and Cyprus were at the final stages of national agreement and launch. In Cyprus, consultation took place to amend the regulatory framework to recognize the APN title and role. However, conversations in Cyprus were ongoing about how to confer a more prominent role for advanced practice nurses within the health system. In Belgium, advanced practice nurses are recognized as healthcare providers by law. However, the executive order specifying education and competencies is still missing. Despite lacking a clear regulatory framework, a curriculum reform within the Master of Science nursing and midwifery is being developed to drive national developments.

The approach to establishing APN seemed fragmented in other countries where a regulatory framework for APNs was under development. For instance, in Germany, only a few hospitals initially attempted to implement APN roles (e.g. delirium prophylaxis or wound care). They established professional networks, such as the DBfK (the German professional association for nursing professions), which were driving the establishment of APN rather than being a national initiative. Similarly, a national approach is missing in Spain, with the APN role being developed regionally. In Portugal, a nurse can study to become a Specialist Nurse after a period of 2 years' experience post registration. They can also then continue post graduate education to be recognized as having 'Advanced Added Skills or Competences' in an area of nursing practice. Finally, in Bulgaria, Luxemburg, Montenegro, Romania and Serbia, the development of the APN role was challenged by limited political will to drive progress. However, discussion and debate at the national level were underway. This debate builds on existing organizational structures and recognition of nurse specialities or the enhancement of nursing competencies.

4.2 | Defining advanced practice nursing

In 14 of the 20 countries with established APN, the definition used draws on the one provided by the ICN and applied in the EFN Matrix—that is 'one [nurse] who has acquired a specialized knowledge base, complex decision-making skills and clinical competencies for expanded practice, the characteristics of which are shaped by the context and/or country in which he/she is accredited to practice. The master's degree is recommended for entry level' (EFN, 2017, p. 4). However, subtle variations and clarifications were present in some countries' definitions. For example, the respondent from the Royal College of Nursing (RCN) in the United Kingdom (UK) clarified that:

Advanced practice is a level of practice and across four pillars; clinical, education, research, and leadership rather than a type of practice. APNs are educated at the master's level in clinical practice and have been assessed as competent in practice using their expert clinical knowledge and skills. They have the freedom

and authority to act, making autonomous decisions in the assessment, diagnosis, and treatment of patients.

Similarly, the respondent from Estonia noted that the definition used is expanded to include aspects of research and development as well as interdisciplinary working:

The [advanced practice nurse] is a nurse who has completed the specialised nursing curriculum or one nursing care speciality in the Master's programme in health sciences, and has obtained more advanced clinical competence and decision-making skills in the acquired speciality, as well as the preparedness to work independently and/or in the interdisciplinary team and to lead the research and development activity.

Albania, FYR Macedonia, Lithuania, Poland and Slovenia did not use definitions in alignment with those of the ICN. All these countries barring Slovenia, which adopted the EFN Matrix definition, reported having developed their definitions of APN. In Poland, for instance, advanced practice nursing is defined as a *Master of Science in Nursing specialising in a particular area of nursing*. In FYR Macedonia, the definition corresponds to a nurse specialist rather than an advanced practice nurse.

Regarding the role title given to advanced practice nurses, variation persisted across all the countries where APN has been established. In Austria, for instance, there was no role title, as was the case in Finland. Similarly, in the United Kingdom, there was no role title; however, advanced-level nurse was used to reflect the recognition of the advanced practice level. In FRY Macedonia and Slovenia, the title given to an APN is the same as that used for a registered nurse with a speciality. Only Hungary, the Netherlands and Slovakia have adopted the title stipulated by ICN and EFN.

4.3 | Recognition of APN

For the purposes of this paper, we use legal or regulatory recognition to refer to the formal acknowledgment and authorization by governmental bodies or professional regulatory organizations of the specialized roles and responsibilities of APN. This could involve establishing laws, regulations or guidelines that define the scope of practice, licensure requirements and standards for APN to provide healthcare services independently or in collaboration with other healthcare professionals.

In the current survey, legal or regulatory recognition of APN was lagging, with only 11 out of the 20 EFN members with an APN framework reported the existence of a law establishing minimum educational requirements: Albania, Estonia, Finland, France, Iceland, Ireland, Lithuania, Malta, the Netherlands, Norway and Poland. Among the 20 countries with established APN, recognition of APNs took place through different bodies, as outlined in Table 2.

Among those countries without a national law to regulate APNs, only Slovakia reported that advanced practice nurses were

TABLE 2 Recognition for APNs.

National bodies that provide recognition to APN				
Country	Regulatory body	Professional body	Government body	Regional body
Albania	X		X	X
Austria				
Denmark				
Estonia	X	X		
Finland	X		X	
France	X		X	
FRY Macedonia				
Hungary				
Iceland	X			
Ireland	X			
Lithuania			X	
Malta	X		X	
Netherlands	X	X	X	
Norway			X	
Poland			X	
Slovakia	X	X	X	X
Slovenia				
Sweden				X
Switzerland		X	X	
UK		X		

Abbreviation: APN, advanced practice nursing.

recognized by all their respective national regulatory, professional, government and regional bodies. In Finland, recognition only applied to nurses with restricted authority to prescribe. In the United Kingdom, despite no laws regulating APN, a professional body (the Royal College of Nursing) recognized advanced-level practice with a credentialing programme of over 1000 advanced practice nurses.

Only four countries with an established APN framework reported there being a requirement for revalidation: Ireland, Lithuania, the Netherlands, Switzerland and the United Kingdom; with revalidation taking place every 5 years except for the United Kingdom, where nurses are asked to revalidate at 3 years intervals. Requirements for revalidation consisted of a combination of work experience, with at least 40% of this being practice hours in direct patient care and professional development hours. For instance, in the Netherlands, advanced practice nurses required more than 200h of 'expertise promotion' (i.e. education), including at least 100h of continuing education and training, at least 40h of peer-reviewed activities and 60h of additional expertise-promotion activities. In Lithuania, APNs must follow the common rules of licence maintenance. All advanced practice nurses must provide information about their continuous professional development every 5 years to the State Health Care Accreditation Agency. Finally, in Switzerland, confirmation of clinical practice employment at least 40% of full-time equivalent and 8 European Credit Transfer and Accumulation System (ECTS) credits of continuous education were needed across the 5 years to revalidate.

4.4 | Education for advanced practice nurses

Entry requirements for participants of APN education programmes varied across countries. In Albania, FYR Macedonia, Norway, Slovenia, Sweden and Switzerland, entry requirements were based on the number of ECTS credits the applicant completed. In Albania, this requirement was 40 ECTS credits, followed by FYR Macedonia with 120 ECTS credits. Norway, Slovenia, Sweden and Switzerland required a minimum of 180 ECTS credits plus a nursing degree at bachelor's or master's level.

In Denmark, 210 ECTS credits plus a bachelor's degree in nursing and at least 3 years of professional experience or a diploma in nursing with at least 5 years of professional experience were required to begin APN education. In Estonia, an additional 90 ECTS credits (on top of the 210 ECTS credits required to qualify as a nurse) was required via a master's degree in health sciences.

In France, Hungary, Ireland, Slovakia and the United Kingdom, the entry requirement was a standard nurse registration with some years of experience (e.g. 1–3 years). Whereas in Estonia, Iceland, Malta and Sweden, in addition to the bachelor's degree, applicants were also required to have a master's degree plus at least 2 years of experience for entry into such a programme.

We asked representatives of member countries with established APN about the minimum level of education needed to qualify as an advanced practice nurse; for most countries ($n=14$), this was a

TABLE 3 Education for APNs.

Country	Level of education needed to qualify as an APN nurse			
	Nursing education for general care practice	General nursing training	Postgraduate certificate	Diploma
Albania				X
Austria	X	X		X
Estonia			X	
FYR Macedonia			X	
Poland	X			
Slovenia	X	X		

Abbreviation: APN, advanced practice nursing.

master's degree. However, in six countries, the required level of education was below a master's degree, as summarized in Table 3.

In nine countries (Denmark, FYR Macedonia, Malta, Norway, Poland, Slovakia, Slovenia, Switzerland and the United Kingdom), education programmes for APN can be undertaken on either a full-time or a part-time basis. Only part-time programmes were available in Austria, Estonia, France, Iceland, Ireland, the Netherlands and Sweden, whereas only full-time programmes were available in Hungary and Lithuania. The apprenticeship route was also available in the United Kingdom and involved part-time study while remaining in clinical practice as a 'trainee'. In Albania, however, there was not a full-time or part-time programme as such. Still, studies were self-guided and self-paced, depending on the amount of time the student took to prepare for the examinations to obtain the licence as an APN.

There was also significant variation between countries in the number of ECTS credits required to progress from a general nursing degree to APN. Most countries where APN is established had a requirement of 120 ECTS credits for programmes of study leading to APN (France, Hungary, Iceland, Lithuania, Norway, Poland and Sweden). Malta and the United Kingdom reported having a minimum requirement of 160 ECTS credits, whereas only 60 ECTS credits were required in FYR Macedonia. However, there were also countries in which these standards did not apply. For instance, in Albania and Slovakia, the ECTS was not adopted by their respective national educational institutions; in Albania, the requirement was 360h rather than a certain number of credits. In other countries, the number of ECTS credits required was higher than the standard 120 ECTS credits (Table 4).

In most countries, a newly registered nurse must work for a certain number of years in a specific field before commencing advanced education. This requirement was less than 1 year only in Estonia and Iceland, whereas 1 year of practice was required in Switzerland and the United Kingdom. In four countries (Ireland, the Netherlands, Norway and Poland), the requirement was 3 years. Finally, Malta was the only country where 5 years of work experience were required for being allowed to commence APN training. In Albania, Estonia, FYR Macedonia, Hungary, Lithuania, Slovakia and Slovenia, there was no minimum requirement for practitioners to work in a specific field of

nursing before they could start APN training. Similarly, in Denmark, the curriculum did not have specific prerequisites for working experience after graduation as a nurse.

5 | DISCUSSION

The results presented here do not seek to compare or rank progress on the development of APN but rather to inform current and future work in establishing APN in Europe and beyond. The data submitted by the EFN members concerning APN in 35 European countries reveals significant progress, great opportunities and persistent challenges. It is incredibly encouraging that over half of EFN members report that APN is established in their country, with more making steady progress. In the context of the COVID-19 pandemic, there is an excellent opportunity to grow APN as a key mechanism through which to strengthen health systems across Europe that are currently stretched by a sharp rise in demand for both specialist and general care. However, it is evident that variability and inconsistency exist among countries, which jeopardizes the quality and safety of care and limits professional mobility and sharing of expertise.

5.1 | State of the art of APN in US, Australia and Canada

APN efforts within other continents outside of Europe varies as identified by the World Health Organization in its State of the World's Nursing report (2020, Figure 1). Next, we summarize APN models and their current operationalization across the United States (U.S.), Australia and Canada to contextualize our findings from Europe; and invite interested readers to refer to the WHO report for details beyond the scope of the current article.

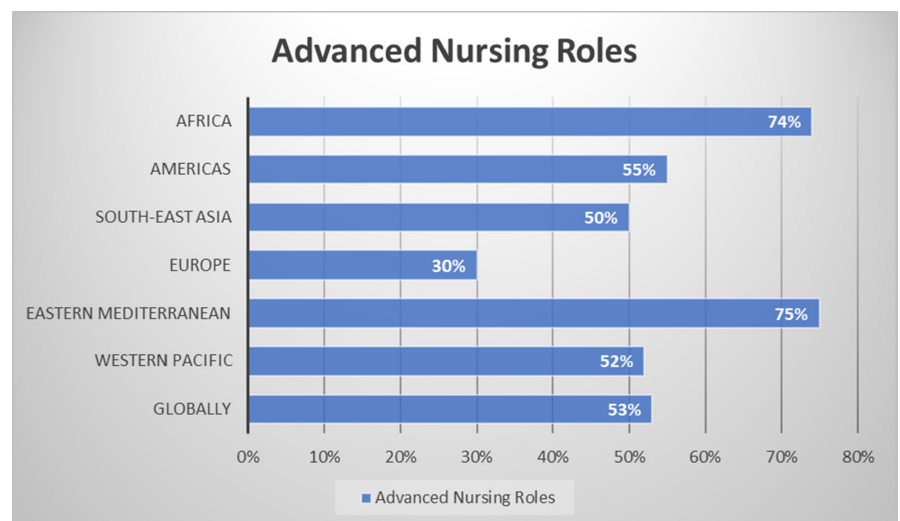
In Europe, healthcare regulation for advanced practice nursing is typically centralized, with a national regulatory body setting standards and requirements for the entire country. This leads to a more uniform approach, where advanced practice nurses across regions have similar privileges and restrictions. Conversely, the United

TABLE 4 Credit requirement for APNs.

Country	60 ECTS	120 ECTS	160 ECTS	Other
Albania				N/A
Austria				90 ECTS
Denmark				210 ECTS
Estonia				90 ECTS (after having completed 210 ECTS at the bachelor's level)
Finland				Master's equivalent to 120 ECTS Master's level 90 ECTS Restricted right to prescribe 45 ECTS
France		X		
FRY Macedonia	X			
Hungary		X		
Iceland		X		
Ireland				130 ECTS
Lithuania		X		
Malta			X	
Netherlands				240 ECTS and only possible with a completed bachelor's degree in Nursing
Norway		X		
Poland		X		
Slovakia				N/A
Slovenia				180 ECTS
Sweden		X		
Switzerland				Minimum 90 ECTS
UK			X	180 UK credits on top of 360 UK credits (Registered Nurse—Adult, Children, Learning Disability or Mental Health)

Abbreviations: APN, advanced practice nursing; ECTS, European Credit Transfer and Accumulation System.

FIGURE 1 Percentage of responding countries that reported existence of advanced practice nursing role regulations, 2013–2018, by WHO region. Source: Adapted from WHO's State of the World's Nursing 2020: Investing in Education, Jobs and Leadership (2020), <https://www.who.int/publications/item/9789240003279>.



States follows a decentralized model, with each state having its own nursing board responsible for establishing practice limitations, licensure requirements and scope of practice. As a result, in comparison

with Europe, there is significant variability in nursing practice limitations, autonomy, prescribing authority and restrictions depending on the state of licensure.

In the United States, since 2008, an advanced practice registered nurse (APRN) national consensus model has been in place to guide licensing, accreditation, certification and education (LACE) standardization for the four recognized APRN roles of clinical nurse specialists, nurse practitioners, nurse midwives and nurse anaesthetists (ANCC, n.d.; NCSBN, n.d.-a). The *Future of Nursing* report (IOM, 2011) strongly endorsed the need for all nurses to practice to the full extent of their training and education. However, full adoption of the LACE model across all states is yet to be realized, with resulting variability in title protection, practice independence and prescriptive authority (Kleinpell et al., 2021; NCSBN, n.d.-b). Various state executive orders and regulatory practice waivers temporarily lifted barriers and restrictions to APN practice during COVID-19; however, these barriers may be reinstated after the pandemic stabilizes (Kleinpell et al., 2021).

In Australia, nurse practitioner (NP) is a protected title and designates a registered nurse with the experience, expertise and authority to diagnose and treat a range of clinical conditions. NPs must complete master's level study and show competence in collaborative practice with professionals across the extended health team to improve access to health care for Australian communities; they achieve this by engaging in care management, health promotion and prevention. Nurse practitioners were introduced in 2000 and practice across all States and Territories in Australia. As in many other countries, the initial focus of the NP was to increase access to care for at risk populations, and those living in rural and remote areas. Since 2010, nurse practitioners have been eligible providers of care that is subsidized through the Medicare Benefits Schedule (MBS) and the Pharmaceutical Benefits Scheme (PBS). In 2021, there were 2251 registered nurse practitioners (Kim et al., 2022). The introduction and expansion of the nurse practitioner role has not been without objections and hesitancy, both internal and external to the profession (Dunn et al., 2010; MacLellan et al., 2015). Guidelines have been developed outlining key attributes of the NP role: clinical care; support of systems; education; research and professional leadership (Kim et al., 2022; Middleton et al., 2010).

The Canadian Nurses Association (CNA) (2019) developed an APN pan-Canadian framework to establish a common understanding of this role among health, public and policy stakeholders. This framework provides support for consistent and coordinated approaches to implementing and integrating APN across Canada's ten provinces and three territories, while also offering jurisdictions flexibility to allow new APN roles to be developed (CNA, 2019). The framework provides information on multiple APN elements including: definition, characteristics, education, roles, regulation and evaluation. Strategies to support the successful implementation, integration and sustainability of APN roles in health systems are also outlined (CNA, 2019). In Canada, APN is used as an inclusive term for those nurses who 'integrate graduate nursing educational preparation with in-depth, specialized clinical knowledge and expertise in complex decision-making to meet the health needs of individuals, families, groups, communities and populations' (CNA, 2019, p. 13). Two APN roles are recognized: (1) clinical nurse specialist (CNS); and (2) NP. While there are many similarities in the scope of practice and

competencies underpinning these two APN roles, the key distinction is that NPs have the 'legislative authority, knowledge and skills to autonomously diagnose, order and interpret diagnostic tests, prescribe treatment (including drugs) and perform specific procedures' (CNA, 2019, p. 19).

In the current survey from Europe, we uncovered a significant level of variation in the way in which countries define APNs and how they are regulated at academic and practice levels. Notably, most countries have developed their own definitions and regulatory frameworks, with the majority having master's level education required. More research is needed to investigate whether this is the result of designing models of APN that work in different contexts; and, on what impact a standardized regulatory framework could have in countries where, for instance, entry requirements to APN training are lower.

At least at a European level, consistency in APN development would benefit from a more aligned education pathway. Therefore, a roadmap may be needed to guide countries towards developing a joint training framework in line with the European Commission (2005) Directive on Professional Qualifications (2013/55/EC). Specifically, the Directive legislative articles pertaining to common training frameworks offer an opportunity to extend the existing system of automatic recognition to new professional groups based on such frameworks. This could strengthen the mobility of APNs in Europe while ensuring a standard level of quality in terms of the care offered by these individuals across countries.

5.2 | Limitations

These results should be interpreted in the context of limitations inherent in survey designs. Our results represent a snapshot of data available in March 2021, so we cannot track progress longitudinally; however, the current article was considered for the currency of data by the EFN APN Working Group, so we remain confident in the reliability of our results. Participation in the survey was voluntary, but risk of self-selection was contained by achieving a 100% response rate. While we acknowledge that national stakeholders may have gaps in their knowledge in certain areas of daily practice, our study focuses on a significant stakeholder group within Europe whose perspective is not always represented in the literature. Finally, face and content validity of our questionnaire was assured through our expert panel though risk of missing some potentially relevant items remains; we sought to minimize this risk by including space for any additional, open-text comments.

6 | CONCLUSION

The need for developments in APN is pressing, given the current and future pandemic context, which is stretching health systems and leading to increasing health needs globally. Within the pandemic context of tighter health budgets and rising demand for high-quality

and safe care, the implementation and integration of APN can be central to making the best use of scarce resources and improving outcomes. Making timely progress in the development of advanced practice nurses will rely on genuine collaboration between policy-makers, educators, employers and professional bodies to ensure that any initiatives are fit for purpose. Engaging frontline staff and existing advanced practice nurses will be fundamental to the journey forward.

AUTHOR CONTRIBUTIONS

PDR, PMD, JB, MP, SMJ, ACA, AX and WP made substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data; involved in drafting the manuscript or revising it critically for important intellectual content; and given final approval of the version to be published. All authors participated sufficiently in the work to take public responsibility for appropriate portions of the content; agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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CONFLICT OF INTEREST STATEMENT

PDR, PMD, JB, MP, SMJ, ACA, AX and WP declare no known financial conflicts of interest.

PEER REVIEW

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DATA AVAILABILITY STATEMENT

Data are available on request due to privacy or ethical restrictions.

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REFERENCES

- American Nurses Credentialing Center (ANCC). (n.d.). *APRN consensus model*. <https://www.nursingworld.org/certification/aprn-consensus-model/>
- Bowling, A. (2014). *Research methods in health: Investigating health and health services*. McGraw-Hill Education.
- Buchan, J., Temido, M., Fronteira, I., Lapao, L., & Dussault, G. (2013). Nurses in advanced roles: A review of acceptability in Portugal. *Revista Latino-Americana Enfermagem*, 21(Spec), 38–46.
- Bureau of Labor Statistics, U.S. Department of Labor. (2022). *Occupational outlook handbook, nurse anesthetists, nurse midwives,*

- and nurse practitioners*. <https://www.bls.gov/ooh/healthcare/nurse-anesthetists-nurse-midwives-and-nurse-practitioners.html>
- Canadian Nurses Association (CNA). (2019). *Advanced practice nursing: A pan-Canadian framework*. Canadian Nurses Association. https://hl-prod-ca-oc-download.s3-ca-central-1.amazonaws.com/CNA/2f975e7e-4a40-45ca-863c-5ebf0a138d5e/UploadedImages/documents/Advanced_Practice_Nursing_framework_EN.pdf
- Delamaire, M., & Lafortune, G. (2010). *Nurses in advanced roles: A description and evaluation of experiences in 12 developed countries*. OECD Health Working Paper No. 54. <https://www.oecd.org/els/health/workingpapers>
- DiCenso, A., Bryant-Lukosius, D., Bourgeault, I., Martin-Misener, R., Donald, F., Abelson, J., Kaasalainen, S., Kilpatrick, K., Kioke, S., Carter, N., & Harbman, P. (2010). *Clinical nurse specialists and nurse practitioners in Canada: A decision support synthesis*. http://www.chsrf.ca/migrated/pdf/10-CHSRF-0362_Dicenso_EN_Final.pdf
- Diez-Sampedro, A., Gonzalez, A., Delgado, V., Flowers, M., Maltseva, T., & Olenick, M. (2020). COVID-19 and advanced practice registered nurses: Frontline update. *The Journal for Nurse Practitioners*, 16(8), 551–555.
- Dixon-Woods, M., Agarwal, S., Jones, D., Young, B., & Sutton, A. (2005). Synthesising qualitative and quantitative evidence: A review of possible methods. *Journal of Health Services Research & Policy*, 10(1), 45–53.
- Dunn, S. V., Cashin, A., Buckley, T., & Newman, C. (2010). Nurse practitioner prescribing practice in Australia. *Journal of the American Academy of Nurse Practitioners*, 22(3), 150–155.
- European Commission. (2005). *Directive 2005/36/EC on the recognition of professional qualifications, amended by the Directive 2013/55/EU*. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02005L0036-20140117&from=EN>
- European Federation of Nurses Associations. (2015a). *EFN competency, framework. EFN guideline to implement Article 31 into national nurses' education programmes*. http://www.efnweb.be/?page_id=6897
- European Federation of Nurses Associations. (2015b). *Evidence-based guidelines for nursing and social care eHealth services: Advanced roles*. EFN.
- European Federation of Nurses Associations. (2017). *EFN workforce matrix 3+1 executive summary*. <http://www.efn.eu/wp-content/uploads/EFN-Workforce-Matrix-31-Executive-Summary-May-2017.pdf>
- Evans, C., Pearce, R., Greaves, S., & Blake, H. (2020). Advanced clinical practitioners in primary care in the UK: A qualitative study of workforce transformation. *International Journal of Environmental Research and Public Health*, 17(12), 4500.
- Health Education England. (2020). *Analysis of the online workshop to consider the impact of COVID-19 upon and the implications for the future of advanced and consultant practice*. Final report. National Health Service.
- Huws, D. W., Cashmore, D., Newcombe, R. G., Roberts, C., Vincent, J., & Elwyn, G. (2008). Impact of case management by advanced practice nurses in primary care on unplanned hospital admissions: A controlled intervention study. *BMC Health Services Research*, 8, 115.
- Institute of Medicine (US) Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing, at the Institute of Medicine. (2011). *The future of nursing: Leading change, advancing health*. National Academies Press.
- International Council of Nurses (ICN). (2020). *Guidelines on advanced practice nursing*. <https://www.icn.ch/system/files/documents/2020-04/ICN-APN%20Report-EN-WEb.pdf>
- Kim, M. J., McKenna, H., Davidson, P., Leino-Kilpi, H., Baumann, A., Klopfer, H., Al-Gasseer, N., Kunaviktikul, W., Sharma, S. K., Ventura, C., & Lee, T. (2022). Doctoral education, advanced practice and research: An analysis by nurse leaders from countries within the six WHO regions. *International Journal of Nursing Studies Advances*, 4, 1–13.

- Kleinpell, R., Myers, C. R., Schorn, M. N., & Likes, W. (2021). Impact of COVID-19 pandemic on APRN practice: Results from a national survey. *Nursing Outlook*, 69(5), 783–792.
- Kroezen, M., Dussault, G., Craveiro, I., Dieleman, M., Jansen, C., Buchan, J., Barriball, L., Rafferty, A. M., Bremner, J., & Sermeus, W. (2015). Recruitment and retention of health professionals across Europe: A literature review and multiple case study research. *Health Policy*, 119(12), 1517–1528.
- MacLellan, L., Higgins, I., & Levett-Jones, T. (2015). Medical acceptance of the nurse practitioner role in Australia: A decade on. *Journal of the American Association of Nurse Practitioners*, 27(3), 152–159.
- Maier, C., Aiken, L., & Busse, R. (2017). *Nurses in advanced roles in primary care: Policy levers for implementation*. OECD Health Working Paper no. 98. https://www.oecd-ilibrary.org/social-issues-migration-health/nurses-in-advanced-roles-in-primary-care_a8756593-en
- Middleton, S., Gardner, G., Gardner, A., Della, P., Gibb, M., & Millar, L. (2010). The first Australian nurse practitioner census: A protocol to guide standardized collection of information about an emergent professional group. *International Journal of Nursing Practice*, 16(5), 517–524.
- National Council of State Boards of Nursing (NCSBN). (n.d.-a). *APRNs in the U.S.* <https://www.ncsbn.org/aprn.htm>
- National Council of State Boards of Nursing (NCSBN). (n.d.-b). *APRN consensus implementation status.* <https://www.ncsbn.org/5397.htm>
- Rafferty, A. M., Xyrichis, A., & Caldwell, C. (2015). *Post-graduate education and career pathways in nursing: a policy brief: Report to Lord Willis, Independent Chair of the Shape of Caring Review*. King's College London. <https://www.kcl.ac.uk/nursing/research/nrru/publications/Reports/PG-Education-Policy-Brief-March-2015.pdf>
- Rosa, W. E., Fitzgerald, M., Davis, S., Farley, J. E., Khanyola, J., Kwong, J., Moreland, P. J., Rogers, M., Sibanda, B., & Turale, S. (2020). Leveraging nurse practitioner capacities to achieve global health for all: COVID-19 and beyond. *International Nursing Review*, 67(4), 554–559.
- World Health Organization. (2020). *State of the world's nursing 2020: Investing in education, jobs and leadership.* <https://www.who.int/publications/i/item/9789240003279>

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