

Regulation of advanced nurse practice: its existence and regulatory dimensions from an international perspective

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Regulation of advanced nurse practice: its existence and regulatory dimensions from an international perspective

Aim To explore the regulation of advanced nurse practice internationally and to identify differences and commonalities.

Background Regulation of advanced practice nursing does not occur in many countries. Ireland is currently in the minority in regulating advanced practice at a national level.

Key issues Lack of regulation poses difficulties for national governments and for society due to uncertainty in advanced practice concept and role.

Methods A literature review of 510 scholarly nursing papers published in CINAHL, PubMed and MEDLINE between 2002 and 2013 and 30 websites was undertaken.

Results There is a lack of consistency in legislative systems internationally. Nursing organisations have recognised advanced nurse practice by regulation in some countries and by voluntary certification in others.

Conclusions Research has demonstrated that care delivered by advanced nurse practitioners has enhanced patient outcomes yet regulation of advanced practice is not undertaken in most countries.

Implications for nurse manager Nurse managers need to know that criteria for the regulation of advanced practice are in place and reflect the minimum requirements for safe practice.

Keywords: advanced nurse practice, certification, licensing, professional bodies, regulation, regulatory systems

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Introduction

Legislative and regulatory practices vary between and within countries (Delamaire & Lafortune 2010). Professional nursing organisations have recognised advanced nurse practice by regulation in some countries and by voluntary certification in others (American Nurses Association 2010). Senior nurses in the United Kingdom (Report of the Prime Minister 2010) and in Australia (Australian Nursing & Midwifery Council 2009) have questioned if regulation or

registration of advanced practice is necessary or if it is the natural extension to the role of the nurse and ask if regulation has the potential unduly to limit the practice of nurses who do not meet the specified requirements (Royal College of Nursing 2012). The United States has developed the 'LACE (licensure, accreditation, certification and education) consensus model' to clarify the roles of advanced practice nurses and to standardise education, licensure and certification – areas where confusion exists (American Nurses Association 2010, APRN 2012). The goal of this

paper is to explore the international literature regarding the regulation of advanced nurse practice and to identify current differences and commonalities.

Background

Countries are at different stages in implementing more advanced roles for nurses and midwives and some unofficial practices may already exist that adversely affect the role (Delamaire & Lafortune 2010). There are up to 13 different titles being used to denote advanced practice, leading to debate on the subject. Ireland uses the title of 'advanced nurse/midwife practice' (ANP/MP) to identify the advanced practice nurse. The title advanced practice nurse (APN), first used in the United States in 1965 as an overarching concept to signify nurses practising at a higher level than that of traditional registered nurses, is now used as an international concept that incorporates a number of advanced practice roles such as advanced practice nurse (APN), nurse practitioner (NP), nurse consultant (NC) clinical nurse specialist (CNS), nurse anaesthetist (NA) and certified nurse-midwife (CN/M). Debate is also taking place regarding the criteria required for advanced practice. Some regulatory bodies and professional organisations have developed criteria that include registration as a nurse, acquisition of expert knowledge base, complex decision-making skills and clinical competencies for extended practice, the characteristics of which are shaped by the context and/or country in which the nurse is credentialed to practice, whilst others have not done so. For example, education for advanced nurse practice ranges from diploma to PhD level with a master's degree in nursing recommended or required in most countries where the role has been introduced (Schober & Affara 2006, ICN 2008a,b).

Method

Literature search

Three electronic databases were searched for the key words regulation of advanced practice nurse/advanced nurse practice: Cumulative Index of Nursing and Allied Health Literature (CINAHL), PubMed and MEDLINE. Search parameters were research papers, policy documents and international material that dealt with regulation of advanced practice, published between 2002 and 2013. International websites pertaining to regulation, registration or licensure of advanced nurse practice including national governments and professional organisations were also chosen. Five hundred and 10

scholarly nursing papers published in international journals and 30 websites were reviewed.

Analysis and critical appraisal of the literature

Content analysis was undertaken on the 510 papers that were reviewed using a simple analytical framework – Search, Appraisal, Synthesis and Analysis (SALSA) (Grant & Booth 2009). The SALSA framework was joined with NVIVO 9.0 software for document analysis, which involves organising, linking, categorising, questioning, shaping and synthesising relevant qualitative data by exploring material, searching text, analysing documents and linking document themes and attributes. Full texts and abstracts, available in English, were critically appraised for material that met the inclusion criteria: regulation by country and alternative forms of registration of advanced practice nurses' such as licensure, certification and accreditation. Synthesis of the published material was undertaken and comparisons made between types of regulation, if any, occurring. Further analysis of subject matter to determine similarities and differences between countries took place (NVivo 2014).

The process of documentary analysis focused on texts by browsing for advanced practice concepts, which included regulation. Themes relating to regulation, licensure and certification were identified and compared by type and purpose of regulation used across international countries. The next step involved comparing and contrasting the themes and creating document and data links and finally identifying concepts such as knowledge, scope and competencies needed for advanced nurse practice, through linking the themes and attributes extracted. Rigour was obtained through careful scrutiny of the documents selected and adherence to inclusion criteria. A senior college librarian identified relevant documents and then discussed those documents with the researcher while maintaining reference to the inclusion criteria. Content analysis was reviewed with an expert in advanced practice regulation.

The aims of this literature review were to:

- 1 To explore the regulation of advanced nurse practice in international literature.
- 2 To identify, compare and contrast differences and commonalities.

Findings

The scholarly literature revealed a lack of clarity in definitions and terminology relating to the regulation

of advanced practice. The reviewed documents related mainly to criteria for advanced nurse practice, knowledge level required for practice, advanced clinical competencies needed for extended practice and differences between the CNS and ANP. As a result, the scope of the literature search was broadened to include regulation and policy information derived from material published in 30 websites including the Organization of Economic Co-Operation and Development (OECD) countries, professional organisation publications, national and regulatory body reports.

Exploration of 510 scholarly articles indicated that just 25 (5%) related to the 'regulation of advanced nurse practice/advanced practice nurse'. A further 30 websites that were available in English yielded relevant material that met the 'regulation' criteria. Materials were reviewed in relation to 19 countries: Australia, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Singapore, Spain, Sweden, Switzerland, United Kingdom and United States. The findings indicated that regulation occurred in nine countries. These countries are Australia, Canada, Hong Kong, Ireland, New Zealand, Singapore, Spain, United Kingdom and United States. Findings further indicated that six countries are at a more advanced stage in the regulation of advanced practice than others and have well defined regulation in place or in process. These countries are Australia, Canada, Ireland, New Zealand, UK and USA. The findings are presented by individual country alphabetically below with an overview by country, regulation, regulatory body or organisation and criteria for advanced practice, including educational requirements, presented in Appendix S1. A summary table of regulation across countries, depicting differences and commonalities is presented in Appendix S2.

Australia

The role of Advanced Nurse Practitioner (ANP) exists. Definitions of advanced practice nursing and nurse practitioner appear on the Nursing and Midwifery Board of Australia (ANMC 2009) and there is a registration standard for endorsement as a nurse practitioner. As of March 2011, nurses in Australia are regulated by the Australian Health Practitioner Regulation Agency, the key national governance body for nursing. The Australian Nursing and Midwifery Council Inc. (ANMC 2009) published competency standards that are the core competencies that all nurses must possess and assist in indicating the scope of nursing practice (ANMC 2009).

Canada

The role of ANP exists. Two broad categories of nurse practitioner (NP) currently co-exist: Primary Care NPs and Acute Care NPs. In the late 1990s, nurse practitioner regulation was supported by doctors in order to ensure guarantees of appropriate skills and the NP role is now recognised in the legislation of all 10 provinces and three territories via separate acts. Professional legislation governing nursing practice is a provincial rather than a federal responsibility (Canadian Nurses Association 2009, DiCenso & Bryant-Lukosius 2009, Nurse Practitioners' Association of Ontario 2010).

Denmark

The role of ANP does not exist and there is no regulation for advanced nurse practice in Denmark. There is no legally protected 'specialist nurse' title except that of 'home visiting nurse'. Registration is the responsibility of the National Board for Health which authorises the right to practise and which holds registers for 17 professional groups, including nurses and midwives. The Bachelor degree in Nursing is regulated by the Ministry of Education (OECD 2012a,b).

France

The role of ANP does not exist and advanced practice nursing is not regulated in France. Nursing is in transition and the French Nursing Council in 2009 created mandatory registration of all nurses representing a shift from state regulation to self-regulation (OECD 2012a,b). The nursing profession is seeking to expand advanced nurse practice with the development of recent advanced practice programmes in some colleges (ICN 2008a,b). Regulation of first level nurses is the State certification as approved by the Ministry of Health (OECD 2006).

Finland

The role of ANP exists. Advanced practice nursing is not regulated in Finland. 'Specialist nurses' are not recognised through separate registration. The nurse is regulated by law and working requires authorisation from Valvira. The National Supervisory Authority for Welfare and Health (Valvira) grants the right to practise as a licensed professional and authorises the use of the occupational title of health-care professional and added to the Central Register of Health Care

Professionals (*Terhikki*) for practice (Valvira 2014). The first evaluation of the advanced practice 'nurse leader' role in Finland was published by Fagerström and Glasberg in 2011.

Germany

The role of ANP does not exist. There is no national system of registration or a regulatory nursing body and responsibility for registration is devolved to the regions. The National Nursing Act and Ordinance of 1985 regulates general nurse education at a national level and defines the professional competence and responsibilities of nurses (OECD 2006).

Hong Kong

The role of ANP exists. The Hong Kong Nursing Board was established in 1931. With the introduction of Nurses Registration (Amendment) Ordinance in 1997, it was re-named as the Nursing Council with greater self-regulation and involvement of the nursing profession. The Nursing Council of Hong Kong is the statutory body for nurses in Hong Kong (NCHK 2014a,b). The recognition of the 'nurse specialist' role during the health-care reform in 1990s lent itself to the role of the Advanced Practice Nurse (NCHK 2014a,b).

Ireland

The role of ANP exists. The Nurses and Midwives Act (2011) is the current statutory framework for the regulation of nursing and midwifery in Ireland. These professions are self-regulated: certain responsibilities for regulation are granted by the state through legislation to An Bord Altranais (ABA 2010a,b) the professional regulatory body, re-named The Nursing and Midwifery Board of Ireland. It is the legal definition of nursing and midwifery practice (ABA 2010a,b, 2011) which is included in professional legislation, that establishes the basis for the scope of practice in which a registered nurse or midwife may engage while fulfilling EU Directive 2005/36/EC (EU Directive 2005, NCNM 2008, ABA 2010a,b, 2011).

Italy

The role of ANP does not exist. Registers for nurses are kept by colleges of nursing in each province and allow practice throughout Italy. According to the law, the aims of provincial colleges are to protect the

public and support and to guarantee the professionalism of nurses. There is no central control/validation of degree courses (OECD 2006).

Japan

The role of ANP does not exist. Two levels of nurse exist in Japan: registered and licensed practical nurse and there is regulation of first and second level nurses (Japanese Nursing Association 2006, OECD 2006).

Netherlands

The role of ANP does not exist. Specialist training programmes are recognised by both nursing associations and employers. Midwifery is not a specialisation of nursing and is regulated as a separate entity. The Diploma Van Verpleegkundige has regulated nursing practice since the 1921 Act (OECD 2006). The WET BIG, regulates eight health-care professions and states that only those registered as *Verpleegkundige* can use the title and such registration only takes place once the registrar is informed that the candidate has an appropriate diploma (OECD 2006, Donato 2009).

New Zealand

The role of ANP exists. The Nursing Council of New Zealand is the statutory authority governing the practice of nurses. In 2003, the Health Practitioners Competence Assurance Act established a common and consistent framework across health professions, while retaining separate registering bodies, including a new separate Midwifery Council (Nursing Council of New Zealand 2012). In 2004, nursing registers were replaced by four scopes of practice for registered nurse, nurse practitioner, nurse assistant and enrolled nurse (Nursing Council of New Zealand 2012).

Norway

The role of ANP exists. The Ministry of Education and Research regulates advanced practice. Masters and doctoral programmes are offered, including the master's in advanced nursing practice (ICN 2008a,b). Regulation of first level nurses is provided by the Ministry of Education and Research that also regulates nurse education. The Ministry of Health and Care Services issues the licence for practice as a Registered Nurse after an approved Bachelor Degree (EU Law/Sweden 2006, OECD 2006).

Singapore

The role of ANP exists. Nursing and midwifery is regulated through the Singapore Nursing Board (SNB) through the Nurses and Midwives Act (2012). The Board maintains the Advanced Practice Nurses Register. The Act, with the approval of the Minister, has powers to ensure that nurses are prepared and competent to practise as defined in the Standards for Advanced Practice Nurse Education (SNB 2012).

Spain

The role of ANP exists. In 2001, registration of advanced practice nursing became the responsibility of the General Council of Nursing (OECD 2006). There is one level: the first level 'registered nurse'. Regulation of first level nurses' education is regulated by the Ministry of Education. The midwifery qualification is recognised in law. All nurses must be registered with their local Provincial College of Nurses.

Sweden

The role of ANP exists. Advanced nurse practice is not regulated in Sweden. The Swedish nurse is regulated and the title 'nurse' is protected as a person who is a 'general care nurse'. Regulation is as set out in law in the Act (1998), which deals with authorisation relating to professional activities within the health-care system. All nurses in Sweden are 'general care nurses' and must register with the National Board of Health and Welfare (OECD 2006).

Switzerland

The role of ANP does not exist. There is one level – the 'registered nurse'. There is no national accrediting body for specialist programmes and therefore advanced practice is not regulated. University programmes in advanced practice are offered (OECD 2006). Regulation of first level nurses was through the Red Cross, but is now at Federal level through various mechanisms.

United Kingdom

The role of ANP exists, but advanced nurse practice is not specifically regulated by legislation. Nurses became regulated via the Nurses Registration Act, 1919 and midwifery in the 1902 Act. In the UK,

Nurse Practitioners (NPs) have been part of the National Health Service since the early 1970s (Duke 2012). Governance in the creation of advanced practice nurses dwells with the health-care system and with individual health-care organisations rather than with regulatory bodies. Nursing is regulated under the United Kingdom Central Council for Nursing, Midwifery and Health Visiting, UKCC (CREB 2008, CHRE 2009, Royal College of Nursing 2012).

United States

The role of ANP exists. In 1938, New York State passed the first mandatory Nurse Practice Act, which established two levels of nursing: 'licensed registered nurse' and 'licensed practical nurse'. Other states followed. States now recognise expanded nursing roles (NCSBN 2012). The National Board is made up of the boards in the 50 states, the District of Columbia, and five United States territories. Plans are underway and well advanced to revamp nursing regulation in the USA, from the current single-state licensure model to a mutual recognition model, as proposed by the NCSBN Inc. (American Nurses Association 2010, NCSBN 2012). See Appendix S1 for further details.

Synthesis of regulation for advanced nurse practice

The findings indicate that countries have adopted different regulatory systems for nurses and some have varying systems for regulating advanced nurse practice. All regulate nurses to some extent, some regulate advanced practice but others such as Australia, Sweden and United Kingdom do not differentiate between the regulation of nurses and midwives and the regulation of advanced practice. Regulation of advanced practice is difficult to establish as some countries, Hong Kong, Ireland, New Zealand, Singapore and Spain, have clearly defined laws regulating advanced practice. Separate Regulation of Midwifery occurs in Ireland, Netherlands, Spain, Sweden and United Kingdom. Of the 19 countries studied, 10 countries do not regulate advanced practice. These countries are Denmark, Finland, France, Germany, Italy, Japan, Netherlands, Sweden, Switzerland and United Kingdom. The remaining nine countries, Australia, Canada, Hong Kong, Ireland, New Zealand, Norway, Singapore, Spain and United States regulate advanced practice. The different forms that regulation takes are presented.

Different approaches

National legislation

Regulation of advanced nurse practice occurs in Ireland through Legislation via the Nursing and Midwifery Board of Ireland (ABA 2011); in Japan through Legislation and Certification via the Japanese Nurses Association (JNA 2006); in New Zealand through Legislation via the Nursing Council of New Zealand (NCNZ 2012); in Singapore through the Singapore Nursing Board (SNB 2012) and in Hong Kong through The Nursing Council of Hong Kong (NCHK 2014a,b): the statutory body for the regulation of general nurses and for advanced practice nurses.

State regulation of advanced practice occurs in Australia where each state has its own regulatory authority and a similar regulation occurs in Canada: *Provincial Regulation* of advanced practice, through separate acts in each of the 10 provinces and two territories.

Legislation through Licensure for advanced practice nurses occurs via the Boards of Nursing in the United States (APRN 2012). The United States recently developed the 'LACE Consensus Model' which clarifies and standardises the roles of APNs (APRN 2012).

Countries that do not regulate advanced practice

Legislation to regulate nurses and midwives in the United Kingdom is via the Nurses Act (1919) and the Midwives UK (1902) through the UKCC. There is not a separate regulation for advanced practice nurses (RCN 2012). Federal State Law regulation of nurses occurs in Germany and Switzerland; regulation of nurses in Italy occurs via the Colleges of Nursing; Ministry Regulation of nurses occurs through the National Board of Health and Welfare in Sweden; through the Ministry of Education and General Council of Nursing in Spain; and through the Ministry of Education and Research in Norway. In Finland the nurse is regulated by law through the National Supervisory Authority for Welfare and Health (Valvira 2014) and is then added to the Central Register of Health Care Professionals (*Terhikki*). In the Netherlands distinct regulation of eight health professions takes place through Legislation termed WET BIG. Regulation Differences and commonalities are presented in Appendix S2.

Discussion

Researchers appear to by-pass the dimension of regulation and the effects of non-regulation on

practice. The Council of the European Union produces directives from time to time, which have direct implications for nursing and midwifery practice. European countries have legislation to determine the practice of health professions, yet regulation of advanced nurse practice remains in its infancy. Research has portrayed advanced nurse practice as being at varying early stages of development in many European countries including Austria, Greece, Holland and Slovak Republic (NCNM 2005, OECD 2012b). Greece is reported as having more physicians than nurses in practice and as a result there is little support for advancing the nursing role (OECD 2012a,b) and the Hellenic Nurses Association (2013) state that no certified nurse registration for advanced nurse practice exists in Greece.

Professional nursing organisations have supported the recognition of advanced nurse practice through the mechanism of regulation in some countries and voluntary certification in others. These systems have evolved mainly due to the difficulty inherent in applying professional certification requirements to regulatory systems, including legal regulations, as these are the responsibility of legislators and Boards of Nursing (APRN 2012). There is a lack of consistency in regulatory systems, titles and professional awards resulting in role confusion for the public, legislators, nurses and health-care providers (Villegas & Allen 2012, Harris & Ott 2013).

Research has demonstrated that outcomes from care delivered by advanced nurse practitioners have enhanced patient care in relation to level of satisfaction, quality and access (Ritz *et al.* 2000, Green & Davis 2005, Sheer & Wong 2008, Stanley *et al.* 2009, Gerrish *et al.* 2011). However, the regulation of advanced practice has stalled or is not being considered in some countries for many reasons (Institute of Medicine 2011, Duke 2012, Ellerbe & Regen 2012). The different titles and levels of education being used to designate the advanced nurse practitioner are contributing to the lack of official recognition of the role and to adversely impacting the professional role.

Issues relating to role definitions and boundary blurring are inhibiting the advancement of the nursing profession globally as new roles are being taken on by 'physician assistants' who are carrying out a number of clinical and administrative tasks, some of which overlap with those of advanced practice nurses (Horrocks *et al.* 2002, Laurent *et al.* 2005, Sidani *et al.* 2006). The main reasons put forward for the growth of these assistant roles are related to cost containment

by health-care managers in an effort to delegate tasks away from more expensive doctors, thus developing new physician assistant roles but also more advanced roles for nurses, particularly in the United States, United Kingdom and Canada. A further cause is the realisation by managers that ANPs improve access to care in the face of a limited or diminishing supply of doctors, such as in Australia and Canada. Also, in European countries, as a consequence of the European Union Working Time Directive, (HSE 2008) advanced practice nurses (APNs) have taken responsibility for routine patient care that was previously undertaken by doctors, in an effort to reduce doctors' workload and to provide continuity in health-care delivery.

Countries are reviewing the roles of health professionals including nurses in seeking to improve the quality of health care delivered (Jones 2005, Gardner *et al.* 2007, 2010) and consequently the expertise of advanced practice nursing is being acknowledged worldwide (Brooten *et al.* 2012), particularly in areas such as chronic disease management (Sciamanna *et al.* 2006), primary care (Brown & Grimes 2005, Schober 2007), emergency nursing (Lloyd-Jones 2005, Meyer & Miers 2005, Carter & Chochinov 2007) and cancer care (Kleinpell 2005, 2013). This expertise is likely to lead to the regulation of advanced nurse practice in countries not currently regulating practice (Moore 2005, Hurlock-Chorostecki *et al.* 2008, Delamaire & Lafortune 2010, Pulcini *et al.* 2010). Nurse practitioners in Australia are being heavily invested in by the Australian Government, through the Australian Health Practitioner Regulation Agency 2013 (ANMC 2009).

Implications for nurse managers

Nurse managers need to know that regulation of advanced practice nursing is in place, that criteria for regulation have been developed and that these criteria reflect the minimum requirements for safe and competent practice and are the least burdensome criteria consistent with public protection (ANMC 2009). The protection of the public is the key role in regulation. Without regulation standards of care delivered by advanced nurse practitioners are likely to differ. The importance of an agreed definition and consistency in the use of the term of advanced nursing practice will assist nurse managers in making decisions regarding the advanced practice role requirements of their organisations and in ensuring that the environments advanced nurse practitioners work in are suitable for

delivering optimal outcomes for patients and clients (Report of Prime Minister 2010, Royal College of Nursing 2012). While regulators in the United Kingdom and Australia express the view that advanced practice need not be regulated and that advanced practice is the extension of the role of registered nurses, the growth pattern and trajectory is difficult to access because many of those new appointments and roles are not based on a registerable qualification and local differences often exist between job titles and grades as well as varying levels of educational qualification (ANMC 2009). Nurse managers will benefit from the knowledge that advanced nurse practitioners are continuing to take on new roles in acute and primary care settings (DiCenso & Bryant-Lukosius 2009, Lindblad *et al.* 2010) with positive results (Meyer & Miers 2005) and also that care delivered by advanced practitioners continues to produce positive outcomes for patients. Magnet hospitals report positive patient outcomes, nurse autonomy and good working relationships between nurses and doctors (ACNP 2003, American Nurses Association 2010).

Conclusion

Regulatory systems have been developed to authorise advanced practice and professional certification for licensing or registration. Regulation and regulatory authority must work to protect public safety, yet most European countries do not regulate advanced practice or acknowledge the role. More discussion, debate and research in the area would lead to a greater understanding of the role. Advanced nurse practitioners can assist in the promotion of regulation for advanced practice through articulation of the responsibilities to the wider audience of health-care professionals, management and community, otherwise the confusion around the role and its concepts, evident in many countries, will lead to further splintering of the advanced practitioner title, roles, functions and responsibilities.

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References

- Acute Care Nurse Practitioner (ACNP) (2003) *Acute Care Nurse Practitioner Competencies*, National Panel for Acute Care Practitioner Competencies National Organisation of Nurse Practitioner Faculties, Washington, DC.
- American Nurses Association (2010) . *Nursing: Scope and Standards of Practice*, 2nd edn. American Nurses Association, Silver Spring, MD. Available at: www.nursesbooks.org
- An Bord Altranais (2010a) *Nurses Rules (2010)*. An Bord Altranais, Dublin.
- An Bord Altranais (2010b) *Practice Standards for Midwives*. An Bord Altranais, Dublin.
- An Bord Altranais (2011) *Nurses Act 2011*. Available at: www.nursingboard.ie_publications/current, accessed 13 September 2012.
- APRN Consensus Work Group (2012) *Lace Consensus Model Considerations in Selecting a Method of Regulation of Advanced Nurse Practice (LACE)*. Advanced Practice Registered Nurse (APRN) Advisory Committee, Chicago, Ill.
- Australian Nursing and Midwifery Council (ANMC) (2009) *Nurse Practitioners: Standards and Criteria for the Accreditation of Nursing and Midwifery Courses Leading to Registration, Enrolment, Endorsement and Authorisation in Australia – With Evidence Guide*. Available at: [http://www.anmc.org.au/userfiles/file/ANMC_Nurse_Practitioner\(1\).pdf](http://www.anmc.org.au/userfiles/file/ANMC_Nurse_Practitioner(1).pdf), accessed 14 September 2012.
- Brooten D., Youngblut J.M., Deosires W., Singhala K. & Guido-Sanz F. (2012) Global considerations in measuring effectiveness of advanced practice nurse. *International Journal of Nursing Studies* **49**, 906–912.
- Brown S.A. & Grimes D.E. (2005) A meta-analysis of nurse practitioner and nurse midwives in primary care. *Nursing Research* **44**, 332–339.
- Canadian Nurses Association (2009) *Position Statement: Clinical Nurse Specialist*. Canadian Nurses Association, ON. Available at: www.cna-aiic.ca, accessed 7 October 2012.
- Carter A.J.E. & Chochinov A.H. (2007) A systematic review of the impact of nurse practitioners on cost, quality of care, satisfaction and wait times in the emergency department. *Canadian Journal of Emergency Medicine* **9** (4), 286–295.
- CHRE Scottish Report (2009) *Advanced Practice – Report to the Four UK Health Departments*. Available at: <http://www.chre.org.uk/satellite/116/> (Scottish Report) http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_065946/ and Scottish Report, accessed 14 September 2012.
- Council for Regulatory Excellence Board (CREB) (2008) *Advanced Practice Report to the Four UK Health Departments*. Available at: <http://www.chre.org.uk/satellite/116/>, accessed 14 September 2012.
- Delamaire M. & Lafortune G. (2010) *Nurses in Advanced Roles: A Description and Evaluation of Experiences in 12 Developed Countries*. OECD Health Working Papers No. 54, OECD Publishing. Available at: <http://dx.doi.org/10.1787/5kmbrcfms5g7-en>, accessed 14 August 2012. <http://www.oecd.org/els/health/workingpapers>, accessed 13 September 2012.
- DiCenso A. & Bryant-Lukosius D. (2009) *Clinical Nurse Specialists and Nurse Practitioners in Canada: A Decision Support Synthesis*. CHSRF, Ottawa, ON.
- Donato A.S. (2009) Nurse practitioners in Holland: definition, preparation, and prescriptive authority. *Journal of the American Academy of Nurse Practitioners* **21** (11), 585–587.
- Duke N. (2012) Exploring advanced nursing practice: past, present and future. *British Journal of Nursing* **21** (17), 1026–1030.
- Ellerbe S. & Regen D. (2012) Responding to health care reform by addressing the Institute of Medicine Report on the Future of Nursing. *Nursing Administration Quarterly* **36** (3), 210–216.
- EU Directive (2005) 2005/36/EC of the European Parliament and the Council. Available at: http://ec.europa.eu/internal_market/qualifications/policy_developments/legislation/index_en.htm, accessed 14 August 2012.
- European Union EU Law/Sweden (2006) Available at: <http://ec.europa.eu/internal-market/qualifications/docs/nurses/2000-study/nursesweden-en.pdf/>, accessed 14 August 2012
- Fagerström L. & Glasberg A.L. (2011) The first evaluation of the advanced practice nurse role in Finland – the perspective of nurse leaders. *Journal of Nursing Management* **19** (7), 925–932.
- Gardner G., Chang A. & Duffield C. (2007) Making nursing work: breaking through the role confusion of advanced practice nursing. *Journal of Advanced Nursing* **57** (4), 382–391.
- Gardner G., Gardner A., Middleton S., Della P., Kain V. & Doubrovsky A. (2010) The work of nurse practitioners. *Journal of Advanced Nursing* **66** (10), 2160–2169.
- Gerrish K., Guillaume L., Kirshbaum M., McDonnell A., Tod A. & Nolan M. (2011) Factors influencing the contribution of advanced practice nurses to promoting evidence-based practice among front-line nurses: findings from a cross-sectional survey. *Journal of Advanced Nursing* **67** (5), 1079–1090.
- Grant M.J. & Booth A. (2009) A typology of reviews: an analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal* **26** (2), 91–108.
- Green A. & Davis S. (2005) Toward a predictive model of patient satisfaction with nurse practitioners. *Journal of the American Academy of Nurse Practitioners* **17** (4), 139–148.
- Harris J.L. & Ott K.M. (2013) VA professional nursing and practice. *Journal of Nursing Regulation* **4** (3), 28–32.
- Health Service Executive (HSE) (2008) *European Working Time Directive and Non-Consultant Hospital Doctors-Final Report of the National Implementation Group*. Health Service Executive, Dublin.
- Hellenic Nurses Association (2013) ESNE. Available at: <http://www.esne.gr/>, accessed 7 October 2012.
- Horrocks S., Anderson E. & Salisbury C. (2002) Systematic view of whether nurse practitioners working in primary care can provide equivalent care to doctors. *British Medical Journal* **324**, 819–823.
- Hurlock-Chorostecki C., van Soeren M. & Goodwin S. (2008) The acute care nurse practitioner in Ontario: a

- workforce study. *Canadian Journal of Nursing Leadership* 21 (4), 100–116.
- Institute of Medicine (2011) *The Future of Nursing: Leading Change, Advancing Health*. National Academic Press, Washington, DC.
- International Council of Nurses (2008a) *The Scope of Practice, Standards and Competencies of the Advanced Practice Nurse*. International Council of Nurses, Geneva.
- International Council of Nurses (2008b) *Definition and Characteristics of the Role*. International Council of Nurses. Available at: <http://www.icn-apnetwork.org/>, accessed 7 October 2012.
- Japanese Nursing Association (JNA) (2006) Available at: <http://www.nurse.or.jp/jna/english.html>; <http://www.nurse.or.jp/jna/english.htm>, accessed 8 August 2012.
- Jones M.L. (2005) Role development and effective practice in specialist and advanced practice roles in acute hospital settings: systematic review and meta-analysis. *Journal of Advanced Nursing* 49, 191–209.
- Kleinpell R.M. (2005) Acute care nurse practitioner practice: results of a 5 year longitudinal study. *American Journal of Critical Care* 14, 211–219.
- Kleinpell R.M. (2013) *Outcome Assessment in Advanced Practice Nursing*, 3rd edn. Springer, New York, NY.
- Laurent M., Reeves D., Hermens R., Braspenning J., Grol R. & Sibbald B. (2005) Substitution of doctors by nurses in primary care. *Cochrane Database of Systematic Reviews* 18 (2), CD001271.
- Lindblad E., Hallman E., Gillsjö C., Lindbad U. & Fragerström L. (2010) Experiences of the new role of advanced practice in Swedish primary health care: a qualitative study. *International Journal of Nursing Practice* 16, 69–74.
- Lloyd-Jones M.I. (2005) Role development and effective practice in specialist and advanced practice, roles in acute hospital settings: systematic review and meta-synthesis. *Journal of Advanced Nursing* 49 (2), 191–209.
- Meyer S.C. & Miers L.J. (2005) Cardiovascular surgeon and acute care nurse practitioner: collaboration on prospective outcomes. *AACN Clinical Issues* 16 (2), 149–158.
- Moore D. (2005) *Assuring Fitness for Practice: A Policy Review Commissioned by the Nursing and Midwifery Council Nursing Task and Finish Group*. NMC, London, pp. 55–65.
- National Council for the Professional Development of Nursing and Midwifery (2005) *A Preliminary Evaluation of the Role of the Advanced Nurse Practitioner*. National Council for the Professional Development of Nursing and Midwifery: Dublin.
- National Council for the Professional Development of Nursing and Midwifery (2008) *Framework for the Establishment of Advanced Nurse Practitioner and Advanced Midwife Practitioner Posts*, 4th edn. NCNM.
- NCSBN (2012) *Regulation of Advanced Nursing Practice NCSBN Position Paper (1993)*, NCSBN, Washington, DC. Available at: https://www.ncsbn.org/1993_Position_Paper_on_the_Regulation_of_Advanced_Nursing_Practice, accessed 14 August 2012.
- Nurse Practitioners' Association of Ontario (2010) *Educational Programmes*. Nurse Practitioners' Association, Ottawa, ON.
- Nursing Council of Hong Kong (2014a) Available at: <http://www.nchk.org.hk/>, accessed 26 May 2014.
- Nursing Council of Hong Kong (2014b) Available at: <http://www.nursingcouncilhongkong.hk/>, accessed 26 May 2014.
- Nursing Council of New Zealand (2012) Available at: <http://www.nursingcouncil.org.nz/download/68/guidelines-np-sept09.pdf>, accessed 23 July 2012
- NVivo Software Package (2014) Available at: <http://www.qsrinternational.com/about-qsr.aspx>, accessed 5 November 2014.
- OECD (2012b) *Health at a Glance, Europe*, 2nd edn. OECD, Publishing: available at <http://www.oecd.org/health/healthdata>, www.oecd.org/health/healthdata, doi: 10.1787/9789264183896-en, accessed 24 July 2012.
- OECD Health Data (2012a) OECD. Available at: <http://www.oecd.org/health/healthdata>, accessed 14 August 2012.
- OECD Ministry of Education (2006) Education systems Available at: <http://www.oph.fi/english/SubPage.asp?path+447,4669>, accessed 14 August 2012.
- Pulcini J., Jelic M., Gul R. & Loke A.Y. (2010) An International survey on advanced nursing practice, nursing education, practice and regulation. *Journal of Nursing Scholarship* 42, 31–39.
- Report of the Prime Minister on the Future of Nursing and Midwifery in England (2010) *Front Line Care: the Future of Nursing and Midwifery in England*. Report of the Prime Minister's Commission, UK.
- Ritz L.J., Nissen M., Swenson K.K. et al. (2000) Effects of advanced nursing care on quality of life and cost outcomes of women diagnosed with breast cancer. *Oncology Nursing Forum* 27, 923–932.
- Royal College of Nursing (2012) *Advanced Nurse Practitioners – An RCN Guide to Advanced Practice Role*, Advanced Nurse Practitioners and Programme Accreditation, London. Available at: http://www.rcn.org.uk/data_assets/pdk_file/0003/146478/003207.pdf, accessed 8 October 2012.
- Schober M. (2007) The global emergence of advanced practice nurses in providing home and community care health services. *Home Health Care Management* 20 (1), 34–40.
- Schober M. & Affara F. (2006) *Advanced Nursing Practice*. International Council of Nurses, Geneva.
- Sciamanna C.N., Alvarez K., Miller J., Gary T. & Bowen M. (2006) Attitudes toward nurse practitioner-led chronic disease management to improve outpatient quality of care. *American Journal of Medical Quarterly* 21 (6), 375–381.
- Sheer B. & Wong F.K.Y. (2008) The development of advanced nursing practice globally. *Journal of Nursing Scholarship* 40 (3), 204–211.
- Sidani S., Doran D., Porter H. et al. (2006) Processes of care: comparison between nurse practitioners and physician residents in acute care. *Nursing Leadership (Tor Ont)* 19, 69–85.
- Singapore Nursing Board (SNB) (2012) *Regulation of Nursing in Singapore*. Available at: <http://statutes.agc.gov.sg/aol/search/display/view.w3p;page=0;query=Id%3A%2223382dd7-4e15-4a3d-b6b1-088d8295cbd4%22%20Status%3Ainforce;rec=0;whole=yes/>, accessed 21 July 2012.
- Stanley J.M., Werner K.E. & Apple K. (2009) Positioning advanced practice registered nurses for health care reform: consensus on APRN Regulation. *Journal of Professional Nursing* 25 (6), 340–348.
- Valvira (2014) *National Supervisory Authority for Welfare and Health: Professional Practice Rights*. Available at: <http://www.valvira.fi/en/professional-practice-rights/nurses>, accessed 21 September 2014.
- Villegas W.J. & Allen P.E. (2012) Barriers to advanced practice registered nurse scope of practice: issue analysis. *The Journal of Continuing Education in Nursing* 43 (9), 403–409.

Supporting information

Additional Supporting Information may be found in the online version of this article:

Appendix S1. Regulation of advanced practice nursing in 19 countries.

Appendix S2. Summary of regulation across countries: differences and commonalities (1.1–1.12).