

An international perspective of advanced practice nursing regulation

R. Heale¹ RN(EC), PHC-NP, DNP, & C. Rieck Buckley² RN, BScN, MScA

¹ Associate Professor, School of Nursing, Laurentian University, Sudbury, ² Executive Director, Canadian Nurses Foundation, Ottawa, ON, Canada

HEALE R. & RIECK BUCKLEY C. (2015) An international perspective of advanced practice nursing regulation. *International Nursing Review* **62**, 421–429

Background: There is no common understanding about the role of the advanced practice nurse across the globe and there is wide variation in the regulation of advanced practice nursing roles as well as their educational, licensing and credentialing requirements.

Aim: The goal of this research was to examine the status of advanced practice nursing regulation globally.

Methods: An online survey link was emailed to National Nursing Associations and nursing health policy makers worldwide from June to December 2011. Questions focused on regulation, education, scope of practice, and barriers and opposition. Analysis included frequency statistics and descriptive data for survey questions and content analysis for two open-ended questions.

Limitations: The survey was offered online and only in English. Therefore, technology and language barriers may have influenced the results.

Results: There is wide variation in educational requirements, regulation and scope of practice of advanced practice nurses. The barriers to advanced practice nursing are often linked to the status of legislation and credentialing in specific jurisdictions.

Conclusion: A database of advanced practice nursing regulation and issues related to practice has the potential to become a valuable resource for individual countries.

Implications for nursing and health policy: Each country has unique challenges related to health policy for advanced practice nursing roles. International nursing organizations have established programmes for regulation development; however, a stronger focus on monitoring regulation and more effective dissemination of information about available supports may have a bigger impact on the development and revision of health policy related to advanced practice nursing.

Keywords: Advanced Practice, Advanced Practice Nursing, Credentialing, Nursing, Nursing Legislation, Nursing Regulation, Nursing Roles, Registration

Correspondence address: Dr Roberta Heale, School of Nursing, Laurentian University, Ramsey Lake Road, Sudbury, ON P3E 2C6, Canada; Tel: 1-800-461-4030 ext 3971; Fax: 1-866-536-4749; E-mail: rheale@laurentian.ca.

Funding

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

Conflict of Interest

No conflict of interest has been declared by the authors.

Advanced practice nurses (APNs) have been described as a 'sleeping giant' for healthcare systems, with the potential to be a strong force for increased access to quality health care (Pulcini et al. 2010). In fact, there has been a trend in the development of advanced practice nursing roles worldwide matching an increased need in health care for more skills, specialties and subspecialties consistent with expanded technology and system complexity (Bryant 2005; Gaumer 1984). Not only do APNs take on difficult and complex roles, they also fill gaps in health systems with human health resource challenges. However, the development of advanced practice nursing roles and the challenges faced by these nurses vary considerably across the globe. The aim of this study was to obtain a snapshot of the status of the regulation of advanced practice nursing globally and to attempt to determine the unique factors affecting this regulation.

Background

The International Council of Nurses (ICN) has developed the following definition of the APN:

A Nurse Practitioner/Advanced Practice Nurse is a registered nurse who has acquired the expert 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 s/he is credentialed to practice. A master's degree is recommended for entry level. (ICN/INPANN 2013, para 2)

There are limitations to capturing a definition that reflects a common understanding of the APN. Part of the difficulty is that advanced practice roles have been operationalized very differently across the globe and two or more roles may exist in a country with differing requirements and regulation. Different countries have similar roles but use different names including nurse practitioner (NP), clinical nurse specialist (CNS), nurse specialist (NS), APN and more. Educational requirements to practice, scope of practice, and licensing renewal may also differ from country to country and often from jurisdiction to jurisdiction (Ketefian et al. 2001; Pulcini et al. 2010). In many cases, the advanced practice nursing role includes an expanded scope of practice that traditionally belonged in the medical domain.

The licensing, accreditation, or regulation of healthcare professionals, or lack thereof, has a profound impact on professional practice (Forgotson & Cook 1967). Historically, the medical profession sought regulation which gave it authority over a significant portion of health care. This regulation in various forms across the globe often excluded other healthcare professionals from practice similar to medicine. The medical profession has controlled the numbers of medical graduates and

remuneration and ensured that medicine had a prominent voice in healthcare system decision making (Gaumer 1984; Raach 1944). In comparison, the emergence of regulation of APNs has spanned decades and has been influenced by factors such as social change, economic concerns and population health needs (ICN 2008).

As an extension of existing nursing roles, advanced practice nursing roles have evolved in a variety of ways across jurisdictions with the pace of development of these roles varying considerably across the globe (Sheer & Wong 2008). The recognition of the value of the APN is always an underlying concept in the development of the role in a jurisdiction (Ketefian et al. 2001). Ketefian et al. identified a number of forces that have supported the development of advanced practice nursing roles including 'the socio-political environment, health needs of society, healthcare workforce supply and demand, governmental policy and support, intra- and interprofessional collaboration, the development of nursing education and documentation of effectiveness of advanced role' (p. 152). The forces that influence the development of APNs also have an impact on the type and extent of regulation of the roles.

Regulation and the advanced practice nursing role

Despite the value of APNs to health systems, many of these providers experience barriers to their practice, impeding their ability to provide care to the full extent of their knowledge and skill for optimal patient care. In Canada, research related to NPs and CNSs demonstrates that a lack of understanding of these roles may result in limitations to the work of the APN and impede practice that promotes optimal patient health outcomes (Bailey et al. 2006; Bryant-Lukosius et al. 2004; van Soeren et al. 2009). A lack of organizational understanding of an advanced practice nursing role can lead to wide variations in practice, lack of role clarity, inconsistent expectations, restrictive employer job descriptions, role conflict, role overload and variable stakeholder acceptance. In addition, the lack of understanding by physicians and the public may contribute to restrictions to advanced practice (Bryant-Lukosius et al. 2004; Lamarche & Tullai-McGuinness 2009; van Soeren et al. 2009).

Understanding the role of APNs is enhanced through the support of clear regulation and legislation. Regulation of professional practice or professional legislation offers health professions legitimacy through credentialing procedures such as registration, certification and licensure as well as a defined scope of practice, authorized clinical tasks and entry requirements (Gaumer 1984). It is important for legislation to be written in such a way that it supports role clarity and credibility (DiCenso & Bryant-Lukosius 2010). In addition, credentialing

mechanisms provide a definition of the profession and help ensure safe and competent practice (Bryant 2005; Carney 2015; Morrison & Benton 2010).

On the other hand, if regulation is inadequate, it can impose its own form of practice barriers (van Soeren et al. 2009). 'As regulation is fundamental to the identity, structure and type of services a professional can offer, the way nursing is regulated can either facilitate or impede its ability to remain relevant and its capacity to offer needed services' (ICN 2013, para 2). Thus, while advanced practice nursing roles may benefit from regulation, the regulation must be clear and adequate enough to address the full scope of practice of the APN, mitigating competition between APNs and other healthcare providers and additional barriers to practice.

Regulation and continued competency

In the 1980s, the ICN implemented an initiative to strengthen basic nursing regulation worldwide with a particular emphasis on removing barriers (Bryant 2005). Despite this work, many countries continue to lack basic nursing regulation, rules or regulatory mechanisms (Bryant 2005; Morrison & Benton 2010). Consequently, expanded nursing roles are even less defined in regulation. The data available about advanced practice nursing regulation demonstrate wide variation in the stages of development and implementation of advanced practice nursing roles and regulatory development. Some countries have moved towards national regulation while others have a patchwork of various levels of regulation in a number of jurisdictions within a country. In many circumstances, licensing and regulation that is separate from that of the registered nurse is not required and other mechanisms for recognizing the advanced practice nursing role outside of regulation are implemented, such as clinical and educational requirements (DiCenso & Bryant-Lukosius 2010).

Types of regulation

There are a number of different types of nursing regulation. Two major types of regulation are state based and profession based (ICN 2009). Regulation may occur by statute or government decree, where the provisions for registration and practice are given to a governing body. In some cases, the government regulates nursing, along with all other health professionals in the country, through central regulation. At other times, nursing is regulated through a professional body (Bryant 2005). In some jurisdictions, APN roles are governed by legislation that is separate from basic nursing, while in others, APN roles are an expansion of basic nursing licensure and legitimized through credentialing processes, such as additional education (DiCenso & Bryant-Lukosius 2010). Finally, employers may impose a

form of regulation on nurses working in their institution through their designated policies and procedures (Bryant 2005).

The criteria required to practice in an expanded nursing role are often determined by regulation and/or registration boards. An important element in preparing safe and competent APNs is the educational programme (Bryant 2005). 'Registration boards have an interest in role expansion as they need to be assured that nurses are adequately educated and have the competencies to function in the expanded role' (Bryant 2005, p. 8). Ensuring quality of care requires such things as review of the quality of education, continuing education opportunities, procedures for re-licensing and measurement of ongoing competencies, recognizing that competencies evolve and change over time (Bryant 2005; Gaumer 1984).

Examples of advanced practice nursing regulation

There have been regulated advanced practice nursing roles in the United States for over 40 years (Kleinpell et al. 2012). The USA is the most prominent example of the complexities that can occur. For instance, each individual state has separate regulations for advanced practice nursing roles including certified registered nurse anaesthetists, certified nurse-midwives, CNSs and certified NPs. The tremendous variation across the USA, as well as the development of numerous nursing subspecialties, has led to the proposal of a uniform model of regulation across the country. This model defines advanced practice and describes an advanced practice nursing regulatory model that includes the advanced practice nursing titles, specialties, and addresses the emergence of new roles and health issues (APRN Consensus Work Group 2008).

Some countries have made preliminary steps to jointly discuss different elements of advanced practice nursing roles including education and licensing standards. For example, Australia and New Zealand researched NP practice in order to develop generic competency standards that could apply to education, authorization and practice of NPs in both countries. The 'generic standards for nurse practitioner practice will support a standardised approach and mutual recognition of nurse practitioner authorisation across the two countries' (Gardner et al. 2006, p. 601). It was felt that the collaboration provided a 'research-informed basis for regulation, education and practice at a national level; this study has contributed to the global debate on nurse practitioner competencies' (Gardner et al. 2006, p. 609).

In another example, regulation of NPs in Taiwan was developed to ensure NP competency and professionalism with the intention of enhancing the quality of care, implementing teamwork (nurses and physicians), improving accessibility to health

care, involving patients in decision making and reducing malpractice (Cheng et al. 2012).

A global dialogue about APN regulation is vital to the safe and effective practice of APNs across the world recognizing that '... nurses need to be able to meet the challenges presented by increasingly complex health care and social systems' (ICN 2009, p. 21). This objective is difficult to achieve without an understanding of advanced practice nursing regulation across the globe. While there are many articles about regulation and the situation in specific jurisdictions, there is a dearth of up-to-date databases and current literature about the status of regulation from a global perspective. The primary purpose of this study was to obtain a snapshot of the status of the regulation of advanced practice nursing globally and to attempt to determine the unique factors affecting advanced practice nursing regulation. Of consideration were socio-political issues, education of APNs, influence of labour dynamics on the advanced practice nursing role(s), and economics and funding (ICN 2009).

Methodology

Regulation survey

An online survey was developed by the research team in collaboration with the International Nurse Practitioner/Advanced Practice Nursing Network of the ICN. Two subcommittees of the International Nurse Practitioner/Advanced Practice Nursing Network were represented, including the Education and Health Policy Subgroups and the Core Steering Group. The survey included questions about APN roles and titles, educational requirements, regulatory and legislative requirements, and scope of practice. The survey also included short answer questions where respondents were asked about opposition to the APN role(s) in their country and barriers to the implementation of the role(s). Survey questions could be completed for each type of APN role that respondents identified. Participants could choose from a list of the four most frequently cited advanced practice nursing roles identified in a previous study by Pulcini et al. (2010), namely the NP, APN, CNS and NS. Given that there are a number of other recognized advanced practice nursing roles, participants were also able to identify roles not listed in the survey and complete the corresponding survey questions. It should be noted that the term *advanced practice nurse* is an umbrella term for expanded practice and encompasses a variety of roles, but advanced practice nurse is also used as the actual title for expanded nursing roles in some countries.

Sample

Once the research received ethical approval from Laurentian University in Sudbury, Canada, an invitation to complete the

online survey was sent in a newsletter by the ICN to all affiliated National Nursing Associations (NNA). At the time of the survey, there were 135 NNA members in the ICN federation. The invitation requested that each NNA identify a person to complete the survey. An ongoing review of completed surveys allowed the researchers to track countries that had responded and to follow up with non-responding countries. The online survey was initially available for 2 months, but remained open to respondents for 3 months to encourage further participation.

Thirty-six countries responded to the survey. The response from six countries was incomplete and the data were not used in the analysis. Twenty-four of the countries that responded included answers to the open-ended questions.

Findings

Responses from countries from a large proportion of the world were obtained including North America, Europe, Asia, South America and Africa. Most countries with advanced practice nursing roles cited more than one role. Each role was unique with regard to regulation and educational requirements. The responses from countries with advanced practice nursing roles and regulation are provided in Table 1. The respondents from four countries indicated that they did not have an advanced practice role in their country and were not included in Table 1. They are Democratic Republic of the Congo, Gambia, Sri Lanka and Suriname.

There was wide variation in the advanced practice nursing roles with specific regulation. Of those that did not have regulation, participants identified the existence of credentialing criteria such as licensure or educational programmes. Many respondents chose the option 'varies by jurisdiction' to describe the regulation of advanced practice nursing roles in their country.

Education requirements are very often intrinsically tied to regulation. A review of the data showed that participants identified whether there were minimal educational requirements for advanced practice nursing roles in their country. Table 2 outlines the number of jurisdictions that identified educational requirements for each of the four most commonly listed advanced practice nursing roles. Respondents identified 52 advanced practice nursing roles in 26 countries. Only 42 of these had a minimum level of education requirement. There was wide variation in the educational requirements for each role, including variation in the jurisdictions of many of the responding countries. A master degree was the educational requirement for 25 of the identified roles.

The survey included two open-ended questions. The first inquired about opposition to the identified advanced practice

Table 1 APN roles and regulation

Country	NP	CNS	APN	NS	Nurse midwife	Clinical nurse consultant	Nurse anaesthetist
Angola	*	Y	–	–	–	–	–
Australia	Y	V	*	–	–	*	–
Austria	–	–	*	Y	–	–	–
Bahamas	*	–	Y	–	Y	–	–
Bolivia	Y	–	–	–	–	–	–
Botswana	*	–	–	*	–	–	–
Canada	Y	*	–	–	–	–	*
Finland	–	*	*	–	–	–	–
France	–	–	–	Y	–	–	–
Greece	–	Y	–	Y	–	–	–
Iran	V	Y	*	*	–	–	–
Ireland	–	*	Y	–	–	–	–
Italy	–	*	–	Y	–	–	–
Malaysia	–	*	–	–	–	–	–
Mongolia	*	–	–	–	–	–	–
Netherlands	Y	*	–	–	–	–	–
New Zealand	Y	–	–	–	–	–	–
Poland	*	–	–	*	–	–	–
Sierra Leone	–	–	–	Y	–	–	–
Singapore	–	–	Y	–	–	–	–
Spain	–	–	Y	–	–	–	–
Taiwan	Y	–	–	–	–	–	–
Thailand	Y	Y	Y	Y	–	–	–
Togo	*	*	*	–	–	–	–
UK	*	–	–	–	–	–	–
USA	Y	V	–	–	Y	–	Y

* = role exists but there is no regulation; – = no role exists; NP = nurse practitioner; CNS = clinical nurse specialist; APN = advanced practice nurse; NS = nurse specialist. Y = role and regulation exist; V = role exists but regulation varies by jurisdiction (some sectors of the country have regulation for the role, while others do not).

nursing role in their jurisdiction. Opposition was not defined for the participants in order to avoid leading the responses. The researchers implemented an inductive content analysis approach to code the responses and develop themes (Elo & Kyngäs 2008).

In many countries, one advanced practice nursing role may have experienced opposition while another did not. The majority of advanced practice nursing roles in 38 countries did not experience opposition (18% or 47%). Of the advanced practice nursing roles that were associated with opposition, most indicated that it arose from physicians and medical organizations. Other groups that showed opposition to advanced practice nursing roles in some countries were pharmacists, government and administrations.

The respondents were also asked to identify the barriers in their country that prevent the APN from functioning to full

scope of practice. Several themes emerged in the responses to this question. Participants identified that legislative limitations including prescribing from a list, low nursing representation in policy development, and discrepancies between NP and physician reimbursement for prescriptions were barriers. Others specifically cited the lack of title protection and lack of regulation of the advanced practice nursing role as a barrier. Still others indicated that the opposition of other healthcare providers and the requirement of physician supervision were barriers to advanced practice.

A lack of leadership in government and nursing organizations was another theme that emerged. Some respondents indicated that there was no strategic leadership at multiple levels and that a lack of recognition of advanced practice roles existed. Added to this was a lack of standardization of competencies and a 'lack of political strength of nurses'.

Table 2 Educational requirements for the four most common APN roles

Country	Role	Minimum education required	Post-basic certificate (non-academic)	Baccalaureate	Masters	Post-Masters certificate	Doctorate	Other
Angola	NP	Y		*	*	*		
	CNS	Y		*	*			
Australia	NP	Y			*			
	APN	N						
Austria	CNS	Y	*					
	APN	Y		*				
Bahamas	NP	N						
	APN	Y	*					
Bolivia	NP	Y						Incomplete
Botswana	NP	Y	*					
	NS	Y	*		*			
Canada	NP	Y	*		*	*		Post-BScN certificate
	CNS	Y			*			
Finland	CNS	N						
	APN	N						
France	NS	Y	*		*			
Greece	CNS	Y		*				
	NS	Y			*			
Iran	NP	Y		*				
	APN	Y			*			
	CNS	Y			*			
	NS	Y		*				
Ireland	APN	Y			*			
	CNS	Y						Post Grad Dip
Italy	CNS	Y						Post-basic academic certificate
	NS	Y			*			
Malaysia	CNS	Y	*	*				
Mongolia	NP	Y			*			
Netherlands	NP	Y			*			
	CNS	N						
New Zealand	NP	Y	*		*			
Poland	CNS	Y	*	*	*		*	
	NS	Y	*	*	*			
Sierra Leone	NS	Y	*	*	*	*		
Spain	APN	N						
Switzerland	APN	Y	*		*			
	CNS	N						
Taiwan	NP	N						
Thailand	NP	Y	*		*			
	APN	Y			*			
	CNS	Y			*			
	NS	Y	*					
Togo	NP	Y	*	*				
	APN	Y	*	*				
	CNS	Y		*				
UK	NP	N						
USA	NP	Y			*			
	CNS	Y			*			

More than one response per role in a country = minimal education requirement varies by jurisdiction within the country.

NP = nurse practitioner; CNS = clinical nurse specialist; APN = advanced practice nurse; NS = nurse specialist; Y = minimum educational requirement exists.

* = education requirement.

Education of APNs as a barrier formed another theme. Some countries cited limited accessibility to advanced practice nursing programmes while others indicated a lack of accreditation of advanced practice nursing programmes. The theme of Human Health Resources also arose. Poor working conditions, low remuneration, lack of appropriate facilities, the expectation to either work beyond the scope of practice or the inability to work to the full scope of practice were all issues raised. Disparities in the advanced practice nursing roles between healthcare settings and a general lack of understanding of the advanced practice nursing role were also identified as concerns.

Other themes identified are the influence of a poor economy in the full utilization of APNs, a health system designed to a medical model and the lower societal status of women. Finally, the fact that the advanced practice nursing role is in its infancy in many countries is a barrier to the full implementation of the role.

Discussion

The study confirmed that there is wide variation in educational requirements, regulation and scope of practice of APNs across the globe. The barriers to advanced practice nursing are linked in many ways to the status of legislation and credentialing in specific jurisdictions. Barriers to advanced practice nursing identified by the participants in this study are reflected in previous advanced practice nursing evaluations and include such things as non-supportive legislative and organizational environments.

Barriers to the ability of the APNs to practice to the full extent of their competencies or scope of practice can have significant negative impact on health services. 'If an advanced practice nurse cannot work to her/his full scope of practice, it can be seen as a waste of human resources and can lead to frustration, delays in treatment, and additional work for other healthcare team members' (DiCenso & Bryant-Lukosius 2010, p. 33). The ICN stated:

It is important that nurses . . . take every opportunity to influence events and contribute to policy debates which determine or affect the context of their professional practice. In this way they can become agents of constructive change for public benefit and professional growth, rather than passive victims of potentially destructive change proposed and promoted by others. (ICN 2009, p. 21)

Support is required to assist APNs to overcome their barriers to practice and provide the best possible care for patients. Although it is the role of nurses within each jurisdiction to ensure the appropriateness of the standards, ethical codes, educational requirements and practice of advanced practice

nursing in their countries (ICN 2009), there is a place for assistance from nursing organizations. Consultation or observation of policy work across jurisdictions has the potential to provide exemplars and frameworks for regulatory development.

Limitations

This study had several limitations. One limitation was the difficulty in the recruitment of countries. This resulted in an extension of the timelines of the survey. The survey was offered only in English; therefore language became a barrier for some countries that did not have a full understanding of the survey questions. Although efforts were made to mitigate confusion, the use of the term APN as an umbrella term in addition to a role title in some jurisdictions may have resulted in further misunderstanding. Incomplete surveys as well as multiple responses from participating countries were also problematic, making data verification difficult. And finally, the survey was only available in an online format.

Implications for nursing and health policy

Morrison and Benton (2010) suggest that nursing leaders 'Develop methods to capture and record changing and innovative nursing legislation' (p.47). The International Nurse Practitioner/Advanced Practice Nursing Network is the only global advanced practice nurse network and an important organization for all APNs to participate in to share knowledge and experiences (Fitzpatrick 2007). Two key objectives of this Network are to 'to serve as a forum for exchange of knowledge and to serve as a resource base for the development of advanced practice/nurse practitioner roles and the appropriate educational underpinnings' (Sheer & Wong 2008, p. 204). The Network is also ideally positioned to collect and store data about advanced practice nursing regulation globally. A database of this kind has the potential to become an important resource for individual countries to help inform changes to legislation that will ultimately promote optimal advanced practice nursing and patient care.

The ICN has 'Regulation' as one of its three pillars. The organization has developed a comprehensive programme to support its members (including the above Network) with regulatory concerns. Some of the related activities include:

- providing NNAs and others with the tools (e.g. information, guidelines, international standards, competencies and frameworks) to enable them to remain up to date on regulatory matters,
- providing nursing and other key stakeholders with advice and consultation to undertake reforms and to respond to changes having an impact on professional regulation,

- liaising with international institutions addressing issues of regulation,
- influencing/negotiating regulatory reform in the best interest of the public and the profession,
- establishing accreditation, certification and endorsement services in selected areas,
- collaborating with other groups and interested parties on regulatory activities and issues of common interest,
- setting directions for the ongoing development of nursing regulation worldwide, and
- promoting data collection in order to provide an evidence base for regulatory policies and practices (ICN 2013, para 1).

Despite the supports available through the International Council of Nurses and International Nurse Practitioner/Advanced Practice Nursing Network, there continues to be wide variation of advanced practice nursing regulation and credentialing criteria. Future research could focus on determining the availability of ICN regulatory supports to various countries. There is potential that wider dissemination of the regulatory programmes may be more effective in enacting health policy changes globally. In addition, in jurisdictions where professional nursing associations or groups of individuals are the leaders for change in the development of policy related to an advanced practice nursing role, a stronger presence of International Nurse Practitioner/Advanced Practice Nursing Network and the maintenance of a database of the status of regulation globally may help reinforce these efforts.

Conclusion

This global snapshot of advanced practice nursing regulation, education and barriers to practice offers a starting point to the understanding of issues faced by APNs. The importance of adequate regulation based on a foundation of educational standards and credentialing to ensure full advanced practice nursing in support of optimal patient health outcomes is confirmed. Policy and regulatory development in individual jurisdictions could be enhanced by the development of a database of regulatory status across the globe. In addition, The International Nurse Practitioner/Advanced Practice Nursing Network and the International Council of Nurses have established structures to assist countries in the development of advanced practice nursing roles.

Acknowledgements

Special thanks to Dr Alba DiCenso, McMaster University, Hamilton, Ontario, Canada, CHSRF/CIHR Chair in Advanced Practice Nursing for her guidance and support of this project.

Author contributions

Both authors were involved in the development and implementation of this study and in the analysis of data. Both authors were equally involved in the drafting of this manuscript.

References

- APRN Consensus Work Group (2008) *Consensus Model for APRN Regulation: Licensure, Accreditation, Certification & Education* (pp. 1–41). Available at: <http://www.aacn.nche.edu/education-resources/APRNReport.pdf> (accessed 18 October 2014).
- Bailey, P., Jones, L. & Way, D. (2006) Family physician/nurse practitioner: stories of collaboration. *Journal of Advanced Nursing*, **53** (4), 381–391.
- Bryant, R. (2005) Regulation, roles and competency development. *International Council of Nurses*. Available at: http://www.icn.ch/images/stories/documents/publications/GNRI/Issue1_Regulation.pdf (Retrieved April 27, 2015).
- Bryant-Lukosius, D., DiCenso, A., Browne, G. & Pinelli, J. (2004) Advanced practice nursing roles: development, implementation and evaluation. *Journal of Advanced Nursing*, **48** (5), 519–529.
- Carney, M. (2015) Regulation of advanced nurse practice: its existence and regulatory dimensions from an international perspective. *Journal of Nursing Management*, doi: 10.1111/jonm.12278.
- Cheng, H.L., et al. (2012) Perceptions of NPs and administrators in regard to the governing and supervision of NPs in Taiwan. *Journal of the American Academy of Nurse Practitioners*, **24** (3), 132–137.
- DiCenso, A. & Bryant-Lukosius, D. (2010) *Clinical Nurse Specialists and Nurse Practitioners in Canada*. Canadian Health Services Research Foundation. Available at: http://www.cfhi-fcass.ca/Libraries/Commissioned_Research_Reports/Dicenso_EN_Final.sflb.ashx (accessed 18 October 2014).
- Elo, S. & Kyngäs, H. (2008) The qualitative content analysis process. *Journal of Advanced Nursing*, **62** (1), 107–115.
- Fitzpatrick, J. (2007) Global advanced practice nursing: how practice developments and professional organizational initiatives might influence educational developments. *Nursing Education Perspectives*, **28** (3), 117.
- Forgotson, E.H. & Cook, J.L. (1967) Innovations and experiments in uses of health manpower—the effect of licensure laws. *Law and Contemporary Problems*, **32** (4), 731–750.
- Gardner, G., Carryer, J., Gardner, A. & Dunn, S. (2006) Nurse practitioner competency standards: Findings from collaborative Australian and New Zealand research. *International Journal of Nursing Studies*, **43** (5), 601–610. doi:10.1016/j.ijnurstu.2005.09.002
- Gaumer, G. (1984) Regulating health care professionals: a review of the empirical literature. *The Milbank Memorial Fund Quarterly. Health and Society*, **62** (3), 380–416.
- ICN Nurse Practitioner/Advanced Practice Nursing Network (ICN/INPANN). (2013). *Frequently Asked Questions*. Available at: <http://icn-advancedpracticenurseetwork.org/> (accessed 18 October 2014).
- International Council of Nurses (ICN) (2008) *The Scope of Practice, Standards and Competencies of the Advanced Practice Nurse, ICN Regulation Series*. ICN, Geneva.

- International Council of Nurses (ICN) (2009) *Regulation 2020: Exploration of the Present; Vision for the Future, ICN Regulation Series*. ICN, Geneva.
- International Council of Nurses (2013) Regulation Network. Accessed from <http://www.icn.ch/networks/regulation-network/> (Retrieved April 27, 2015).
- Ketefian, S., et al. (2001) The development of advanced roles: implications in the international nursing community. *International Nursing Review*, **48** (3), 152–163.
- Kleinpell, R.M., Hudspeth, R., Scordo, K.A. & Magdic, K. (2012) Defining NP scope of practice and associated regulations: focus on acute care. *Journal of the American Academy of Nurse Practitioners*, **24** (1), 11–18.
- Lamarche, K. & Tullai-McGuinness, S. (2009) Canadian nurse practitioner job satisfaction. *Nursing Leadership*, **22** (2), 41–57.
- Morrison, A. & Benton, D.C. (2010) Analyzing nursing regulation worldwide. *Journal of Nursing Regulation*, **1** (1), 44–48.
- Pulcini, J., Jelic, M., Gul, R. & Loke, A.L. (2010) An international survey on Advanced Practice Nursing education, practice and regulation. *Journal of Nursing Scholarship*, **42** (1), 31–39.
- Raach, J.H. (1944) English medical licensing in the early seventeenth century. *Yale Journal of Biology and Medicine*, **16** (4), 267–288.
- Sheer, B. & Wong, F.K.Y. (2008) The development of advanced nursing practice globally. *Journal of Nursing Scholarship*, **40** (3), 204–211.
- van Soeren, M., Hurlock-Chorostecki, C., Goodwin, S. & Baker, E. (2009) A primary healthcare nurse practitioner in Ontario: a workforce study. *Nursing Leadership*, **22** (2), 59–72.