Introduction

Despite great progress being made toward achieving the Millennium Development Goals (MDG), disparities in health persist worldwide. One contributory factor in global health disparities is inequitable access to care. In considering the role of the MDGs as they are directly related to access to care, MDGs Goal 4 (Reduce childhood mortality); Goal 5 (Improve Maternal Health); and Goal 6 (Combat HIV/AIDS, Malaria, and other Diseases) should be of particular concern.

Evidence supports that advanced practice registered nurses (APRNs) make a vital contribution to expanding access to primary care for vulnerable populations. The World Health Organization (WHO), the International Council of Nurses, and the Institute of Medicine, among other organizations, have identified advanced practice registered nurses (APRN) as a potential solution to address the primary care workforce shortage. These groups recommend APRNs as a vital source for expanding the health care workforce that is needed to improve access to care to vulnerable populations, particularly in low-resource countries. To introduce an expanded nursing role in existing health-care systems, an assessment of multiple system factors must be undertaken. Once these contributory factors have been identified, a framework and process for introduction of new HC delivery models into existing HC systems in health workforce shortage areas must be developed. The first step in this process must be to First: Identify factors influencing implementation of such health services expansion.

Aim

The aim of this exploratory study was to describe contributory factors for consideration in implementation of expanded nursing roles for the purpose of improving access to care to vulnerable populations in health workforce shortage areas globally. After a review of the literature, a summary was made of factors impacting the introduction of nurse practitioners (NP), or nurses with expanded roles, into existing health-care systems globally. Exemplar international cases were reviewed, and multiple factors impacting roles & utilization of APRNs were identified. The factors identified were then compared with a theoretical model proposed by DeGeest et al. (2008). After reviewing an individual case in Northeastern Brazil, this investigator queried if one contributing factor had failed to be recognized.

Advanced Practice Registered Nurses Globally

It is beyond the scope of this paper to review the complete historical evolution of the role; however some select noteworthy facts will be highlighted. Through a review of the literature, it is apparent that the international trends in the development of APRN utilization, roles, titles, education, practice, and regulation varies greatly (Ketefian et. al., 2001; Pulcini et. al., 2009; Sheer, & Yuet Wong, 2008). In the United States, the role began in the 1940’s, first with the role of nurse anesthetist, followed
by that of nurse-midwife, and then that of nurse practitioner to address a primary care provider shortage. Currently there are four APRN roles in the United States: nurse anesthetist, nurse practitioner, nurse-midwife, and clinical nurse specialist. In the rest of the Americas, the role was introduced later and in varying degrees, being well established in Canada, and little utilized in South America.

Some factors contributing to the scarcity of APRNs in South America are thought to be related to: 1) a similar number of physicians to nurses, 2) the predominant primary care provider being the physician, 3) nursing education often not at the university level, and 4) additional hurdles related to education, legislation, and system wide acceptance. In Asia, there is great intra-continental variation of the roles and utilization of APRNs. The role is oldest in Korea, where it was introduced in the 1950s beginning with the nurse-midwife role, and expanding to now have 10 types of APRNs.

In Japan, there is only the clinical nurse specialist role. In mainland China there are similar factors as are seen in South America, which contribute to the absence of an advanced nursing role; whereas in Taiwan, the role was introduced in 1993, with post-graduate education becoming the entry level in 1995. The evidence supporting the value of the APRN role there is consistent with that being identified elsewhere. In Africa, the WHO estimates that 80% of the continents of health care needs are met by nurses. With the significant population health issues including poverty, increased chronic disease and a health workforce shortage, many countries in Africa are recognizing the need for APRNs.

In 2006, the International Council of Nurses-Nurse Practitioner/Advanced Practice Nurse Network held its annual conference in South Africa for the first time. The contributions of nursing were recognized by the Executive Council. Significant challenges to introducing the role on a greater scale include lack of role models, definition of scope of practice, and reimbursement mechanisms. In Australia and New Zealand there are very established roles and regulations, first introduced in the 1990s and early 2000s respectively. In Europe, there continue to be varying degrees of utilization of the APRN role, the oldest model being in the United Kingdom, to the most recent being in the Netherlands, Belgium and Switzerland. A resistance to advancing the nursing role remains in Germany (Ketefian et. al., 2001; Pulcini et. al., 2009; Sheer, & Yuet Wong, 2008).

To facilitate the process of introducing an expanded nursing role to an existing health care system, the factors influencing role development and program implementation must be identified. Ultimately a framework and process for this health system reform must be developed.

**Facilitating Factors to Role Introduction**

Through a literature review, it was discovered that there are two elements of APRN role introduction: role development and role implementation. The factors impacting these two components are summarized in Table I.

<table>
<thead>
<tr>
<th>Role Development</th>
<th>Role Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardized national approach</td>
<td>Recruitment &amp; Retention</td>
</tr>
</tbody>
</table>
High-quality education
Legislation & Regulation
Scope of Practice
Prescriptive Authority
Planning
Research
Funding
Intra- & Inter-professional relations
Public Awareness
National Leadership Support
Role Evaluation
Role Clarity
Health Care Setting Support
Implementation of role components
Continuing Education

Table 1. Facilitating Factors (DiCenso, et. al., 2010; Ellis, & Morrison, 2010; Pulcini, et. al., 2010; Turner, Keyzer, & Rudge, 2007).

A Theoretical Framework: Introduction of Advanced Nursing Role

Introducing Advanced Practice Nurses / Nurse Practitioners in health care systems: a framework for reflection and analysis. Five Drivers: 1) Health care needs of the population; 2) Education; 3) Workforce; 4) Practice patterns; and 5) Legal and health policy framework. (DeGeest, S. et. al., 2008).

<table>
<thead>
<tr>
<th>Key contributory factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population health needs</td>
</tr>
<tr>
<td>Readiness of the profession</td>
</tr>
<tr>
<td>Support for innovation</td>
</tr>
<tr>
<td>Roles</td>
</tr>
<tr>
<td>Education</td>
</tr>
<tr>
<td>Environment</td>
</tr>
<tr>
<td>Policies related to practice (regulation and scope of practice)</td>
</tr>
<tr>
<td>Workforce supply and demand</td>
</tr>
<tr>
<td>nurse : population ratios</td>
</tr>
<tr>
<td>nurse : physician ratios</td>
</tr>
<tr>
<td>Intra/Inter-professional collaboration</td>
</tr>
<tr>
<td>Participation in the discovery of evidence and its dissemination.</td>
</tr>
</tbody>
</table>

Table 2. Summary of Findings

This author questioned whether there was one factor absent. How does culture fit in? To investigate this question, the author sought to explore these findings in a case study to gain an understanding of the experience the participants had in the process, and what factors they felt were contributory.
A case study in Brazil

The aim of this phase of the study was to consider the applicability of the DeGeest, et al. (2008) framework for the introduction of advanced practice nurses/nurse practitioners to health care systems in less developed countries. The case was the introduction of an ‘expanded nursing role in Northeastern Brazil (Girot, Cruz Enders, & Wright, 2005). The design was a theoretical expansion with the purpose of exploring the relevance of an additional fundamental driver or dimension: cultural context (Purnell & Paulanka, 2008) in order to meet the Standards of Practice for Culturally Competent Nursing Care: 2011 Update (Douglas et al., 2012), specifically those of cultural competence in health care systems and organizations (Standard # 5) and policy development (Standard #11). Internal Review Board approval was obtained. The study was funded by an internal grant awarded by Pace University Lienhard School of Nursing.

Design/Methods

A Qualitative Descriptive design was utilized with a purposeful sample. The participants were: 1) Dr. Sabina DeGeest (University of Basel, Basel, Switzerland), the main author of the framework described above (DeGeest, et al., 2008). This dialogue informed the investigator’s understanding of the setting from which DeGeest collaboratively developed her framework for introducing the role of APRN/NP to a number of health care systems in Europe. DeGeest reviewed the evolution of her interest in expanding the role of APRN/NP, her introduction of the role to various existing health care systems in Europe, and how she developed the framework with her colleagues. Through focused questions, the investigator also explored DeGeest’s thoughts on the feasibility of utilizing her group’s framework for health systems in other countries; 2) Dr. Larry Purnell in Newark, Delaware. The focused questions for Dr. Purnell were related to how he envisioned his Model of Cultural Competence (Purnell & Paulanka, 2008) applied from a system’s view in comparison to the individual practitioner’s perspective; 3) Dr. Bertha Cruz Enders, of your own For the purposes of informing the author’s ethnographic understanding of the cultural setting, she toured the Universidad de Rio Norte, the main public and private hospitals, and the city of Natal itself, including the favela (ghetto). Field notes of the observations documented the limited access to care that exists for this Northeastern Brazilian population, as well as the influence of the safety and security issues for the population within the favela borders. To gain a deeper understanding of the role of nurses and the profession of nursing, the investigator attended the Conference of the Brazilian Nurses Association in celebration of National Brazilian Nurses Week, for which Dr. Cruz Enders interpreted and provided contextual explanation. From this conference, the author gained a better understanding of the professional structure and scope of practice of the nursing profession in Brazil. The primary nursing role is one of assistant to the physician, and although there is graduate nursing education, there is no legally accepted, standardized, or regulated advanced clinical role; and 4) Dr. Elizabeth Rosser [AKA Girot] (University of Bournemouth, Bournemouth, UK) was interviewed to glean an understanding of the experience of the colleague introducing the new role to the existing health care system outside her own country.
Semi-structured, in-depth interviews were conducted, videotaped and transcribed. *Atlas.ti*, a qualitative data analysis software was utilized to facilitate identification of emergent themes form the interview transcripts.

**Findings**

It is not within the scope of this paper to share excerpts, however several themes emerged (Figure1): 1) **Culturally specific population health care needs/target outcomes** emerged from interview excerpts; 2) The driver of **practice patterns** emerged to include **professional roles and practice philosophy**. Professional practice is defined by the individual nursing roles that are accepted and regulated within a specific country and region. This role definition is tied into inter-professional relationships. In order to alter one’s philosophy of caring in the professional role, the inter-professional collaborations need to support that philosophy of practice; 3) It became evident that cultural differences exist not just between countries, but within them. Cultural disparities span regions, socio-demographics, policies, etc. Within a region, policy makers, administrators, physicians, nurses, and all stakeholders who influence health care delivery models and system through reform may hold different values. This theme of professional philosophy, practice and roles emerged as integrated with a fundamental dimension of cultural specificity, which envelops the driver of professional practice. The transcript excerpts through which the theme of culturally specific education and competencies emerged were related to the country-specific educational resources and competencies. More fundamentally, the driver of education relates back to the concept of **culturally specific population health needs/target outcomes**. Other excerpts reflect the theme that an appreciation of standard competencies in education must address the culturally specific educational structure and resources in an individual country or region. The education driver is also related to the policies specific to the country or region. There were also excerpts that reflected that the proposal to have educators from another country training providers in a different culture presents challenges; 4) workforce issues, like education, could not be fully separated from policy considerations, and were again, culturally specific; 5)
The role of government and policy in introducing new models of care is specific to each country. The policy/legal driver also includes politics. These influences, too, are regionally or country specific; and 6) A broad theme of culture as a supreme, overarching concept emerged and there are regional variations in culture that need to be taken into consideration.

**Proposed Theoretical Model**

The framework which describes the drivers involved in the introduction of a new health care delivery model to an existing health care system includes the five original drivers (DeGeest et al., 2008) enveloped by the dimension of culture, a supreme overarching driver influencing each of the others. The most central element of population health/target outcomes remains the primary driver and identifies the specific need for a new health care delivery model within the individual culture. The success and sustainability of a new health care delivery model will then be reliant on the drivers of education, resources and infrastructure, specific to the country and its culture; culturally defined professional practice, roles & philosophy; workforce considerations and the identified need to expand the model in that specific region or country; and finally, the country’s own policy and legal environment established to regulate the new model in the existing health care system.

**Figure 2. Theoretical Model: A Cultural Framework for the introduction of new health care delivery**

**Conclusion**

APRNs can make a vital contribution to improving access to care for vulnerable populations globally. To improve access to primary health care and health outcomes in low-resource countries, a sensitive and systematic process for introduction of new health-care delivery models, such as the APRN role, into existing health-care systems must be identified. Within a cultural context, the fundamental elements to be taken into consideration are: population health; policy and regulation; education; practice; and workforce. Continued investigation of the factors which influence successful health services reform would contribute to the further development of a theoretical framework to guide the process of health-care delivery system transformation.
References


Andrea Sonenberg, DNSc, WHNP, CNM. Assistant Professor. College of Health Professions, Lienhard School of Nursing. Pace University, New York, NY.