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Editorial: Documenting and Communicating Advanced Practice Nurses' Effectiveness

Advanced practice nurses, a title similar to clinical nurse specialists [CNS], nurse practitioners [NPs], certified nurse midwives [CNMW], have made solid gains in numbers and recognition worldwide over the last decades.¹ Challenges remain in understanding, the acceptance, and ability to practice the full scope of the advanced practice nurse (APN) role. These challenges can be helped by providing information to those resisting APNs' full scope of practice, however, acceptance and appropriate pay for their roles will be harder to achieve. Research demonstrating differences APNs make in improving patient outcomes and access to health care, reducing health care costs to health systems and societies, and communicating these findings to wide audiences, provides the strongest argument.

APN gains in numbers and recognition. Need for APNs worldwide is for improved health care access, provider shortages in underserved regions, physician shortages and cost containment.² The International Council of Nurses [ICN], (n.d.) estimates that at least 70 countries worldwide have or are exploring use of APNs in their health care systems.¹ In addition, approximately 70% of hospitals worldwide have some advanced model of nursing practice.³ Although APN scope of practice varies across countries and broad consensus has not been reached on the roles and regulations of APNs, there is increased awareness and recognition of the key role APNs play in improving health outcomes and increasing access to care.⁴ Canada, the United States, and the United Kingdom lead the way in years of implementation and use of clinical roles and services provided by APNs.⁵ Other countries are exploring ways to use APNs, shifting health care tasks and responsibilities from medicine to nursing.⁶ Documenting and communicating APN effectiveness in these shifted roles is essential.

Challenges to the full scope of the APN role. The ICN recommends APNs be educated at master degree level and much progress has been achieved worldwide toward this goal. In 2004 the American Association of Colleges of Nursing endorsed the doctor of nursing practice (DNP) as the single entry degree for APNs in the US.⁷ Lack of knowledge about APNs' education and training often results in concerns about the skills and expertise of APNs. Some physician groups acknowledge and value APNs' education, training, and expertise, yet dread the potential overlap in scope of practice and responsibilities. The result is efforts to impose limitations on the autonomy and independence of APNs.⁵ In addition, variations in regulation and licensure of APNs have an influential role in the public's acceptance of APN practice.

APNs independent and collaborative practice is often dictated by reimbursement policies. In the US, health plans often don't recognize APNs as primary care providers in regions where APN scope-of-practice is limited.⁸ Currently, in the US and other countries, APNs are allowed to bill directly for services provided; yet APNs' reimbursement is less than physician reimbursement for the same services. This limits the APNs practicing independently, in interprofessional group practices, hospitals, or other collaborative settings.^{5,8} This may be less of a problem in countries with universal health coverage but doesn't negate the critical importance of documenting and communicating APN effectiveness to increase APN numbers and increase health care access.

Research demonstrating differences APNs achieve. Studies conducted in countries including Thailand, Japan, Hong Kong, the United States and other regions of world have effectively linked APN care to improved

health status, decreased hospitalizations, as well other improved health and service outcomes.⁵ An international team of researchers reported that in documenting APN effectiveness there are 2 basic requirements: 1) very careful choice of outcomes important to the local region or country and its system of health care; and 2) an adequate dose of APN practice for patients, groups of patients or health systems.⁹

Careful choice of outcomes. In studies of APN effectiveness, most outcomes chosen have been patient outcomes and health care costs. In choosing patient outcomes, it is essential to choose outcomes related to health challenges important for citizens of the region and the country. Choosing to study measles in a country where measles is not prevalent has far less impact than studying APN effects on the problem in a country/region where measles is a major problem where results will be important to citizens, providers, and government.

To date investigators have examined APN effects in managing patient outcomes of major health problems and symptom management¹⁰ including diabetes,^{11,12} heart failure,¹³ cancer,¹⁴ mental health¹⁵ and physical health¹⁶ in patient groups across the life span from newborns and maternal health¹⁷ to the elderly. There have been studies on APNs care in settings including primary care,¹⁸⁻²¹ home care, hospital care,^{22,32} long term care,²⁴ and transitional care.^{13, 16} Results show that APN care has equal or better outcomes than physician care. Worldwide there are hundreds of study findings on APN effects reported over the past decades including those reported in the PRJNR.^{11,12} These studies provide a solid base upon which to build subsequent studies using these outcome measures, methods and instruments that have been developed and that can be modified for other regions.

Studies on effects of APN practice on health care costs have differed depending on a country's system of health care financing.⁹ In countries with universal health care coverage, examining health care service use such as numbers of patient routine visits kept, hospitalizations, acute care services, vaccinations, and other health service use can be more important than patient bills for health services. In countries where there is no universal coverage, issues for researchers about access to patient health care bills, patient personal health information and who actually pays the health care costs (patient, insurer, government) can be complex.

Adequate Dose of APN practice. In addition to the choice of outcomes to study, examining the APN dose effect, conceptualized as having 3 components, dose, nurse and host and host response, is essential.²⁵

The APN dose includes having an adequate number of APNs in the clinical site, region or country or having adequate APN care in number of contacts or amount of care time provided.⁹ Having 1 or 2 APNs in a very large hospital likely renders an insufficient APN dose to show an effect on patient outcomes. In addition, if the APN role is not well defined and implemented and APNs are pulled to do other work when the general nurse staffing is low, the APN dose is further diluted. Improved patient outcomes have been demonstrated where the APN has a defined case load of patients matched to the APN's clinical specialty skills.²⁶ This is comparable to and is rarely questioned if patients are being cared for by physician specialists such as cardiologists or urologists.

The number of APN contacts or amount of care time that the APN can provide also must be examined. Studies have demonstrated that the more APN contacts and care time provided, the better the patient outcomes. In a review of several randomized clinical trials, patients cared for by APNs had more acute care visits compared to control group patients but had fewer days in the hospital. The APNs had caught the health problems earlier and thus if the patients had to be hospitalized, they were hospitalized for shorter periods of time at less health care cost.²⁷ Other studies examining health care visits by APNS, physician assistants and physicians found that patients followed by physicians had fewer visits.²³ What is most important in these studies is to examine the total days of subsequent hospitalizations and subsequent health of the groups. In addition, there are a growing number of studies examining APN care using mobile technology.²⁸ Using cell phone technology can increase the number

of APN contacts at low cost, provide individualized patient information, provide APN daily availability and can reach patients in rural and remote areas. These studies are demonstrating improved patient outcomes.

APN Characteristics. APNs differ in education globally and individually in expertise and experience. Studies have demonstrated that APN clinical expertise matched with patient groups needing that specialty expertise show the most improvements in health.²⁶

Host Response includes that of the patient, health care organization, government and other health care team members.⁹ The hosts' understanding and acceptance of the APN role is essential to an APN's ability to provide care and to demonstrate APN effectiveness. *Patient.* There are numerous studies that have documented patient satisfaction with APN care.^{29, 30} *Health care organization.* While APNs are being hired in health care organizations, knowledge gaps remain regarding APN roles. In one study of hospital decision-makers in 2 multi-site acute care organizations, administrators and leaders reported difficulty distinguishing between the NP and CNS roles.³¹ They also required specific information on the "value added" benefits from the APN role. Communicating the difference APNs make in improving patient outcomes and reducing health care costs is essential for these decision makers and for governments. In addition, organizational culture should be conducive to APNs being able to promote evidence-based practice within the organization if patient outcomes are to be improved.³² *Government.* Governments have embraced advanced nurse practice differently, however, worldwide there is a trend to shift tasks from physicians to nurses.^{2, 6} In a study of countries with task-shifting to advanced nurse practice, governance models affected advanced practice.⁶ In countries with national or decentralized regulation of advanced practice, restrictive scope of practice laws were barriers to advanced practice and payment for services. Countries that left governance to individual settings and those countries with decentralized regulation found results of uneven levels of advanced nurse practice. *Other health care team members.* Where APNs have been practicing for some time and where they have become partners in health care practices, they are accepted and recruited. APN physician collaboration has been successful in improving patient outcomes.³³ Other studies have shown that where the role is new, it is essential to have clearly defined roles and responsibilities compared to other team members to improve APN acceptance.¹⁹ In a study on the developing APN role in 32 countries, the greatest support for the NP-APN role came from nursing organizations, individual nurses and the government while opposition came primarily from physician organizations and individual physicians.³⁴ Physician resistance has been reported in other studies as well.⁸

Strategies to communicate APN effectiveness. When the research is done and data documents APN effectiveness in improving patient outcomes and reducing health care costs, results must be widely communicated to citizen, health care provider and government audiences. For citizen audiences, writing short articles for local or regional newspapers about APNs, their practice and differences they make in outcomes and serving as speakers at community and organizational meetings is a beginning. In the US, APNs have developed TV commercials to introduce their roles and highlight barriers to implementing their full scope of practice. For health care provider audiences, communicating the "value added" benefits of APN practice in improving patient outcomes and reducing health care costs is essential. Outcome results provided at administrative meetings as 1 page handouts or as part of the meeting agenda can help. Having the "value added" benefits of APN practice highlighted in the organization's advertisements is very helpful. These strategies are also helpful for government audiences where one or two page handouts at meetings and testimonies at committee health care hearings can highlight differences APNs make in improving patient outcomes and reducing health care costs.

In conclusion, there are hundreds of studies documenting APN effectiveness, especially in developed countries. Future studies should concentrate on major health care issues important in the researcher's region or country. Communicating findings to citizens, health care providers, administrators and government decision makers is critical in implementing the APN full scope of practice and improving outcomes and health care access for the countries' citizens.

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