EDUCATION NEWS

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Promoting Patient Safety Through an International Approval Process for Anesthesia Schools

The International Federation of Nurse Anesthetists (IFNA) is a federation of 45 national anesthesia organizations. Among its activities are setting global standards for anesthesia practice, patient monitoring, and anesthesia education, as well as creating a code of ethics. This article focuses on the use of its education standards as the foundation for the International Federation of Nurse Anesthetists' Anesthesia Program Approval Process. The approval process strongly encourages educational institutions throughout the world to improve the education of nurse anesthetists and other nonphysician anesthetists, with the ultimate goal being patient safety. The approval process also promotes the use of nurses to administer anesthesia whenever adequate resources are available.

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A plan to develop nurse anesthesia as a global profession was announced at the International Federation of Nurse Anesthetists (IFNA) 1997 World Congress in Vienna, Austria, by Marjorie Peace Lenn, EdD, executive director of the Center for Quality Assurance in International Education.[1] One of Dr Lenn's recommendations was the creation of a quality assurance program for nurse anesthesia educational programs.[1] She encouraged the IFNA to promote the quality of nurse anesthesia programs throughout the world. This correlated with the IFNA's belief that "nurses should be appropriately educated if they are utilized for preoperative or postoperative preparation of the patient; if they perform venous and arterial cannulations, induction and emergence of anesthesia, intubation, and extubation; and if they are left alone for any reason".[2] Dr Lenn's speech set the stage for the IFNA's pursuit of a process to promote the quality of nurse anesthesia programs and promote patient safety throughout the world.

After several years of planning and development, the IFNA approved its Anesthesia Program Approval Process (APAP) in July 2010.[3] The biggest challenge (and achievement) during APAP development was the many differences that exist in the education of nurse anesthetists throughout the world so that no single international approval system could be applied to all schools. It took creative thinking to design a system where all nonphysician anesthesia schools could meet APAP eligibility requirements and graduates would possess the scientific knowledge necessary to provide skilled care. The answer was to offer 3 levels of approval embracing all nonphysician anesthesia programs.

This inclusive process was approved by the IFNA officers and Country National Representatives with the goal of fostering patient safety by encouraging education programs to meet the *IFNA Educational Standards for Preparing Nurse Anesthetists*.[4]

The 3 levels of program approval offered are level 1 registration, level 2 recognition, and level 3 accreditation. Several categories of approval recognize (1) the diversity of nurse anesthesia programs throughout the world, (2) the capacity of a program given its national or regional context, (3) the resources available to individual programs, and (4) a commitment of diverse programs to work toward meeting a common standard of educational quality.[5]

Need for Education of Anesthetists

According to the World Health Organization (WHO), surgery still

involves high rates of morbidity and mortality globally, with at least 7 million people each year being disabled by surgical complications, from which more than 1 million die.[6] Furthermore, findings from the WHO's work indicate that every day in 2015, about 830 women died due to complications of pregnancy and childbirth.[7] Almost all of these deaths occurred in low-resource settings with inadequate or nonexistent surgery and anesthesia, and most could have been prevented.[7] A large part of the problem is simply that not enough healthcare workers are being educated and trained in many areas of the world. Efforts are under way to train individuals to perform surgery or give anesthesia in many countries to help alleviate the shortage.[8] The result of this shortage is that millions of people die or are disabled unnecessarily.

Jackie Rowles, DNP, CRNA, IFNA president, reports that the IFNA and its 45 Country National Representatives are well aware of the tremendous shortage of trained anesthesia providers in many countries. She reports as follows (Jackie Rowles, DNP, CRNA, email communication, December 3, 2017):

> It is a given that nurses are providing a large share of the available anesthesia care globally and especially in low income countries. The IFNA is working to help countries establish recognition for the nurse anesthetists and implement globally approved standards of education and practice in order to increase the quality of anesthesia care. Utilization of nurse anesthetists allows increased access to surgical, obstetric, and trauma care services. The IFNA has also developed and adopted models of curriculum for educating nurse anesthetists which have been utilized to assist countries in the development of standardized anesthesia education.[9,10]

Approval Process

Nurse anesthetists provide essential healthcare in more than 100 countries,[11,12] and their use can help decrease a shortage of health workers; however, nonphysician schools of anesthesia may admit nurses, nonnurses, or a mixture of both. In addition, anesthesia education in the world ranges from no formal training to formal schooling. There are differences in faculty qualifications, wide variations in student qualifications, and varying levels of resources.[3] The IFNA believes that promoting common international education standards for all nonphysician anesthesia programs can improve healthcare; therefore, the APAP is designed to work with anesthesia programs as they currently exist if they pledge to meet the *IFNA Educational Standards for Preparing Nurse Anesthetists*[4] to the best of their abilities.

Programs seeking IFNA accreditation must limit admissions to nurses in compliance with the IFNA Educational Standards, whereas programs seeking IFNA registration or IFNA recognition, may admit students who are nurses or who have other scientific backgrounds that prepare students to succeed in the anesthesia education program. Once approved, programs are contacted at 5-year intervals for a progress report on their success toward fully meeting the standards.[5]

Although the IFNA strongly supports a nursing background for admission, it also believes in an approval process that recognizes the differences that currently exist in the educational preparation of healthcare professionals worldwide that result in nurses and nonnurses being students in nonphysician anesthesia programs. The IFNA believes that an inclusive approval process provides the greatest opportunity to improve anesthesia care to patients now and in the future.[5]

Respect for Cultural Differences

The IFNA Education Committee and the APAP manager are responsible for administering the APAP in a manner that encourages compliance with the IFNA education standards while taking cultural, national, or regional differences into consideration. In view of this goal, the IFNA Education Committee members anticipated that on-site visitors at a program/school applying for APAP accreditation might lack an understanding of the education system and fluency in the local language. To prevent this from happening, a policy was written as follows[5]:

> There will be a minimum of two site visitors assigned to visit a program. One visitor will be a member of IFNA's Education Committee and one visitor will be from the country where the program is located. Visitors from the program's country will be selected from: (1) names of anesthesia professionals provided by the CNRs [Country National Representatives] or (2) from a list of names of anesthesia professionals requested from the program. The Education Committee will review the list(s) and select an anesthesia professional who is fluent in the native language and knowledgeable about education and regulation in the country where the program is located. Arrangements for an interpreter must be made by the program if necessary since the visit will be conducted in English.

Involvement of a local expert was also recommended by Dr Lenn, a consultant and recognized higher education authority, who critiqued the APAP policies before they were adopted. Subsequently, a local expert has participated in all aspects of every on-site visit since the first visit was conducted in November 2011 at Ecole des Infirmiers Anesthesistes, Paris, France. The inclusion of local experts in the international approval process has helped visiting teams to understand appropriate regional and cultural differences in education. They are an important element in conducting a successful and accurate evaluation of anesthesia educational programs.

Feedback on Anesthesia Program Approval Process

Karin B. Björkelund, PhD, RN, AN IC, IFNA Education Committee chair, invited faculty from APAP-approved programs to attend luncheons during the 2016 and 2018 World Congress of Nurse

Anesthetists in Glasgow, Scotland, and Budapest, Hungary, respectively. Attendees were asked to reflect on their experiences going through the APAP approval process. The biggest challenge was reported by faculty from non-English-speaking countries, who found it time consuming and expensive to translate documents required for accreditation into English. To minimize this problem, the IFNA revised a policy to allow some documents to be reviewed on-site with the aid of an interpreter, who can be the local expert member of a visiting team. In this event, an additional day is added to the on-site visitors' schedule for document review.

Anesthesia program faculty also identified benefits of being an APAP-approved program. Some benefits identified by approved programs were: (1) International recognition demonstrates congruency with the mission of the anesthesia program and/or the parent institution. (2) Feedback obtained from anesthesia colleagues with different ethnic and cultural backgrounds provides unique perspectives on the local education offered to students. (3) Contacts with program officials in other countries are a source of potential collaborative research efforts or student-faculty exchanges. (4) Graduates can claim their program was recognized by a nurse anesthesia organization, affiliated with the International Council of Nurses, using international standards. (5) The anesthesia program is promoted through a community news release announcing that it has been officially recognized for its efforts to comply with international education standards, which have been endorsed by numerous anesthesia organizations.

Faculty also noted that the approval process promoted the sharing of information and experiences among anesthesia educators throughout the world.

Importantly, promoting international education standards and sharing information with colleagues from other nations were said to help improve health by promoting the best education possible for nurse anesthetists on a global basis. As one attendee cited at the luncheon: "Working together internationally allows us [to] share knowledge and to address common issues."

Exemplar
The development of a formal nurse anesthesia education program in China, and its eventual receipt of IFNA recognition, demonstrates one way that the APAP is fulfilling its mission to advance the quality of anesthesia care by promoting educational standards.

A research study funded by the Science and Technology Foundation of Shanghai Jiao Tong University in Shanghai, China, resulted in the establishment of the first nurse education program in China based on international education standards.[13] The program was designed based on the IFNA education standards within a Chinese context.

According to the researchers, numerous nurses work in operating rooms and recovery rooms or participate in the performance of anesthesia in China, but the scope of their practice and education is not standardized, and most nurses are not trained sufficiently to provide anesthesia care.[13] However, greater numbers of surgical procedures have increased the workload of physician anesthesiologists, resulting in an increased need for anesthesia nurses in China. Although studies have shown that large numbers of nurses work in anesthesia departments in Chinese hospitals, they are not officially recognized by the government with the title of Anesthesia Nurse. The educational preparation of these anesthesia nurses vary greatly, ranging from apprenticeships to 3-year

nursing technical schools focusing on anesthesia.

The study paved the way for opening the Anaesthesia Nurse Education Program at the Shanghai Ninth People's Hospital in Shanghai, China, for training nurses to provide anesthesia care. In 2015, a total of 13 nurses graduated from the 21-month program. Simultaneously, the Shanghai program applied for IFNA recognition that included an evaluation of the program's curriculum against IFNA education standards. Following graduation and completion of the evaluation, the IFNA Education Committee recommended level 2 recognition, which was awarded to the program in 2015.[13]

Importance of Anesthesia Program Approval Process to Advancing Patient Safety
The APAP resulted from a coordinated effort by anesthesia leaders from various nations to implement a voluntary quality improvement process. It is a collegial approach to improving anesthesia education and promoting the administration of anesthesia by nurses while taking cultural, national, or regional differences into consideration. The preparation of nurses to provide anesthesia care is important to help decrease critical global shortages of healthcare workers that have left many people in the world without safe and affordable anesthesia and surgery.

The APAP is an example of how an international organization can try to reduce needless deaths and disabilities by promoting an educational quality improvement system to prepare skilled clinicians. Additionally, the APAP is an example of how international education standards developed by the IFNA are relevant to the continued evolution of advanced practice nursing.

Twenty-four anesthesia programs located in Africa, Asia, the Caribbean, Europe, and North America had successfully completed

APAP review by the end of 2017.[14] The success of new and established anesthesia programs in progressing toward meeting all international educational standards is evidence that it is possible to promote patient safety by providing anesthesia students with the necessary knowledge and skills to be competent providers of anesthesia care. Governments, educators, and practice authorities would be wise to incorporate nursing standards, developed by experts in the profession, in plans to solve the healthcare shortage with adequately educated healthcare workers.

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