



INTERNATIONAL FEDERATION OF NURSE ANESTHETISTS

Code of Ethics, Standards of Practice, Monitoring, and Education

Revised May 12, 2016

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IFNA Mission Statement

The International Federation of Nurse Anesthetists (IFNA) is an international organization representing nurse anesthetists serving the public and its members. The mission of the federation is dedicated to the precept that its members are committed to the advancement of educational standards and practices that will advance the art and science of nurse anesthesia and thereby support and enhance quality anesthesia worldwide. The IFNA strives to establish and maintain effective cooperation with institutions that have a professional interest in nurse anesthesia such as the International Council of Nurses (ICN), World Federation of Societies of Anaesthesiologists (WFSA), World Health Organization (WHO), European Society of Anesthesiology (ESA), and other organizations that share liaisons with IFNA.

IFNA Vision Statement

The IFNA is the authoritative voice for nurse anesthetists and nurse anesthesia, supporting and enhancing quality anesthesia care worldwide. As professionals, nurse anesthetists are recognized for their significant contribution to global healthcare as nurses, practitioners, teachers, administrators, researchers, and consultants. The IFNA participates in the formulation and implementation of healthcare policy and the recognition of nurse anesthetists as essential and cost-effective healthcare providers.

IFNA Objectives:

- Promote cooperation between nurse anesthetists internationally.
- Develop and promote educational standards in the field of nurse anesthesia.
- Recognize eligible anesthesia education programs through IFNA's Anesthesia Program Approval Process (APAP).
- Develop and promote standards of practice in the field of nurse anesthesia and anesthesia care.
- Provide opportunities for continuing education in anesthesia.
- Assist nurse anesthetists' associations to improve the standards of nurse anesthesia and the competence of nurse anesthetists.
- Promote the recognition of nurse anesthesia and anesthesia care.
- Encourage research related to the profession of nurse anesthesia, anesthesia caring and promotion of patient safety.
- Establish and maintain effective cooperation between nurse anesthetists, anesthesiologists and other members of the healthcare profession, the nursing profession, hospitals, and agencies representing the community of interest in nurse anesthesia.

Preamble

IFNA developed its first set of standards in 1991. The purpose of IFNA's Standards and Code of Ethics is to acknowledge the profession's acceptance of the responsibility and trust conferred upon it by society and to recognize the international obligation inherent in that trust. The actual standards on education for preparing nurse anesthetists, standards of practice, monitoring, and code of ethics are written to accommodate the major variance in the scope of nurse anesthesia practice worldwide. These standards have been defined according to IFNA's mission statement to establish the requirements for safe nurse anesthesia care and to advance nurse anesthesia worldwide. This document contains the standards, as approved by the Council of National Representatives (CNR) at the World Congress for Nurse Anesthetists, Glasgow, Scotland, 2016, and the competencies that lead to their fulfillment. As the scope of practice can vary among IFNA's member countries in order to serve local healthcare needs, IFNA's standards are provided to serve as global references for national, regional and local validation of nurse anesthesia's scope of practice.

Structure of the Standards

The current revision of the Code of Ethics, Standards of Practice, Monitoring, and Education was fully adapted to the professional roles of nurse anesthetists. It addresses ethical aspects for national associations, as well as the ethical requirements for the individual nurse anesthetist and refers to *The ICN Code of Ethics for Nurses*, revised 2012.¹ The Conceptual Framework for Nurse Anesthesia Practice is provided in a comprehensive role model, followed by standards of practice, monitoring, and education. In this revision IFNA strengthened the competency-based approach²

Purpose of a Competency-Based Approach in Nurse Anesthesia

Patient care requires coordination, which demands unprecedented teamwork. Health professionals, such as nurse anesthetists, are service providers who link people to technology, information, and knowledge. They are caregivers, communicators, educators, team members, managers, leaders, and policy makers. Labour markets for health professionals are not only national but also global. In professions with internationally recognized credentials, migration is a growing occurrence.³ In such circumstances, establishing equivalence of qualifications is necessary and competencies serve a valuable purpose in this process.⁴ Major shifts in medical education have seen the implementation of outcome-based curricula, mainly for societal and accountability reasons. The outcome-based or competency-based approach requires defining explicit outcome goals.⁵ Outcome goals are a specific strategy to define scope of practice and are essential for curriculum planning. They offer several advantages such as engaging a wide range of stakeholders, and support the trend toward greater accountability and quality assurance. They specify the health problems to be addressed, identify the requisite competencies required of graduates for health system performance, tailor the curriculum to achieve competencies, and assess achievements and shortfalls.³ To accommodate the requirements of nurse anesthesia in complex teams and complex healthcare systems, IFNA has adopted and adapted the CanMEDS role model⁶ as the conceptual framework on which to base its standards and code of ethics. By using the CanMEDS role model, interprofessional cooperation and learning are strengthened. Through standards and competencies, a common set of values addressing social and professional accountability can be established as objective criterion to classify nurse anesthetists' scope of practice.

IFNA Code of Ethics

Purpose of Code of Ethics

The purpose of a code of ethics is to acknowledge a profession's acceptance of the responsibility and trust conferred upon it by society and to recognize the international obligations inherent in that trust. The IFNA Code of Ethics originates from the premise that as healthcare professionals, nurse anesthetists must strive, both on an individual and collective basis, to pursue the highest possible ethical standards. Nurse anesthetists demonstrate expertise in ethical decision-making and help guide staff through ethical dilemmas. Nurse anesthetists share the responsibility with other healthcare specialists to respect human rights, including cultural rights, the right to life choice, and to be treated with dignity and respect. Care is unrestricted by considerations of age, colour, creed, culture, disability or illness, gender, sexual orientation, nationality, politics, race, or social status.

Application of the Code of Ethics

The code of ethics is a guide for action, based on values and needs of the society. It will have meaning only if it becomes a living document applied to the realities of human behaviour in a changing society. In order to achieve its purpose, the code must be understood, internalized, and applied by nurse anesthetists in all aspects of their work. It must be continuously available to students, teachers, managers, and practitioners throughout their study and work lives.

I. IFNA and National Associations

- A. IFNA advocates strongly for national associations to provide ethical guidelines, based on the ICN Code of Ethics for Nurses.¹
- B. IFNA encourages national associations to develop position statements and guidelines supporting human rights and ethical standards, as well as advocating for a safe and healthy work environment.
- C. National associations should lobby for nurses to be involved in ethical committees and provide guidelines and continuous professional development related to ethical issues in nurse anesthesia through journals and conferences.
- D. National associations advocate for fair social and economic working conditions in nurse anesthesia and develop position statements and guidelines in workplace issues.
- E. National associations are encouraged to develop position statements, standards, and guidelines for nurse anesthesia education, practice, and research

Code of Ethics

II. Individuals and Nurse Anesthetists

- A. Assume primary responsibility is to those patients who require anesthesia nursing care. In providing this care, nurse anesthetists make sure that human rights, values, customs, and beliefs of patients and their families are respected.
- B. Defend the patient's right to privacy by protecting information of confidential nature from those who do not need such information for patient care, as well as providing sufficient information to allow informed consent and the right to choose or refuse treatment.
- C. Maintain personal integrity, act to safeguard patients from unethical or illegal actions of any person, and strive to establish their freedom of conscience as it pertains to patients and all members of the healthcare team.
- D. Develop, improve, monitor, and evaluate environmental safety in the workplace and provide continuous professional development opportunities on ethical issues.
- E. Take part in creating mechanisms to monitor and respond to situations where patient safety, privacy, or dignity may be compromised.
- F. Participate in policy development to improve the level of confidentiality and security of written and verbal information acquired in professional capacity.
- G. Demonstrate professional integrity and ethical conduct in response to the industry and when prescribing drugs and other products.

III. Practice and Nurse Anesthetists

- A. Provide services with respect for human dignity and the uniqueness of the patient, unrestricted by considerations of social or economic status, personal attributes, or the nature of health problems.
- B. Establish standards of care and a work setting that is committed to a high quality of care.
- C. Demonstrate, on a continual basis, a high level of competence by establishing, maintaining, and evaluating a system of regular and systematic professional appraisal, continuous professional development, and systematic proof of current competence.
- D. Demonstrate responsibility and accountability for individual professional judgments and actions, advocate for the patient's rights by engaging in effective ethical decision-making, and contribute to the promotion of ethical practice in the anesthesia, pain, and emergency environments.
- E. Participate in learning and teaching that addresses ethical risks, benefits, and outcomes.
- F. Establish methods to address ethical concerns relevant to clients and assure methods are available to staff.
- G. Engage in the development of patient safety systems including utilization of safe and well-maintained equipment and supplies in advance of procedures because of the high risk nature of the work.

Code of Ethics

IV. Society and Nurse Anesthetists

- A. Perform a 2-fold obligation to society: as a professional, licensed to render selected healthcare services and as a responsible member of society and the communities in which they live.
- B. Participate in the profession's effort to protect the public from misinformation and misrepresentation and to maintain the integrity of the profession.
- C. Support, promote, and/or participate in the conduct, dissemination, and utilization of research related to nurse anesthesia and critical care.
- D. Collaborate with other members of the healthcare team and other citizens in promoting community and national efforts to meet the health needs of the public.

V. Co-workers and Nurse Anesthetists

- A. Sustain cooperative relationships between nurse anesthetists, physician anesthetists, and other members of the medical profession, the nursing profession, hospitals, and agencies representing a community of interest (eg, patient associations) in nurse anesthesia.
- B. Create awareness of specific and overlapping functions and the potential for interdisciplinary tensions and apply strategies for conflict management.
- C. Treat all associates and co-workers with fairness, consistency, reliability, trustworthiness, honesty, dependability, and sincerity by developing a workplace system that supports common professional and ethical values and behaviour.
- D. Develop mechanisms to safeguard the individual and families when their care is endangered by healthcare personnel.

VI. The Profession and Nurse Anesthetists

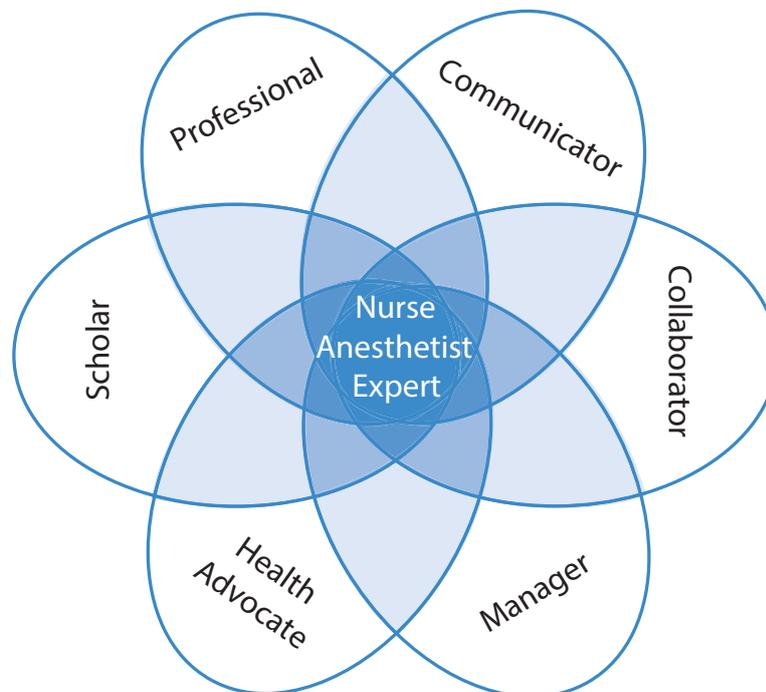
- A. Establish and implement standards of nurse anesthesia practice and education that promote quality care by practicing within the national legislation and regulation that define this advanced role in nursing.
- B. Participate in activities that contribute to the on-going development of the profession's body of knowledge through the conduct, dissemination, and utilization of research.
- C. Articulate and promote the advanced practice role in clinical, political, and professional contexts.
- D. Participate in the profession's effort to establish and maintain conditions of employment conducive to high quality nurse anesthesia care.
- E. Promote and engage in participation in national nurses associations in order to create a beneficial socioeconomic climate for nurses and influence policy making in healthcare.
- F. Scan the environment (demographic, national, and global) for new trends in advanced practice in anesthesia and critical care in order to analyse and evaluate them for future relevance.
- G. Advocate for and take part in obtaining public, legal, and employer recognition of their specialist qualification, title protection, and scope of practice

Conceptual Framework Nurse Anesthesia Practice

Conceptual Framework Nurse Anesthesia Practice

Conceptual Framework for Nurse Anesthesia Practice

By focusing on the outcomes of nurse anesthesia education, the approach is more transparent and, therefore, is accountable to learners, policy makers, and stakeholders.³ To accommodate the requirements of nurse anesthesia in complex teams and complex healthcare systems, IFNA has adopted and adapted the CanMEDS role model.⁶ The CanMEDS role model was initially developed by the Royal College of Physicians and Surgeons of Canada in 1996 to describe the core knowledge, skills, and abilities of specialist physicians. CanMEDS has been widely adopted worldwide within medicine in general and within other healthcare professions. The overlapping roles are illustrated in the CanMEDS figure below that consists of all 7 roles.¹



¹ Adapted from the CanMEDS Physician Competency Diagram with permission of the Royal College of Physicians and Surgeons of Canada. Copyright © 2009.

Conceptual Framework Nurse Anesthesia Practice

Conceptual Framework Nurse Anesthesia Practice

Role Definitions

Nurse Anesthesia Expert Role

The centre role of the *Nurse Anesthesia Expert* integrates all of the CanMEDS roles. The role requires applying medical and nursing knowledge and clinical, technical, and nontechnical skills. Nurse anesthetists are involved in preoperative, intraoperative, and postoperative anesthesia care. They prepare and check anesthesia machines, monitors, drugs, materials, and equipment for all anesthesia procedures, and they administer or participate in the administration of general and regional anesthesia to all ages and categories of patients and surgical procedures. They are familiar with a broad variety of anesthesia techniques, anesthetic agents, adjunctive and accessory drugs, as well as with pain management and safe sedation procedures. They understand the effective analysis and utilization of invasive and non-invasive monitoring data. In order to work in close collaboration with physician anesthetists, surgeons and other healthcare professionals in the perioperative domain, nurse anesthetists need good communication and cooperation skills. Nurse anesthetists recognize and take appropriate action when complications occur and immediately consult with appropriate others if patient safety requires it or if the incidence exceeds their scope of practice. They serve as resource persons in cardiopulmonary resuscitation, respiratory care, and other acute care needs.

Professional

As *Professionals*, nurse anesthetists are committed to the health and well-being of individuals and society through ethical practice, profession-led regulation, and high personal standards of behavior. They demonstrate methods of continuous professional development and role model nurse anesthesia practice. Nurse anesthetists encourage and support staff in professional achievements (e.g., nurse anesthesia mentoring, work in national and/or international professional associations). They maintain national certification in nurse anesthesia, if required. They accept accountability for their own errors and identify and handle critical incidents by entering them into the relevant database for analysis and evaluation

Communicator

As *Communicators*, nurse anesthetists effectively facilitate the nurse-patient relationship and the dynamic exchanges that occur before, during, and after the anesthesia care encounter. They maintain confidentiality and engage in effective interprofessional and intraprofessional communication suitable for the interdisciplinary domain of operating theatres.

Collaborator

As *Collaborators*, nurse anesthetists effectively work within the healthcare team to achieve optimal patient care. They demonstrate appropriate knowledge and application of nontechnical skills.⁷ They establish effective, collegial relationships with other health professionals and sustain cooperative relationships between nurse anesthetists, physician anesthetists, and other members of the medical profession, the nursing profession, hospitals, and agencies representing a community of interest (eg, patient associations). Nurse anesthetists respect roles and competencies of other team members to achieve the best possible patient outcome. They demonstrate knowledge of and adherence to the national, regional, and local legal regulations; accept the respective responsibility and accountability of nurse anesthesia; and seek consultation of appropriate others if a situation is beyond professional accountability.

Conceptual Framework Nurse Anesthesia Practice

Manager

As *Managers*, nurse anesthetists are integral participants in healthcare organizations. They use existing resources effectively and economically and consider fiscal and budgetary implications. They measure or participate in measuring client satisfaction, cost, clinical outcomes, nurse satisfaction, staff retention, and apply methods of quality assurance and improvement. Nurse Anesthetists organize and plan for the correct ecological handling of wastes such as gases, drugs, sharps, and infectious materials.

Health Advocate

As *Health Advocates*, nurse anesthetists responsibly use their expertise, situation awareness, and influence to advance the health and well-being of individual patients and communities. They consider and evaluate various influences on patients' health status (e.g., biological, psychological, social, environmental, and cultural influences). Nurse anesthetists select health information appropriate to developmental level, health, literacy level, learning needs, readiness to learn, preferred learning style, and cultural values and beliefs.

Scholar

As *Scholars*, nurse anesthetists demonstrate a lifelong commitment to reflective learning by engaging in formal self-evaluation processes, seeking feedback regarding their own practice. They collect and/or advocate for the collection of cumulative anesthetic data to facilitate the progressive enhancement of the safety, efficiency, effectiveness, and appropriateness of anesthesia care. Nurse anesthetists lead and/or participate in activities that facilitate the public dissemination of research and participate regularly in scholarly professional activities.

Standards of Practice and Graduate Competencies

Anesthesia Expert

Domain	Graduate Competencies (Expert)
Preanesthetic patient assessment	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Perform and/or participate in the performance of preanesthetic interviews by eliciting comprehensive histories and performing physical examinations based on patient’s presenting symptoms. B. Assess and evaluate multiple variables (drugs taken, pre-existing diseases, allergies, previous anesthetic experiences) that may affect the course of anesthesia. Identify potential risks to patient safety. C. Formulate an anesthetic care plan based on current knowledge, concepts, available evidence, and nursing principle. D. Provide accurate and understandable information to assist patients in giving informed consent. E. Integrate evidence to explain possible anesthetic and/or postanesthetic risks.

Anesthetic management	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Are continuously present during anesthetic management. B. Administer and/or participate in the administration of general and regional anesthesia to all patients for all surgical and medically related procedures. C. Prepare, administer, and adapt anesthetic medications, anesthetic procedures, and other interventions according to pre-existing disease and surgical procedure, demonstrating advanced knowledge of human sciences, pharmacology, surgical, and anesthesia procedures. D. Provide psychological support to help patients through the perioperative experience by using advanced communication skills to improve patient outcomes and design strategies to meet the patient’s needs. E. Use a broad variety of techniques, anesthesia agents, adjunctive and accessory drugs, and equipment when providing anesthesia care and pain management. Exhibit a comprehensive knowledge of pharmacology and pharmacokinetics related to anesthesia practice. Select, administer, and prescribe appropriate medication based on accurate knowledge of patient characteristics, anesthesia technique, and surgical procedure.
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Standards of Practice, Graduate Competencies

<p>Risk management</p>	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Take appropriate safety precautions including documentation to ensure the safe administration of anesthesia care. B. Prepare anesthetic plans, equipment, and drugs according to standard operating procedures and globally recommended checklists. C. Recognize and take appropriate actions during anesthesia management by rapidly assessing a patient's situation through synthesis and prioritization of historical and available data. Advanced knowledge and experience are demonstrated at all times. Nurse anesthetists demonstrate confidence in their own abilities to identify normal and abnormal states in anesthesia. D. Engage in the development of guidelines, standard operating procedures, and checklists for equipment and drug use.
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<p>Monitoring</p>	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Monitor, analyse, and utilize data obtained from the use of current invasive and non-invasive monitoring modalities using critical thinking and clinical judgment. Identify priorities quickly using context-specific knowledge and accurately identify parameters for the safety of patients to ensure decisions are justified in the specific context. Respond constructively to unexpected or rapidly changing situations and develop flexible and creative approaches to manage challenging clinical situations.
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<p>Advanced Life Support</p>	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Take corrective action to maintain or stabilize the patient's condition and provide advanced life support care. B. Assess and provide adequate advanced life support. Use advanced communication skills to inform the interdisciplinary team, organize and collaborate with appropriate experts, and use adequate medications and equipment. C. Provide regular education in basic life support and advanced resuscitation procedures to health professionals, as needed. D. Adhere to the latest international guidelines and accept responsibility for their own regular certified training in advanced life support.
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Standards of Practice, Graduate Competencies

Equipment	<p>Nurse anesthetists</p> <ol style="list-style-type: none"> A. Select, prepare, use, and clean, the appropriate equipment in routine and critical incident situations.
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Termination of anesthesia	<p>Nurse anesthetists</p> <ol style="list-style-type: none"> A. Assess, analyse, and evaluate adequacy of the patient's condition before transferring care. Evaluate patient responses for readiness to move to next level of care by identifying patient situation, and take appropriate action in the immediate postoperative period. B. Report all essential data regarding the perioperative period comprehensively and completely to the personnel in charge of the next level of care.
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Postoperative care and pain management	<p>Nurse anesthetists</p> <ol style="list-style-type: none"> A. Serve as a resource person in pain management and adequate postoperative care. B. Demonstrate advanced knowledge in pharmacology and pharmacokinetics of analgesic drugs in assessing and providing pain management. C. Assess and manage common postoperative complications such as respiratory, hemodynamic, neurological dysfunctions, and postoperative nausea and vomiting. D. Develop or participate in developing and revising standard operating procedures for all personnel covering postoperative care.
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Infection control	<p>Nurse anesthetists</p> <ol style="list-style-type: none"> A. Apply practices such as proper hand hygiene and cleansing or sterilization of equipment. B. Maintain knowledge of and adhere to national and/or institutional standards of infection control to protect the patient and healthcare workers from infectious diseases. C. Adapt or participate in adaptation and revision of infection control standards for all anesthesia procedures, and adhere to national standards for storing, handling, prescribing, and administering drugs.
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Documentation	<p>Nurse anesthetists</p> <ol style="list-style-type: none"> A. Provide prompt, complete, and accurate recording of pertinent information and action of care on the patient's record. B. Facilitate, through accurate recording, comprehensive patient care. Provide information for retrospective review and research data, and establish a medical-legal record.
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Standards of Practice, Graduate Competencies

Professional

Domain	Graduate Competencies (Professional)
Professionalism	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Provide safe and patient-centred care based on available evidence. The nurse anesthetist recognizes the responsibility of professional practice and maintains a high level of quality in knowledge, judgment, technological skills, and professional values prerequisite to deliver patient-centred care. B. Accept responsibilities and correctly delegate responsibilities to other team members or healthcare professionals. C. Demonstrate self-appraisal activity. D. Identify opportunities for generating and using research and/or continuous professional development activities.
Advancement of anesthesia care	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Demonstrate leadership by disseminating outcomes of nurse anesthesia practice through presentations and publications and participation in local and national nurse anesthesia organizations. Promote and facilitate the awareness of public and professional policy issues that affect nurse anesthesia practice. Serve as a role model for nurse anesthesia practice and encourage and support staff in professional achievements. B. Use quality, satisfaction, and cost data to modify patient care, nurse anesthesia practice, and systems. Accept accountability for own errors. Identify and handle critical incidents by entering them into critical incident reporting systems.
Accountability	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Maintain credentials in nurse anesthesia, as mandated by national legislation or regulation. B. Respect the confidentiality of information about patients learned in clinical relationships, demonstrate overall respect, and maintain the basic rights of patients, showing concern for personal dignity and human relationships. C. Are aware of individual, ethnic, cultural, and religious differences, and provide appropriate care to deliver the best possible patient outcomes.

Standards of Practice, Graduate Competencies

Communicator

Domain	Graduate Competencies (Communicator)
Communication and situation awareness	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Communicate in a calm, confident, and effective approach that brings comfort and emotional support to patients and their family, and create a climate that supports mutual engagement and establishes partnerships with patients. B. Engage in effective interpersonal and intraprofessional communication using advanced communication skills suitable for the interdisciplinary domain of the workplace. C. Create awareness of specific and overlapping functions and the potential for interdisciplinary tensions and demonstrate strategies of conflict management, if necessary. D. Display crisis intervention skills when required and assure patient understanding, respect, empathy, and trust by maintaining confidentiality and discretion.

Collaborator

Domain	Graduate Competencies (Collaborator)
Collaboration and teamwork	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Collaborate with others to identify innovative solutions to clinical and system problems. Advance patient care standards by partnering with interdisciplinary healthcare team members in research and educational activities. B. Implement new technologies that enhance patient care and promote patient safety goals. C. Establish effective, collegial relationships with other health professionals that reflect confidence in the contribution that nurse anesthetists make to the system. D. Encourage cooperative relationships between nurse anesthetists, physician anesthetists, and other members of the medical profession, the nursing profession, hospitals, and agencies representing a community of interest in nurse anesthesia. E. Respect roles and competencies of other team members and demonstrate joint decision-making skills to achieve the best possible patient outcome. F. Provide feedback and constructively discuss team strengths and weaknesses, listen to others, and ensure consistent information flow to patients and colleagues. G. Demonstrate effective solutions to problems concerning team issues.

Standards of Practice, Graduate Competencies

Manager

Domain	Graduate Competencies (Manager)
Task management	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Anticipate and make decisions in advance for challenges by allocating appropriate time frames, organizing appropriate staffing, and preparing equipment and materials B. Use existing resources effectively and efficiently by designing or participating in designing evidence-based strategies to meet the multifaceted needs of patients. C. Consider fiscal and budgetary implications in decision-making regarding practice and system modifications. D. Organize and plan for the correct ecological handling of wastes such as gases, drugs, sharps, and infectious materials. E. Evaluate and optimize the use and impact of products, services, and technologies on high quality patient care.

Quality management	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Measure or participate in measuring patient satisfaction, cost, clinical outcomes, nurse satisfaction, and retention by applying methods of quality assurance and improvement. B. Foster an interdisciplinary approach to quality improvement, evidence-based practice, research, and transition of research into practice.
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Standards of Practice, Graduate Competencies

Health Advocate

Domain	Graduate Competencies (Health Advocate)
Patient information	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Consider and evaluate various influences on patients' health status. Detect health related and anesthetic risk factors through anesthetic assessment, and promote individual health by addressing behavioural change.

Patient education	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Participate in the education of patients, other members of the health team and members of the community before, during, and after the operative period. B. Design or select health information and patient education appropriate to developmental level, health, literacy level, learning needs, readiness to learn, preferred learning style, and cultural values and beliefs. C. Facilitate patient and family understanding of the risks, benefits, and outcomes of proposed anesthesia regimen to promote informed decision-making.
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Patient advocacy	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Support and preserve the rights of patients for privacy by protecting information of a confidential nature from those who do not need such information for patient care. Support the rights of patients for independence of expression, decision, and action.
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Scholar

Domain	Graduate Competencies (Scholar)
Continuous professional development	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Commit to continuous professional development. B. Accept responsibility and accountability for practice and engage in lifelong professional educational activities. C. Engage in a formal self-evaluation process, seeking feedback regarding their own practice from patients, peers, professional colleagues, and others. Develop and implement strategies for lifelong learning. D. Are aware of and address individual needs for clinical inquiry through continuous professional development activities. E. Demonstrate knowledge of and adherence to the national legal regulations, accepting the respective responsibility and accountability of nurse anesthesia and others.

Standards of Practice, Graduate Competencies

<p>Research</p>	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Incorporate evidence-based techniques and knowledge, as well as international guidelines and standards in clinical performance. B. Protect the rights of patients or animals involved in research projects and conduct the projects according to ethical research and reporting standards.
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<p>Education</p>	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Facilitate and teach based on national and international standards of education and practice. B. Contribute to learning experiences for all professionals and students within their spheres of influence, and interact with colleagues at the local, national, governmental, and regulatory levels to enhance professional practice. C. Assist healthcare professionals in identifying their educational needs related to anesthesia and acute care needs. D. Provide peers, colleagues, students, and staff with constructive feedback regarding practice with the goal of facilitating improved outcomes and professional development.
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Monitoring Standards

Adherence to the monitoring standards will assist the nurse anesthetist in providing consistent and safe anesthesia care. These standards apply to all patients undergoing general, regional, or monitored anesthesia care. Nurse anesthetists are accountable for their clinical judgment in prioritizing and implementing these standards. Nurse anesthetists consult with appropriate others when encountering situations beyond their knowledge or scope of practice and make sure they conform to legal requirements, professional policies, and their own level of competence. If there are reasons to omit a monitored parameter, the reason for the omission should be documented on the anesthetic record.

Purpose of Monitoring Standards

Patients have the right to expect to be safe and protected from harm during their medical care, and anesthesia has a key role to play in improving patient safety perioperatively. The funders of healthcare are entitled to expect that perioperative anesthesia care will be delivered safely; therefore, they must provide appropriate resources.^{8, 9, 10, 11}

1. Preanesthesia Care

Domain	Monitoring Competencies
<p>1.1 Facilities, equipment, and medications</p>	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Cooperate in the selection and evaluation of anesthesia equipment and materials to ensure safe delivery of anesthetics and continuous monitoring of vital functions. All equipment including suction equipment is checked according to standard operating procedures and the checks documented before each anesthetic. B. Prepare appropriate and complete equipment, materials, and facilities, adequate both in quantity and quality, wherever any kind of anesthesia or sedation and recovery from it is undertaken. This includes outside traditional hospital operating room suites such as imaging departments, outpatient facilities, or offices. C. Accept full responsibility for their adequate and regular in-service training and verification of an individual's ability to use a specific piece of equipment or material correctly and safely. D. Ensure that their workplace provides ways of formal certification as documentation of the training activities or develop or cooperate in developing such a documentation format. E. Acknowledge, apply, and adhere to the relevant national and international standards for equipment, monitors, and materials. F. Organize and prepare appropriate anesthetic, resuscitative, and adjuvant medications for every kind of anesthetic procedure.

Monitoring Standards

1.2 Personnel	<p>Nurse anesthetists</p> <p>A. Are committed to reliable continuous clinical observation, assessment, and vigilance, in addition to the use of monitoring technology, because equipment may not detect clinical deterioration as rapidly as demonstrated by a skilled professional. Their foremost concern is constant vigilance during all anesthetic procedures.</p>
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1.3 Preanesthesia checks	<p>Nurse anesthetists</p> <p>A. Ensure that every patient is investigated, assessed, anesthetically evaluated, and informed about the perioperative period by an anesthesia professional before administration of an anesthesia.</p> <p>B. Prepare all necessary equipment and medication, and check for correct functions before induction of anesthesia.</p> <p>C. Adhere to appropriate checklists of the anesthesia systems, facilities, equipment, and supplies before the start of each operating list and document.</p> <p>D. Accept the responsibility to establish or take part in establishing equipment checklists in each healthcare institution providing anesthesia services. The checklists should be based on evidence and guidelines of the relevant national and/or international associations.</p> <p>E. Identify equipment and system failures and demonstrate adequate troubleshooting skills.</p> <p>F. Apply and adhere to the relevant components of World Health Organization Safe Surgery Checklist.¹⁰</p> <p>G. Assess interdisciplinary practice for collaboration and use of evidence based on best practice guidelines.</p>
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Monitoring Standards

2. Intraoperative Care

Monitoring Standard	Graduate Competencies
2.1 Records and statistics	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Create a record of all monitored and observed details of each anesthetic and ensure it is preserved with the patient's medical record. This record also includes all details of the preoperative assessment and the postoperative course. B. Collect and/or advocate for the collection of cumulative anesthetic data to facilitate the progressive enhancement of the safety, efficiency, effectiveness, and appropriateness of anesthesia care.

2.2 Airway and ventilation	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Monitor, assess, evaluate, and adapt the adequacy of the airway and ventilation continuously at least by observation and auscultation of the chest. When a breathing circuit is used, the reservoir bag must be observed for normal function and adequate measures taken if function is assessed abnormal. B. Accept responsibility for sufficient ventilation by monitoring at least respiratory volume, capnography and alarm for low inspiratory oxygen concentration. Clinical assessment may also include continuous assessment with a precordial or oesophageal stethoscope. C. Confirm the correct placement of an endotracheal tube or other airway device, assess the adequacy of ventilation by continuous measurement display capnography, and maintain continuous interpretation of the expired carbon dioxide. D. Set a "disconnect alarm" throughout the period of mechanical ventilation when mechanical ventilation is employed. If possible, the inspiratory and/or expiratory gas volumes and the concentration of volatile agents are measured continuously.
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Monitoring Standards

<p>2.3 Oxygenation</p>	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Monitor and assess the adequacy of tissue oxygenation continuously by pulse oximetry. B. Observe skin colour, colour of the blood in the surgical field, and arterial blood gas and analyse as indicated C. Ensure adequate illumination and exposure of the patient whenever feasible. D. Check and verify the integrity of the oxygen supply. The inspired oxygen concentration is continuously monitored throughout each anesthesia with an instrument fitted with a low oxygen concentration alarm. E. Make sure that an oxygen supply failure alarm and a device protecting against the delivery of a hypoxic gas mixture are in place and functioning properly. Systems with interlocks (tank yokes, hose connection, etc) should be used to prevent misconnections of gas sources.
<p>2.4 Circulation</p>	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Monitor and assess circulation with at least 3 of the following measures: skin colour, capillary refill, palpation of pulse, auscultation of heart sounds, blood pressure, pulse oximetry, and continuous intra-arterial pressure monitoring, if indicated. B. Measure, assess, and record blood pressure and heart rate at least every 5 minutes and continuously monitor the electrocardiogram during anesthesia. C. Monitor, assess, and interpret cardiac rate and rhythm, the pulse wave with the pulse oximeter, and the capnography wave continuously. Adapt and control the course of the anesthesia accordingly. D. Ensure that a defibrillator is available at all times.

Monitoring Standards

<p>2.5 Body temperature</p>	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Apply adequate means of body temperature measurements during every general and regional anesthetic, in children, and when indicated on all other patients. B. Monitor body temperature in patients in whom a change is anticipated, intended, or suspected continuously. Electronic measurement is recommended. C. Check, maintain, and correctly use body and fluid warming devices. D. Assess and interpret changes in body temperature and adapt the warming or cooling regimen accordingly. E. Recognize the symptoms and signs of malignant hyperthermia, and immediately initiate the correct procedures and treatment. Ensure that relevant emergency protocols and drugs for the treatment of malignant hyperthermia are readily available, and all involved personnel know the location of the drugs and are instructed in the application of the treatment protocols.
<p>2.6 Neuromuscular function</p>	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Measure, assess, and score neuromuscular function by a neuromuscular monitor (if available) when neuromuscular blocking agents are being used. B. Assess and evaluate neuromuscular function, also by hand grip or sustained head or leg lift.
<p>2.7 Depth of anesthesia</p>	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Assess and evaluate the depth of anesthesia (degree of unconsciousness) regularly by clinical observation and modify it, if necessary. B. apply continuous measurement of inspired and expired concentrations of anesthetic gases and volatile agents, if available. C. Consider the application of an electronic device intended to measure cerebral function, particularly in cases with high risk of awareness under general anesthesia.
<p>2.8 Clinical assessment and vigilance</p>	<p>Nurse anesthetists</p> <ul style="list-style-type: none"> A. Attend, assess, and evaluate the patient clinically and technically until care can be transferred to another qualified healthcare professional. Continuous clinical observation and vigilance are the cornerstones of anesthesia safety.

Monitoring Standards

2.9 Positioning	<p>Nurse anesthetists</p> <p>A. Monitor and assess positioning of patients to assure optimal physiological function and patient safety by using adequate materials, positioning techniques, and protective measures.</p>
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3. Postanesthesia Care

Monitoring Standard	Graduate Competencies
3.1 Facilities and personnel	<p>Nurse anesthetists</p> <p>A. Assess, analyse, and score the levels of care needed, clinically and technologically, and make sure that all patients who have had an anesthetic affecting neurological function and/or a loss of protective reflexes remain where anesthetized until recovered or are transported safely to a specifically designated location for postanesthesia recovery.</p>

3.2 Monitoring	<p>Nurse anesthetists</p> <p>A. Ensure that all patients are observed, monitored, and assessed in a manner appropriate to the state of their neurological function, vital signs, and medical condition with emphasis on the adequacy of oxygenation, ventilation, circulation, and temperature. Specifically, pulse oximetry is highly recommended until the patient has returned to full consciousness.</p>
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3.3 Pain relief	<p>Nurse anesthetists</p> <p>A. Make every effort for all patients to receive appropriate medication and modalities to prevent and alleviate postoperative pain.</p> <p>B. Monitor, evaluate, and manage pain without delay wherever they see patients, and anticipate their needs for pain management after surgery and discharge, as well as for transports.⁸</p>
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Educational Standards for Preparing Nurse Anesthetists

Purpose of the Standards of Education

Nurse anesthetists are educated into clinical nurse specialists² in many countries throughout the world^{12,13} to provide or participate in the provision of services to patients requiring anesthesia, respiratory care, cardiopulmonary resuscitation, and/or other emergency life-sustaining services. The educational standards for preparing nurse anesthetists are based on the CanMeds role model⁶ (see section on Conceptual Framework for Nurse Anesthesia Practice). The model was chosen because it is well suited to picture the various roles nurse anesthetists have to fulfil and to prepare students for the actual anesthesia practice in a complex interdisciplinary environment. IFNA’s Educational Standards incorporate the 7 CanMEDS roles (expert, communicator, collaborator, professional, manager, health advocate, and scholar) in the curriculum. The education standards are based on the international standards for safe practice in anesthesia.⁸ They are part of the integrated expert role, and reference to them is made in the graduate and practice standards where applicable.

Nurse anesthesia practice is sufficiently complex and advanced to be beyond the scope of general nursing practice.¹³ Specialty expertise is obtained through a professionally approved advanced education program that leads to a recognized qualification. Practitioners in all member countries are organized and represented within a specialty association or a branch of the relevant national nurse association.¹⁴

Domain	Topic
I. Standard: Prerequisites	Minimum prerequisites for applicants/candidates for nurse anesthesia programs are completion of a basic nursing education program of at least 36 months in length and nursing experience of at least 1 (one) year, preferably in an acute care setting.

II. Standard: Selection process	<p>All candidates for nurse anesthesia educational programs must be evaluated on the basis of a qualifying procedure such as:</p> <ul style="list-style-type: none"> ▪ Professional dossier, portfolio, or professional resume ▪ Examination (this depends on national legislation issues and may not be mandatory) ▪ Interview and review of candidates’ knowledge base of anatomy, physiology, pathophysiology, chemistry, physics, biochemistry, pharmacology, ethics, communication and collaborator skills, and philosophy of nursing ▪ It is recommended that the selection of candidates be performed by a committee of academic and clinical teachers that include nurse anesthetists.
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Educational Standards for Preparing Nurse Anesthetists

<p>III. Standard:</p> <p>Curriculum</p>	<p>Program content</p> <p>As a minimum, the program curriculum will contain the following topics or courses as they relate to the practice of nurse anesthetists.</p> <p>Expert role:</p> <ul style="list-style-type: none"> A. Advanced anatomy, advanced physiology, and pathophysiology of all ages and pre-existing diseases related to anesthesia practice and the perioperative period B. Advanced pharmacology including anesthesia agents such as hypnotics, analgesics, sedatives, neuromuscular blocking agents and their antagonists, volatile anesthetics, local anesthetics, adjunctive and accessory drugs, as well as all drugs that may have an impact on the effect of any anesthetic agent being used C. Chemistry and physics in anesthesia related to respiration, circulation, monitoring, and ventilation techniques D. General anesthesia techniques E. Regional anesthesia techniques F. Monitoring techniques, non-invasive and invasive (see section on Monitoring Standards) G. Functioning principles of monitors, ventilators, and other medical devices and materials H. Operation, maintenance, troubleshooting ability, and checking of ventilators, monitors, and all medical devices and materials used in anesthesia I. Patient assessment, evaluation, and management preoperatively, intraoperatively, and postoperatively J. Anesthesia techniques for different ages (paediatrics to geriatrics) and categories (healthy to morbid) of patients and the full range of surgical and medically related procedures when anesthesia is required K. Resuscitation (basic and advanced cardiac life support) and other life-sustaining procedures such as intubation, ventilation, arterial and intravenous punctures, administration and monitoring of vasoactive substances, catecholamine, and blood-fluid resuscitation. L. Perioperative fluid and blood therapy such as crystalloids, colloids, blood, and coagulation products M. Preoperative, intraoperative, and postoperative pain management (assessment and adequate treatment according to WHO guidelines) N. Infection control and hygiene (WHO and national standards of infection control) O. Record keeping and documentation
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Educational Standards for Preparing Nurse Anesthetists

	<p>Professional role:</p> <ul style="list-style-type: none"> A. Leadership, team building, negotiation, and conflict resolution skills B. Utilization and dissemination skills of research and practice outcomes C. Reflective practice D. Presentation skills E. Information on the function and tasks of the national association and IFNA F. Legal aspects of practice and ethical issues in practice (see Code of Ethics) G. Principles of education to support nurse anesthesia students in participating in continuous professional development H. Theories of quality assurance and improvement I. Management of critical incidents and the critical incident reporting system (CIRS) J. Cultural safety (consideration toward culture, race, gender, religion, and other possible differences) K. Stress management and self-management <p>Communicator role:</p> <ul style="list-style-type: none"> A. Communication between nurse anesthetists, physician anesthetists, surgeons, theatre nurses, and other members of the medical profession, the nursing profession, hospitals, and agencies representing a community of interest (e.g., patient associations), and the national nurse anesthesia association B. Communication and negotiation skills in the environment of operating theatres C. Conflict management strategies concerning the overlapping functions and the potential for interdisciplinary tensions in operating theatres D. Crisis intervention strategies suitable for patients facing anesthesia and surgery and for interdisciplinary tensions and problems <p>Collaborator role:</p> <ul style="list-style-type: none"> A. Systems and subsystems in healthcare (e.g., hospital systems, operating room systems) B. Means of collaboration with all disciplines involved in the perioperative period C. Disciplinary and interdisciplinary issues of patient safety D. Collaboration with interdisciplinary team members in research and educational activities and the implementation of new technologies that enhance patient care
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Educational Standards for Preparing Nurse Anesthetists

	<p>Manager role:</p> <ul style="list-style-type: none"> A. Methods to provide direction and leadership to increase staff participation in professional development B. Assessment and evaluation of protocols, regimens, and guidelines using best practice evidence to improve patient outcomes and enhance effectiveness of care C. Teaching and mentoring skills D. Organization and planning skills E. Cost and implementations of ecological issues (e.g., anesthetic gases, disposal of sharps, toxic waste, etc.) F. Decision-making and anticipation skills G. Performance evaluation skills <p>Health Advocate role:</p> <ul style="list-style-type: none"> A. Health promotion B. Risk assessment on various influences of patients' health status (e.g., biological, psychological, social, socioeconomic, environmental, and cultural influences) C. Organization and change management of health related and anesthetic risk factors (e.g., instruction of smoking cessation, risks of obesity) D. Patient education methods E. Principles of ethics (see Code of Ethics) <p>Scholar role:</p> <ul style="list-style-type: none"> A. Research principles and evidence-based practice (strongly recommended) B. Application of measurement instruments that are critiqued for effectiveness and clinical applicability to evaluate interventions C. Analysis and participation in analysis of sources of evidence-based guidelines D. Presentation and publication skills E. Utilization of research in practice F. Self-learning skills <p>Clinical practicum requirements</p> <ul style="list-style-type: none"> A. The clinical practicum requirements shall be designed to provide the students with clinical experience inherent in the list of the graduate standards for nurse anesthetists for which they are being prepared. B. It is recommended and strongly encouraged that at least 50% of the program be devoted to clinical learning experiences involving direct patient care. C. The curriculum for clinical practice should mirror the theory curriculum and include all the skills and techniques required for competent practice.
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Educational Standards for Preparing Nurse Anesthetists

<p>IV. Standard: Graduate competencies</p>	<p>For providing competent, safe anesthesia care to patients requiring such services, only those nurses who have completed a program of instruction in nurse anesthesia, or who are supervised nurse anesthesia students within such educational programs, should be allowed to perform or participate in the performance of anesthesia services. At the end of the educational program, students must be able to demonstrate the competencies described as graduate standards.</p>
<p>V. Standard: Location</p>	<p>Ideally, these programs should be conducted in the university setting or its equivalent, while assuring adequate access to clinical resources for the clinical practicum.</p>
<p>VI. Standard: Length of the program</p>	<p>The length of the program shall be based on the actual competencies for which the nurse anesthetist is prepared. Fulfilment of optimal competencies (such as to perform rather than participate in the performance) may require 24 or more months. A program of 18 to 24 months is strongly endorsed by the IFNA Education Committee.</p>
<p>VII. Standard : Faculty/teaching personnel requirements</p>	<ul style="list-style-type: none"> A. The nurse anesthesia component of the educational program for preparing nurse anesthetists shall be directed by a nurse anesthetist. B. Other faculty/teachers may include other nurse anesthetists, physicians, physiologists, pharmacologists, and other professionals. C. Clinical education of nurse anesthesia students shall be provided by nurse anesthetists, anesthesiologists, and other qualified specialists.
<p>VIII. Standard : Evaluation</p>	<p>Regular evaluation of the student's academic and clinical progress is required in order to make adaptation and changes. Aspects of evaluation should contain:</p> <ul style="list-style-type: none"> A. Achievement of the learning objectives B. Appropriateness of the program's content C. Course administration and venues D. Learning support (theory) E. Adequate clinical practice opportunities F. Learning support (clinical practice) G. Support provided by faculty/teachers H. Achievement of the graduate competencies
<p>IX. Standard : Graduation</p>	<p>Upon graduation, based on a final theoretical and clinical evaluation, the graduate will be provided a certificate, diploma, or degree appropriate to the education, designating the graduate as qualified to provide nurse anesthesia services.</p>

Anesthesia Program Approval APAP

International Federation of Nurse Anesthetists Anesthesia Program Approval Process (APAP)

The International Federation of Nurse Anesthetists (IFNA) believes that it is possible to improve the health and welfare of humanity by promoting international educational standards for non-physician anesthesia programs. Based on this belief and for the purposes of program approval, it is the policy of IFNA to approve programs that admit students who are nurses or who are educated in another scientific area which prepares students to succeed in their anesthesia education. Although 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 health professionals worldwide that have contributed to nurses and non-nurses being enrolled in anesthesia programs. IFNA believes that an inclusive process provides the greatest opportunity to improve anesthesia care to patients now and in the future.

Categories of Approval

Because of the (1) 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; (4) a commitment of diverse programs to a common standard of educational quality, four categories of approval are available.

- **Registration:** A program pledges to comply with the IFNA Educational Standards for Preparing Nurse Anesthetists to the best of its ability. The program is also required to submit its curriculum.
- **Recognition:** A program pledges to meet the IFNA Educational Standards for Preparing Nurse Anesthetists to the best of its ability. The program is required to submit its curriculum and related material for review by the IFNA Education Committee. The curriculum is audited to determine if it complies with "Standard III, Curriculum, Content of Program", and substantially complies with "Standard IV, Graduate Competencies" in the Educational Standards.
- **Accreditation:** A program pledges to meet the IFNA Educational Standards for Preparing Nurse Anesthetists. The program is also required to submit its curriculum and related material in a written self study for review by the Education Committee. The information is also evaluated by a team of on-site visitors to determine if it meets the Educational Standards. The curriculum must meet "Standard III, Curriculum, Content of Program", and substantially meet all other requirements in the Educational Standards.
- **Deemed Accreditation Status:** A program pledges to meet the IFNA Educational Standards for Preparing Nurse Anesthetists. A self study and onsite visit by IFNA is not required; however, the program is required to submit a copy of the governmental or non-governmental standards under which it operates for review by the Education Committee. The information is compared to IFNA's standards for equivalency and must include completion of an onsite visit by the approval agency.

See APAP procedures on the IFNA Website www.ifna.site

Glossary

Anesthesia, adjunctive, and accessory drugs: Three categories of drugs that are utilized in anesthesia practice and included as required content within the courses are a part of the nurse anesthetist's educational program.

1. Anesthesia drugs. Those drugs having an anesthesia or analgesic, hypnotic, sedative effect that are used for that purpose in the administration of an anesthetic.
2. Adjunctive drugs. Those drugs needed to provide other anesthesia and/or surgical conditions as a part of the anesthetic. These include such drugs as muscle relaxants used for intubation or skeletal muscle relaxation or hypotensive agents in the event that intentional hypotension is utilized to minimize bleeding.
3. Accessory drugs. Those drugs that patients require and take as a part of their current physical or psychological condition that may have an effect on the choice of anesthesia and/or adjunctive drugs. Also, those drugs that patients may require during an anesthetic to maintain physiological balance within normal limits or to correct a complication.

Assessment: The initial component of the nursing process (assessment, problem identification, planning nursing care, implementing nursing care, and evaluating nursing care). The nursing equivalent to medical examination: reviewing a patient's health history, current health problems, and physical status as a basis for determination of the care needed that the nurse will provide or within which the nurse will participate. For the nurse anesthetist, patient assessment is a required function before, during, and after the provision of an anesthetic.

Care plan: Documentation of nurse anesthesia process inclusive of assessment, planning, implementation, and evaluation.

Community of interests: Those groups of people who have a significant interest in a particular endeavour. In the case of anesthesia, the community of interests may be the patient, family, surgeons, anesthesia providers (physician and nurse), hospital administrations, and other nurses who will care for the patient before, during, and after the anesthesia. In the case of nurse anesthetist education, the community of interests will be the profession, students, faculty, employers, and the public as potential patients who would be beneficiaries of the services provided by the graduates of these programs. In the case of clinical practice, the community of interest may even extend to pharmaceutical companies and medical equipment manufacturers depending on the particular circumstances.

Competencies: The individual characteristics that are shown as performance. In other words, competencies show the attitudes, skills, knowledge, and levels of certain tasks that are being carried out^{15,16}

Glossary

Evidence-based practice: Integration of clinical expertise, patient values, and the best research evidence in the decision-making process for patient care.

Implement: To initiate and provide a plan of care that has been defined by the nurse or by a physician who has referred the plan to the nurse anesthetist. In some instances the care plan may have been collaboratively developed. Regardless of who or how the plan was determined, the nurse anesthetist, by accepting the plan of care to initiate and/or provide care, becomes responsible and accountable for the care she/he provided. Example: The nurse anesthetist initiates, provides, and/or participates in the provision of a plan of anesthetic management for individual patients.

Nurse anesthetist: This is a general title for nurses working in anesthesia with a specific education.

Perioperative: Around the operative period: preoperative, intraoperative, and postoperative.

Pertinent: Highly significant or relevant.

Quality: An attribute or characteristic of a product or service, denoting a grade of excellence. When applied to anesthesia practice, it not only depicts the provision of an anesthesia service(s) that can be categorized as beyond that level of assuring safety and being compliant with standards for practice, it also exceeds those standards and sets the stage, barring unforeseeable events, for achieving the best potential outcome from the care provided.

Resource person: An individual, who by education and experience has acquired a level of expertise in a field of endeavour and is capable of assisting, advising, consulting with, or supervising other personnel in the provision of a service falling within the area of the individual's expertise.

Example: The nurse anesthetist, as an expert in airway management, ventilation, and resuscitation techniques, may serve as a resource person to other health providers in correcting an airway or ventilation problem or as a leader or member of a resuscitation team in the event of cardiopulmonary failure or severe trauma. The nurse anesthetist may also serve as a teacher to assist others to learn the techniques for correcting airway problems or resuscitating patients in cardiopulmonary failure and in so doing is a resource person for teaching.

Scope of nurse anesthesia practice: The range of competencies for which a nurse anesthetist is legally authorized to perform and for which one has been educationally prepared through a formalized and continuing education process.

Standard: Can be compared to a yardstick, as it provides a certain measurement.^{15,16}

Resources

Dedicated to patient safety from a global perspective, IFNA's recommendations are in line with the International Council of Nurses, World Health Organization, Industrial Psychology Research Centre and Department of Anaesthesia, University of Aberdeen, Helsinki Declaration for Patient Safety in Anaesthesiology, and World Federation of Societies of Anaesthesiologists.

As anesthesia care is globally provided by various healthcare providers, IFNA endorses the 5 core competencies in health professions^{xvii}:

1. Delivering patient-centred care
2. Working as part of interdisciplinary teams
3. Practicing evidence-based medicine
4. Focusing on quality improvement
5. Using information technology

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