



New Zealand
Anaesthetic Technicians'
Society

PROFESSIONAL STANDARDS OF PRACTICE

Index	Page
Introduction	3
Definition	4
Standard One.....	5
Standard Two	6
Standard Three	7
Standard Four	8 - 9
Appendix A: Standards on Infection Control	10 - 13
Appendix B: Supporting Guidelines	14
References and Recommended Reading	15 - 16

Introduction

The New Zealand Anaesthetic Technicians' Society Incorporated (NZATS) has prepared the following Professional Standards of Practice.

Although the original emphasis of the Anaesthetic Technician's role was equipment-focused, this role has now evolved into a highly patient-orientated service. Also, with changes such as inclusion of electronics in anaesthetic machines and in both invasive and non-invasive monitoring, the use of physiological computers and point of care testing equipment, the boundaries of knowledge and skills have been further extended.

The Anaesthetic Technician is an integral member of the peri-operative team. As well as working in partnership with the Anaesthetist, the Anaesthetic Technician works with, and relates to, the surgical and nursing teams and auxiliary health care workers. Technicians must also work within their own team – Anaesthetic Technicians - and support each other to carry out responsibilities that will ensure the best outcome for their patients and their service.

In many hospitals throughout New Zealand, Anaesthetic Technicians assist nursing staff in confirming pre-operative check-in and anaesthetic consent. Anaesthetic Technicians will also assist with intra-operative positioning and provide assistance to the surgical team as required. The scope of anaesthetic practice extends beyond the operating suite.

Anaesthetic Technicians are required to provide support to the Anaesthetist in investigative and procedural units such as radiology, magnetic resonance imaging, angiography, transport, emergency departments and intensive care units.

It is the responsibility of all Anaesthetic Technicians that they base their practice on the policies and clinical practice documentation of their departments. As well, NZATS recommend that Anaesthetic Technicians base their practice on the guidelines of the Australian and New Zealand College of Anaesthetists (ANZCA) PS 8 document, see appendix B.

NZATS promotes the quality and safety of patient care therefore supporting a 1:1 ratio of Anaesthetic Assistance for every case where anaesthesia is administered.

Anaesthetic Technicians must take ownership for quality assurance initiatives relevant to their role and responsibilities. They should research, develop and review clinical practice documentation and ensure practice is evidence based.

Therefore it is essential that Anaesthetic Technicians have Professional Standards of Practice which will provide them, their team members, and their employing hospitals, with a measure of the expectations recommended by NZATS.

The Professional Standards of Practice stated in this document reflect the wide range and variety of settings in which Anaesthetic Technicians may practice with in the New Zealand health-care system.

Key stakeholders for the service of Anaesthetic Technicians are:

- Medical Sciences Council of New Zealand
- Hospitals providing surgical services throughout New Zealand
- New Zealand Anaesthetic Technicians Society Inc. NZATS – approved training hospitals throughout NZ Australian and New Zealand College of Anaesthetists New Zealand Society of Anaesthetists
- Clinical Training Agency
- Ministry of Health
- Nursing Council of New Zealand
- New Zealand Nurses Organisation (NZNO) Peri-operative College of NZNO.

Standards of Practice prepared and documented by:

- Janine Gunn (NZ Reg. Nurse, NZ Reg. Anaesthetic Technician)
- Patricia O'Brien (NZ Reg. Nurse, NZ Reg. Anaesthetic Technician)
- Christine Minton (NZ Reg. Nurse, NZ Reg. Anaesthetic Technician)

Standards of Infection Control prepared and documented by:

- Dr. Andrew Warmington (BHB MBChB FANZCA)

DEFINITION

What is a standard?

A standard is a desired and achievable level of performance against which actual performance can be measured. The standards make clear what the profession expects of its members.

These are generic standards and are to provide the basis for all Anaesthetic Technicians to develop standards and policies specific to their workplace.

- Standard One: Professionalism
- Standard Two: Scope of Practice
- Standard Three: Professional Development
- Standard Four: Roles and Responsibilities

STANDARD ONE:

Anaesthetic Technicians are accountable for their practice and will promote equality for all.

Objectives

- 1a. To comply with the Code of Health and Disability Services Consumers' Rights.
- 1b. To incorporate the Treaty of Waitangi into all aspects of the workplace.
- 1c. To recognise and incorporate into daily work practices the diverse cultural needs of the community, individual beliefs and identity.

Process

- 1a. Anaesthetic Technicians will be educated to, and will practice according to authorised ethical codes. These include Codes of Ethics and Patients' Code of Rights contained in the Health and Disability Service Act.
- 1b. Anaesthetic Technicians will be educated and will practice according to the principles of the Treaty of Waitangi and will be encouraged to attend cultural study days.
- 1c. Anaesthetic Technicians will have the resources readily available to recognise the diverse cultural needs and the personal beliefs of their clients. Anaesthetic Technicians will adjust their practice to reflect this.

Outcomes

- 1a. Patients will be informed of their rights and be able to exercise these rights and choices and decisions made will be treated with respect. Patient and staff confidentiality and privacy will be maintained at all times. Services will be provided in a manner that respects the dignity and individuality of the person concerned.
- 1b. Anaesthetic Technicians practice within the principles of the Treaty of Waitangi - Protection, Partnership and Participation. Practice will be adjusted where possible to enable the patient to feel culturally and spiritually respected. Staff will work in partnership with local Iwi to ensure culturally safe practice.
- 1c. Anaesthetic care is provided in a non-judgemental, skilled manner that incorporates patients' individual, cultural, racial and religious needs.

STANDARD TWO:

Anaesthetic Technicians are, within their scope of practice, responsible for the safety of their patients and colleagues.

Objectives

- 2a. To provide a practice that protects patients from physical danger and avoidable risk.
- 2b. To provide practice that is safe, legal and that meets the Australian New Zealand College Of Anaesthetists (ANZCA) guidelines, the New Zealand Anaesthetic Technicians' Society Inc. (NZATS) and the Health Workforce funding agency (HWNZ).
- 2c. To provide a process that enables continuous evaluation of practices to provide safe outcomes for both patients and staff.
- 2d. To fully participate in the process of quality assurance.

Process

- 2a.
 - i) Anaesthetic Technicians will become familiar with, and participate in, the development of the Health and Safety, Infection Control manuals/policies and Quality Assurance programmes in their workplace. Anaesthetic Technicians will practice within the stated guidelines. Guidelines, manuals, policies and clinical practice documentation must be readily accessible for their reference.
 - ii) Anaesthetic Technicians will be familiar with relevant legislation. Anaesthetic Technicians will be orientated to departmental policies and aware of their hospitals' requirements for compliance to the Medicines Act (1981).
- 2b. Anaesthetic Technicians will practice according to the ANZCA guidelines and the manufacturers' guidelines for the use and maintenance of the particular units of anaesthetic equipment in their hospital. The documentation relating to the above is to be readily available for reference. Documentation must be reviewed on a regular basis for accreditation purposes.
- 2c. Anaesthetic Technicians will take part in regular in-services and educational initiatives.
- 2d. There will be timely and regular reviews of clinical and technical skills and on-going critique and review of personal practice. Anaesthetic technicians will participate in the development of clinical practices and policy documentation. Clinical practices and policies will be researched, implemented and reviewed to meet accreditation standards.

Outcomes

- 2a. Anaesthetic Technicians have a good understanding of their practice and provide a safe working environment for both patients and colleagues.
- 2b. Anaesthetic Technicians provide a service that meets both the legal requirements of the employing hospital, the ANZCA guidelines and the NZATS Regulations and NZATS Training Regulations.
- 2c. Processes are in place for continuous revision of practice for the safe outcome of patients and staff.
- 2d. Quality assurance indicators are attained. The Anaesthetic Technician practices as a role model for peers, junior and other staff. Accreditation will be achieved.

STANDARD THREE:

Professional Development: Anaesthetic Technicians are committed to professional development

Objectives

To ensure:

- 3a. That the Anaesthetic Technician reviews and develops knowledge in current clinical and technical anaesthesia practice and procedures.
- 3b. The Anaesthetic Technician actively participates in the education of peers, colleagues and other staff.
- 3c. The Anaesthetic Technician systematically evaluates the standard and appropriateness of individual practice through research, feedback and discussion.
- 3d. Anaesthetic Technicians are active members of the relevant professional organisation.

Process

- 3a. (i) It is the responsibility of the individual to maintain and develop their clinical practice.
(ii) It is the responsibility of the anaesthetic technician to be familiar with the NZATS anaesthetic technician training programme, Scopes of Practice and the current guidelines of ANZCA.
(iii) Anaesthetic Technicians are active in, and contribute to, the education of colleagues and students through regular in-service and teaching. The individual should identify current and relevant information from resources such as the anaesthetic technician educator, the education folder, library and other relevant sources. The information sourced will include journal articles and information from manufacturers, drug companies, professional bodies and reference material.
(iv) The Anaesthetic Technician will maintain a portfolio which will be a documented record of attendance at educational and in-service sessions, clinical

and technical assessments and teaching sessions, presentations and attendance at conferences.

- 3b. (i) Practice is evaluated yearly through performance appraisal, peer review, audits and assessment.
(ii) Anaesthetic Technicians research, critique and address needs to ensure their practice is current and correct. Issues concerning the practice of colleagues will also be identified and addressed.
- 3c. Anaesthetic Technicians are current members of the NZATS, the professional body for the profession of Anaesthetic Technology.

Outcomes

- 3a. The Anaesthetic Technician maintains current knowledge in anaesthesia and actively participates in the education of peers, colleagues and other staff.
- 3b. A portfolio system will identify areas of practice to be reviewed or reassessed.
- 3c. Anaesthetic Technicians belong to a governing body that develops models and guidelines based on the highest standards of practice.

STANDARD FOUR:

Anaesthetic Technicians will provide dedicated professional, clinical and technical assistance to the anaesthetist.

Objectives

- 4a. To follow the recommendations ANZCA PS8 document 'Assistant to the Anaesthetist' (reviewed 2008).
- 4b. To work in partnership with the anaesthetist and identify the requirements for the anaesthetic procedure.
- 4c. To work in a systematic and planned approach in order to meet the needs of the individual patients.

Process

- 4a. The Anaesthetic Technician will be appropriately educated. The technician will demonstrate the application of knowledge based on scientific and anaesthetic principles.
- 4b. The Anaesthetic Technician will work in partnership with the anaesthetist. The technician will support the anaesthetist until excused from that duty and will identify their whereabouts to the anaesthetist and other team members.
- 4c. The Anaesthetic Technician will communicate and work closely with the anaesthetist to develop an anaesthetic plan for each patient.
- 4d. The Anaesthetic Technician will have sound knowledge of operating theatre environment, procedures and policies.

- 4e. Anaesthetic Technician will have sound knowledge of safety and security systems within their employing hospital.
- 4f. The Anaesthetic Technician will provide support for colleagues, technicians, nurses and other team members as appropriate.

Outcomes

- 4a. The Anaesthetic Technician displays a sound knowledge of the following and demonstrates this in their daily practice:

The principles and process of anaesthetic practice:

- Understanding the principles of, and the requirements for, surgical and investigative procedures.
 - The equipment required for anaesthetic procedures, including physics, functions, application and hazards in practice.
 - Cleaning, decontamination and/or sterilisation, storage, care and maintenance of anaesthetic equipment. Appropriate disposal of single use items is understood and processes followed as part of daily practice.
 - The principles and practice of aseptic technique, Universal Standards, Infection Control, Occupational Health and Safety, waste management and risk management are applied to daily practice.
 - The Anaesthetic Technician will understand the medico-legal requirements and responsibilities. Practice will be based on departmental, ANZCA and NZATS guidelines and requirements.
- 4b. The Anaesthetic Technician will be allocated to an area where an anaesthetic procedure will be carried out. The technician will work in partnership with the Anaesthetist.
- 4c. The Anaesthetic Technician will work in a systematic manner.

The Technician will:

- Check all required anaesthetic, ancillary, monitoring, fluid replacement, warming and other relevant equipment and ensure it is functional and safe to use.
- Confirm patient identity, allergy status and procedure. Ensure informed consent if appropriate
- Act as the patient advocate.
- Assist with patient positioning, ensuring their privacy and dignity is maintained throughout the procedure.

- Anticipate and meet the needs of the Anaesthetist before, during and after the procedure.
- Function as a member of the multidisciplinary team.
- Appropriately document the care provided.
- Ensure documentation is clear, readily available, non-judgemental and correct.

APPENDIX A

Standards on Infection Control

Definitions

Decontamination: The process of removing infective and unwanted matter from the surface of an object, i.e. thorough cleaning.

Disinfection: A process that eliminates many or all micro-organisms except spores.

High Level Disinfection: A process that uses a decontaminant that kills vegetative bacteria, tubercle bacilli, some spores, fungi and viruses (when used according to manufacturers' instructions).

Pasteurisation : A process that employs time and hot water to achieve high-level disinfection.

Sterilisation: A process that leads to the complete elimination of all micro-organisms.

Asepsis: The prevention of contact with micro-organisms.

For disinfection, pasteurisation or sterilisation to occur there must have been previous thorough decontamination.

For technical aspects of these procedures the reader is referred to the Code of Practice for Cleaning, Disinfecting and Sterilising Reusable Medical and Surgical Instruments and Equipment, and Maintenance of Associated Environments in Health Care Facilities (AS 4187-1994).

Standards to apply in all situations.

These standards are to apply in all anaesthesia situations including general inhalational, general and total intravenous anaesthesia, regional and local anaesthetic procedures.

Risks to patients

The patient must be protected from acquiring infection through all anaesthesia procedures including airway and invasive procedures.

Appropriate levels of sterility, disinfection and decontamination are to be applied at all times.

Hand washing

Hand washing is the most important infection control measure. Hands must be washed before:

- Handling a new patient
- Hands washed or gloves changed when:
 - preparing equipment to be used on a new patient
 - between procedures on an individual patient
 - whenever the hands have become contaminated
 - before any invasive procedure.
- The use of alcohol hand rubs is highly recommended
- All cuts on the hands should be adequately covered with a waterproof dressing both for the technician's safety and that of the patient.

Operating room preparation

- The operating room will be appropriately prepared for each new patient.
- The room must have an adequately functioning air conditioning with a minimum of 15 – 20 complete air changes per hour.
- The operating room must be cleaned and appropriately decontaminated from the previous patient. This must include:
 - Theatre floor mopped of obvious soiling and contamination
 - All usable surfaces cleaned
 - Anaesthesia procedure trolleys working surfaces cleaned
 - Anaesthesia machine working surface cleaned and other areas of obvious soiling and contamination.
 - All material from the previous patient is disposed of, preferably out of the room, but as a minimum, where no contamination to following patients can occur.
 - All drugs from the previous patient are disposed of.

- All containers used with the previous patient such as drug trays, airway trays etc. are removed from the room.

Anaesthesia equipment

All anaesthesia equipment, in addition to that mentioned above, must be appropriately prepared as outlined below prior to the patient's arrival in the operating room. Principles of aseptic technique must be applied to all invasive anaesthetic procedures.

Any ancillary devices such as blood pressure cuffs, pulse oximetry probes, ECG leads must be cleaned after use and between patient contacts and decontaminated as required.

Airway equipment

Devices that pass through the mouth or nose should be kept sterile until use. Laryngeal masks must be decontaminated and then sterilised prior to each use. Re-useable facemasks must be decontaminated following manufacturers' instructions.

Laryngoscope blades must be decontaminated and sterilised prior to use. Storage of blades must be such that they cannot become contaminated from touch, splash or aerosols by patient body fluids - individual packaging is preferred to ensure integrity.

Single use items must be disposed after individual use.

Where the manufacturer states that an item should be sterilised before use that recommendation should be taken.

Clean and contaminated equipment must be separated.

Used airway equipment that is expected to be reused on the same patient should be placed in an appropriate receptacle that reduces the risk of surface contamination.

The laryngoscope handle must be decontaminated between all cases and whenever there is obvious contamination.

Breathing Circuit

For each patient the breathing circuit should be sterile or, decontaminated and disinfected or protected by the use of an appropriate filter.

The use of a filter does not eliminate the requirement to ensure that the remainder of the circuit is not contaminated.

Filters are single-use items.

Items such as in-line or side stream sampling should be placed such that the filter protects them.

Anaesthetic Machine

Internal components of the anaesthetic machine and breathing circuits should be cleaned regularly according to departmental and manufacturers' guidelines.

Carbon Dioxide Absorbers

Sterilisation of the absorber is not necessary or practical before each case. An appropriate bacterial/viral filter will protect it. The unidirectional valves should be disinfected regularly.

Ventilators

These should be cleaned regularly and disinfected as required.

Flexible Scopes

Should be sterilised according to the Australian and New Zealand Standards Flexible Endoscopes Recommendations and incorporating the manufacturer's recommendation.

Drugs for Injection

Multiple dose vials and ampoules for more than one patient are not recommended unless all doses are drawn up before the administration of the first dose to a patient.

All doses drawn up for subsequent patients must be kept covered and in an area where there is no risk of contamination from touch, splash or aerosols

The contents of a single ampoule are to be used only for a single patient.

Invasive procedures

Vascular Cannulation

Hands must be washed prior to insertion and gloves used for the operator's protection. The skin should be disinfected with an appropriate preparation prior to insertion. Needle insertion should ensure that the needle tip and shaft of the cannula remain sterile. The sharp must be disposed of in an appropriate container. Any spill of blood should be immediately cleaned and the area decontaminated. Intravenous administration sets, including pump and infusion lines are single use items.

Soiled and contaminated tourniquets should be sent for full decontamination/disinfection.

Syringes, needles, drugs and contents of intravenous trays and dishes are for single patient use only.

Central Vascular Cannulation

The surface on to which the equipment is to be opened should be disinfected with the use of a suitable surface cleaner. Prior to the opening of sterile equipment and gowns, the anaesthetic technician will wash their hands.

Central cannulation should be carried out using full aseptic technique:

- Mask
- Gloves
- Gown
- Appropriately prepared skin
- Use of a sterile field bound by sterile drapes

Regional Anaesthesia

The surface on to which the equipment is to be opened should be disinfected with the use of a suitable surface cleaner. Prior to the opening of sterile equipment and gowns the anaesthetic technician must hand wash.

Regional Blocks

The anaesthetist's hands should be washed and sterile gloves worn. The skin should be suitably prepared and the procedure performed in such a manner that all equipment remains sterile.

For an epidural or spinal procedure, or where a catheter is to remain insitu, full sterile technique must be used including:

- Mask
- Gloves
- Gown
- Appropriately prepared skin
- Use of a sterile field bound by sterile drapes

Personal Protection

Gloves should be worn during patient contact. Gloves should be changed appropriately. Where there is a high risk of aerosols or splashes face masks and eye protection must be worn. Facemasks must be appropriate to their situation e.g. high-filtration masks in a case of a laser plume. Any blood/body fluid exposure should be treated according to hospital policies.

Other Information

ANZCA policy on Infection Control in Anaesthesia P28

Local hospital policies

APPENDIX B

Supporting Guidelines

The guidelines of the Australian and New Zealand College of Anaesthetists are a further guide for the best practice of Anaesthetic Technicians in New Zealand.

NZATS accepts these guidelines in recognition of the fact that Anaesthetic Technicians provide assistance to Anaesthetists who are expected to practice within the scope of the following ANZCA guidelines. (The practice of Anaesthetists is not limited to adherence of the following listed guidelines only).

The following documents can be found here at:

<http://www.anzca.edu.au/resources/professional-documents>

For Anaesthetic Technicians there must be a working knowledge of the following guidelines:

T01	Recommendations on Minimum Facilities for Safe Administration of Anaesthesia in Operating Suites and Other Anaesthetising Locations
T02	Minimum Safety Requirements for Anaesthetic Machines for Clinical Practice (**PILOT**)
PS03	Guidelines for the Management of Major Regional Anaesthesia
PS04	Guidelines on Equipment to Manage a Difficult Airway During Anaesthesia
PS06	Recommendations on the Recording of an Episode of Anaesthesia Care.
PS08	Recommendations on the Assistant for the Anaesthetist
PS09	Guidelines on Conscious sedation for Diagnostic, Interventional Medical, Dental or Surgical Procedures.
PS12	Statement on Smoking as related to the Perioperative period
PS18	Recommendations on Monitoring during Anaesthesia
PS19	Recommendations on Monitored care by an Anaesthetist
PS28	Policy on Infection Control in Anaesthesia
PS29	Statement on Anaesthesia Care of Children in Healthcare Facilities without
PS31	Recommendations on Checking Anaesthesia Delivery Systems
PS43	Statement on Fatigue and the Anaesthetist
PS53	Statement on the Handover of Responsibilities of an Anaesthetist

REFERENCES & RECOMMENDED READING

ACORN Standards 2004 Review. Australia College of Operating Room Nurses:

- A2 Review Aseptic Technique
- A17 Positioning the patient for surgery
- A20 Review Risk Management in the Peri-operative Environment
- A27 Anaesthetic Nurse 2004 Review

ACORN Standards, Recommended Practices, and Guidelines 2003 Edition:

- Anaesthesia Equipment - Cleaning and Processing
- Attire Surgical
- Hazards in the Surgical Environment
- Positioning the Patient in the Peri-operative Practice Setting
- Standard and Transmission Based Precautions
- Sterile Field - Maintaining+

Australia and New Zealand College of Anaesthetists:

- T01 Recommended Minimum Facilities for Safe Anaesthetic Practice in Operating Suites
- PS08 Recommendations on the Assistant to the Anaesthetist
- PS15 Guidelines for the Peri-operative Care of Patients Selected for Day Surgery
- PS28 Policy on Infection Control in Anaesthesia
- PS31 Protocol for Checking the Anaesthetic Machine

The Code of Health and Disability Services Consumers' Rights New Zealand

Anaesthetic Technicians' Society Incorporated (NZATS):

- Machine check prior to use (based on ANZCA Level Two machine check.)
- Level Three Machine Check
- Training Regulations
- Guidelines for Anaesthetic Technician Registration Examination
- NZATS Website: www.nzats.co.nz

New Zealand Government Legislation:

- Crimes Act 1961
- Dangerous Goods Regulations 1980
- Health and Safety in Employment 1993
- Medicines Act
- Misuse of Drug Regulations 1961

New Zealand Nurses Organisation:

- Standards for Nursing Practice.