

# Scope of Practice

## AUSTRALIA AND NEW ZEALAND COLLEGE OF PERFUSIONISTS SCOPE OF PRACTICE

### 1. Statement of Purpose

The purpose of this document is to inform employers and other professionals of the professional roles, activities, practice settings and guiding frameworks covered by the profession of perfusion in Australia and New Zealand.

The Scope of Practice aims to be a description of the breadth of practice carried out within the perfusion profession in Australia but is not intended to be an exclusive list of areas of practice.

Perfusionists may extend their scope of practice via additional qualifications, experience or training. The extended activities are not covered by the Scope of Practice however these activities should not be precluded from a perfusionists capability, providing the area of practice is within the professional competence of the perfusionist.

Innovation and research in clinical practice and technology will result in periodic review of this document.

### 2. Introduction

#### 2.1 What is a Perfusionist?

##### Who we are:

The core activity of a Perfusionist is to operate the heart-lung bypass machine during heart surgery. This maintains safe and stable patient circulation while the heart undergoes surgical repair.

Perfusionists may operate such equipment during any medical situation where it is necessary to support or temporarily substitute for the patient's heart and/or lung function.

##### What services do perfusionists provide?

Perfusion describes the naturally occurring process of blood and oxygen delivery to the organs and tissues of the body.

Perfusionists utilise a heart-lung machine during heart surgery to facilitate blood circulation and blood oxygenation while function of the patient's heart and lungs are temporarily stopped. ensures perfusion of the patient's organs and tissues. During heart surgery, the heart and lungs are bypassed (cardiopulmonary bypass) and blood is pumped outside the body through an artificial circuit and through an oxygenator – then back into the patient to deliver blood and oxygen to the patient's organs and tissues.

Most heart operations require the services of a perfusionist to operate the heart-lung bypass machine. Some perfusionists specifically train to work in paediatrics.

### **Where do perfusionists practice?**

Perfusionists work in operating theatres in public and private hospitals. Their main work is performed within a cardiac operating theatre, but they also work in Intensive Care Units, General, Orthopaedic, Vascular and Neurosurgical Operating theatres, Cardiac Catheter Laboratories and Research Laboratories. They work in multidisciplinary, interdisciplinary and transdisciplinary teams

Perfusionists are responsible for ensuring they work within the limits of their competence and update their professional knowledge and skills as needed through the Australian and New Zealand Board of Perfusion Continuing Professional Development (CPD) program.

### **Recertification and Continuing Professional Development**

The Australian and New Zealand College of Perfusionists and the Australian and New Zealand Board of Perfusion, on behalf of its members, are committed to ensuring that the professional skills of its members continue to develop. The ANZBP offers a CPD program providing a framework to achieve this aim. As such, there are mandated CPD requirements in order to maintain Perfusion Registration in Australia and New Zealand.

The program is linked to ongoing Certified Perfusionist membership (CP) of the ANZCP.

## **2.2 About the Document**

The Scope of Practice has been developed in alignment with the ANZCP documents Code of Ethics and the Competency-based Occupational Standards for Perfusionists. These documents describe the skills, knowledge, attitudes and ethical behaviour expected of ANZCP members practising in Australia and New Zealand.

**2.2.1 Extended Skills** Extended skills are emerging practice areas from new innovations, technology or research and are important for the development and growth of the profession. Extended skills are not discussed in the Scope of Practice document however this should not limit or prohibit perfusionists working in these areas subject to appropriate training, credentialing and/or endorsement by an employing body.

### **2.2.2 Credentialing**

Credentialing is the process of validating an individual's qualifications, skills, experience, training and/or competency to perform certain procedures or service activities against a set of recognised standards at the point of graduate entry into the profession. Credentialing of extended skills is NOT undertaken by ANZCP. Credentialing of extended skills is typically undertaken by employing bodies.

## 2.3 Framework for Practice

In Australia and New Zealand perfusion practice is guided by the ANZCP Standards and Guidelines document, a professional framework using the best available evidence. ANZCP benchmark and align our current practice with overseas standards from:

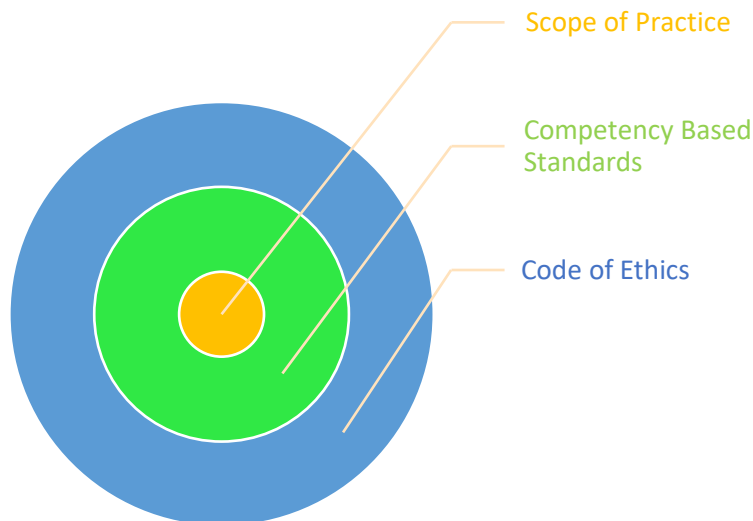
[The American Society of Extracorporeal Technology](#)

[The Society of Clinical Perfusion Scientists of Great Britain and Ireland and The College of Clinical Perfusion Scientists of Great Britain and Ireland](#)

## 3. Scope of Practice

### 3.1 Scope of Practice Relationship

This diagram illustrates how the Scope of Practice fits within existing legal, ethical and professional frameworks. The Scope of Practice forms one of the key foundation documents for perfusionists practising in Australia and New Zealand.



### 3.2 Services (What perfusionist practice may include)

In Australia and New Zealand, the procedures and services which can be provided by Perfusionists include, but are not limited to the following:

#### 1. Extracorporeal Life Support

- a. Cardiopulmonary bypass for adult, pediatric, and neonatal patients.
- b. Cardiopulmonary bypass for congenital and acquired cardiovascular disorders.
- c. Extracorporeal circulatory support for renal, neurological, hepatic and vascular surgery.
- d. Extracorporeal resuscitation.
- e. Extracorporeal circulation for long term support of failing respiratory and/or cardiac function.

#### 2. Associated Extracorporeal Support Functions.

- a. Myocardial protection and administration of cardioplegia
- b. Hemofiltration / hemodialysis.
- c. Anticoagulation and hemostasis monitoring, analysis, and intervention.
- d. Thermal regulation.
- e. Blood gas and blood chemistry monitoring, analysis, and intervention.
- f. Physiological monitoring, analysis, and intervention.
- g. Administration of blood components, pharmaceuticals, and anaesthetic agents

#### 3. Heart Failure Therapy and Support

- a. Ventricular assist device management
- b. Intra-aortic balloon counter pulsation
- c. Temporary pacemaker management
- d. External counter pulsation
- e. Transportation of extracorporeal supported patients
- f. Hemofiltration and modified ultrafiltration.
- g. flow augmentation therapy

#### 4. Blood Management

- a. Auto transfusion
- b. Platelet gel production
- c. Non-differentiated progenitor cell harvest
- d. Acute normovolemic hemodilution
- e. Phlebotomy
- f. Hemostasis monitoring and analysis
- g. Platelet Sequestration

#### 5. Other clinical

- a. Isolated limb / organ perfusion
- b. Isolated limb / organ delivery of chemotherapeutics, progenitor cells, gene therapy vectors, etc.
- c. Organ procurement
- d. Thermogenic lavage
- e. Organ preservation
- f. Dialysis
- g. Plasmapheresis

- h. Total body washout
- i. Surgical assistance
- j. Electrophysiological analysis
- k. Therapeutic hyperthermia
- l. Therapeutic hypothermia
- m. Intravascular membrane oxygenation

## **6. Non-Clinical Responsibilities**

- a. Documentation of duties via the official medical record
- b. Education, including the establishment and management of educational programs for new and current clinical perfusionists, other healthcare providers, and consumers.
- c. Administration, including managing all aspects – technical, fiscal, workflow, and human resources – of clinical perfusion operations.
- d. Quality control and assurance regulatory compliance
- e. Participate in quality improvement projects
- f. Competency / performance evaluation

## **7. Professional Performance**

- a. Obtains and maintains appropriate professional credentials.
- b. Works in partnership with other health care professionals to provide the best medical care possible for all patients.
- c. Adheres to the standards, policies, and procedures adopted by the profession.
- d. Stays current with required continuing medical education (CME) in order to stay abreast of changes in the field of extracorporeal technology and to maintain recertification.
- e. Participates in continuing education activities through professional organizations, to enhance knowledge, skills and performance.
- f. Adheres to the accepted professional ethical standards as defined by the Code of Ethics.
- g. Acts as a patient advocate supporting patient rights.
- h. Design, coordination, and implementation of original scientific investigation.
- i. Support and participation in ongoing original scientific investigation
- j. Critical evaluation of published research.
- k. Serve as an expert witness in court

### **Conduct service management activities such as:**

Human resource management, including supervision of perfusion students and colleagues, mentoring, and recruitment. Supervision of perfusion practice may occur as part of a leadership or management role within an organisation or externally through a contractual arrangement with another service provider.