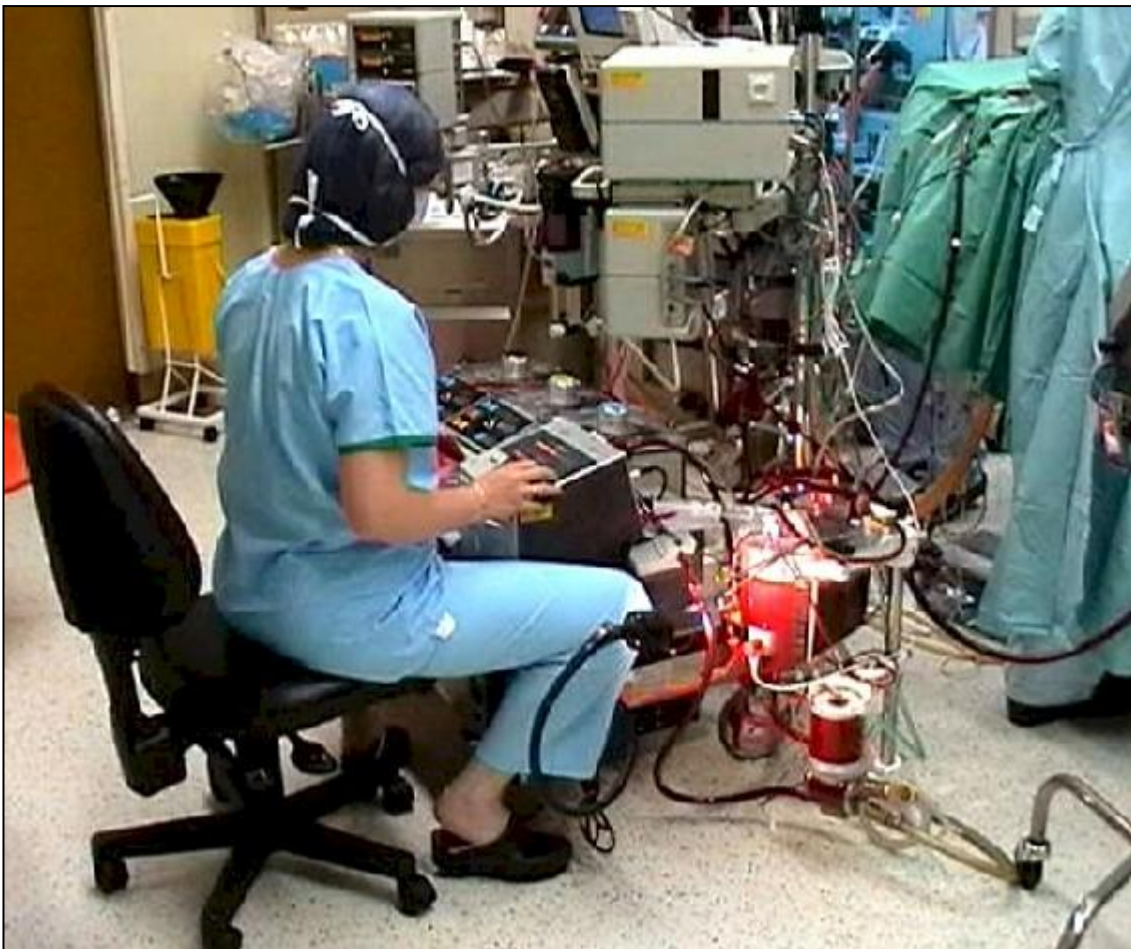




Australian and New Zealand College of Perfusionists

A GUIDE TO PERFUSION IN AUSTRALIA



FACTS YOU NEED TO KNOW

Australian and New Zealand College of Perfusionists

P.O. BOX 921, PARKVILLE, VICTORIA 3025, AUSTRALIA

WELCOME INTRODUCTION

Dear Reader

On behalf of the Australian and New Zealand College of Perfusionists (ANZCP) and The Australasian Board of Cardiovascular Perfusion (ABCP), I would like to welcome you to this outline of the role, practice and duty of care of an ABCP certified Perfusionist and/or ANZCP member.

The ANZCP together with the Royal Australasian College of Surgeons (RACS), and the Australian and New Zealand College of Anaesthetists (ANZCA), established the ABCP to coordinate the education, training, standards and credentialing of Perfusionists.

Despite the existence of this accreditation program, at present there is no obligation for a hospital to employ an ABCP certified Perfusionist to operate the Heart Lung machine in Australia or New Zealand.

The ANZCP and ABCP have been frustrated by the limited number of ways official recognition can be achieved to enable us to prevent uncredentialed individuals from practising or to withdraw credentialing from an individual who has been proven to practice in an unsafe manner.

There are currently no safeguards in place to protect members of the Australian or New Zealand public requiring cardiopulmonary bypass. To this end, the ANZCP and the ABCP are seeking some form of statutory recognition, registration or credentialing of its members by the Australian and New Zealand governments.

We hope you can assist us in closing this loophole that could allow unsafe perfusion practices to occur.

Yours sincerely

Mike Whitburn
President ANZCP



The surgical personnel required to perform Cardiac surgery include the Cardiac surgeon, Surgical assistant, Scrub nurse, Anaesthetist and Perfusionist

With the notable exception of the Perfusionist, each member of this team **MUST BE REGISTERED** to practice by government legislation.

Please assist the ANZCP to rectify this anomaly in Australian and New Zealand law whereby a person may currently practice as a Perfusionist without a minimum qualification or standard of care.

PERFUSIONIST'S DESCRIPTION

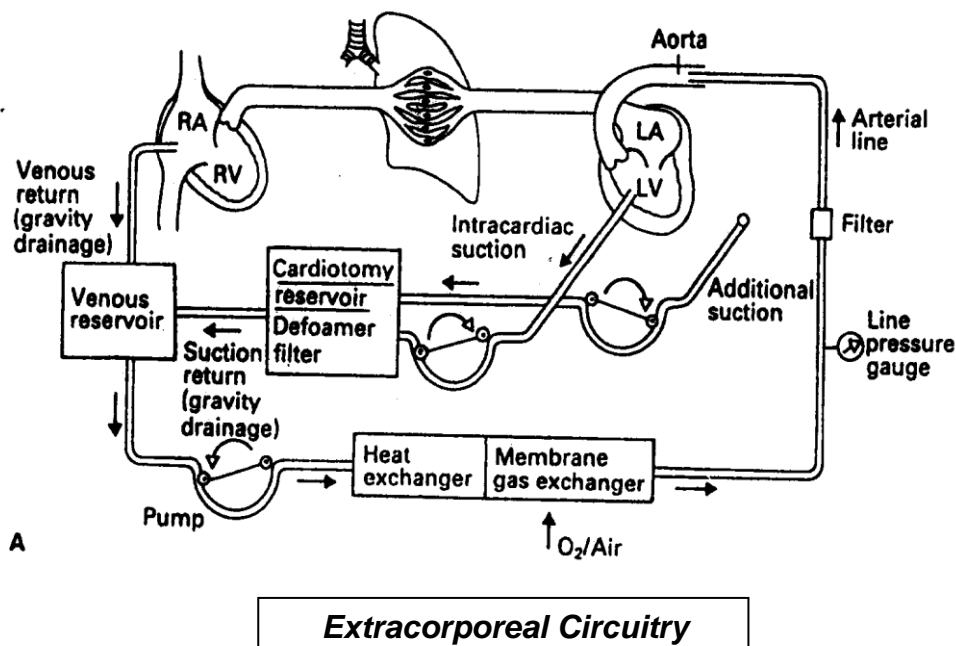
A Perfusionist is a skilled health professional within a cardiac surgery unit. A qualified Perfusionist holds an undergraduate degree of a B.Sc. or equivalent and a Post Graduate Qualification (Diploma of Perfusion) from the ABCP. This enables them to operate and control the extracorporeal circulation equipment required during cardiopulmonary bypass to replace the patient's pulmonary and circulatory functions.

The Perfusionist ensures the proper management of the patient's physiologic functions by monitoring necessary variables. The Perfusionist is knowledgeable concerning the variety of equipment available to perform extracorporeal circulation functions and is responsible for selecting the appropriate equipment and techniques to be used in clinical practice.

Standards defined by the Australian and New Zealand College of Perfusionists and the Royal Australasian College of Surgeons, recommend that cardiopulmonary bypass may only be conducted by specialist individuals who have undergone recognised training and certification in perfusion science.

Perfusionists certified by the ANZCP with recognised training and experience in perfusion science may take responsibility for the conduct of cardiopulmonary bypass.

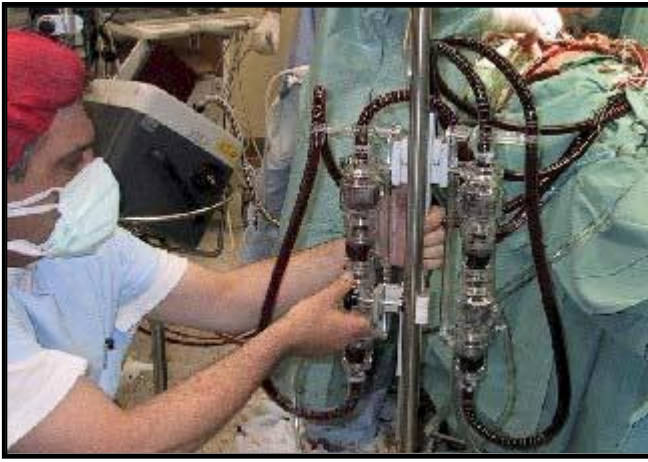
Trainee Perfusionists holding a Bachelor of Science Degree and who are undertaking training by the Australasian Board of Cardiovascular Perfusion may conduct cardiopulmonary bypass with the supervision of a Certified Perfusionist.



The duties of a Perfusionist may include, but are not limited to:

1. Cardiopulmonary Bypass
2. ECMO (Extra Corporeal Membrane Oxygenation)
3. Ventricular Assist Devices
4. Induction of hypothermia I hyperthermia with reversal
5. Haemodilution
6. Haemofiltration I plasmapheresis
7. Administration of cardioplegia
8. Anticoagulation monitoring
9. Blood conservation techniques I Autotransfusion
10. Blood gas I biochemistry monitoring
11. Physiological monitoring
12. Counterpulsation
13. Isolated limb I Organ perfusion
14. Organ preservation
15. Total body washout
16. Dialysis
17. Administration of prescribed medications, blood components, and anaesthetic agents via the extra corporeal circuit
18. Platelet sequestration
19. Full clinical documentation of duties carried out
20. Administration, continuing education, quality control

The above duties describe a spectrum of services potentially carried out by Perfusionists. These services vary according to hospital or institution policy and practice.



Ventricular Assist Device to recover sick heart



Intraoperative blood salvage



Heart-lung machine for paediatric surgery



Intra Aortic Balloon Pump

Measurement of blood flow through coronary grafts



Paediatric Ventricular Assist Device

Anticoagulation, haemostasis, blood gas and electrolyte monitoring



Australian and New Zealand College of Perfusionists (ANZCP)**

In 1984 the Australasian Society of Cardio-Vascular Perfusionists (ASCVP**) was established with the three following objectives:

1. To provide a means of communication between Perfusionists.

This has been achieved by three means;

- i. Annual scientific meeting held on rotating bases between the states of Australia and New Zealand.
- ii. Twice per year publication of the ANZCP Gazette
- iii. The ANZCP website: www.anzcp.org

2. To provide a regulatory body to uphold the standards of Perfusion.

- i. In 1989 the ASCVP in conjunction with the Royal Australasian College of Surgeons and the Australian and New Zealand College of Anaesthetists established the **Australasian Board of Cardiovascular Perfusion (ABCP)**, to train and certify Perfusionists.
- ii. Since 1989 the ABCP has certified 137 Perfusionists from Australia, New Zealand and Singapore.
- iii. In 2001 the ANZCP implemented the re-certification of credentials.

3. To obtain official recognition and acceptance as qualified practicing Perfusionists.

Our objective is to be able to safeguard the public by having an organization such as the ABCP being able to prevent an uncredentialed individual from practising or withdrawing credentialing from an individual who is proven to practise in a dangerous manner.

This area has proven to be the most difficult, as both objectives (i) & (ii) had to be created and established before we could move on.

**The New Zealand government is currently reviewing Perfusionists for inclusion on their register of Para medical practitioners.*

*** In 2007 the ASCVP in line with the other medical craft groups became the ANZCP*

DID YOU KNOW?

According to the Australian Heart Foundation, in 1998 there were **22,253 cardiac surgical procedures** performed in 50 hospitals with each procedure requiring the services of a Perfusionist.

Historically, the number of cardiac surgical procedures grows larger each year. Cardiac surgery procedures in 1998 increased by an estimated 2.6% from 1995.

During most heart surgery the heart must be made to stop beating. To sustain life, the patient's blood is diverted outside the body, circulated through the heart lung machine, and returned to the patient. In effect, the machine assumes the function of both the patient's heart and lungs.

This machine is operated by a Perfusionist

Australia and New Zealand currently **do not require** a Perfusionist to be registered to practice. Neither Australia nor New Zealand set legislated minimum standards for employment of such individuals. Therefore, persons coming into either country to practice extracorporeal technology are not subjected to any minimum standard screening process to work.

For Australia over 90 Perfusionists impact the lives of over 22,253 of its citizens annually. These 22,253 people place their lives in the hands of a surgical team that includes a Perfusionist.

Perfusionists administer medicines and transfuse blood products to patients in the operating room upon the direction of a physician. Allied medical professionals who do these tasks anywhere else in the hospital **must** be registered to practice.

Perfusionists are also utilised in hospitals to participate in heart transplants, lung transplants, liver transplants, mechanical long term circulatory support, and intra operative blood recovery procedures. Perfusionists also perform ECMO (extra corporeal membrane oxygenation) on both paediatric and adult patients. In paediatrics ECMO is performed on newborn infants, and small children who are suffering from both respiratory and cardiac failure. In adults it was used extensively this winter to support H1N1 patients. In some hospitals these patients require the continuous presence of a Perfusionist to support this therapy. Perfusionists are actively involved in many research projects and include such endeavours as the artificial heart.

What Registration of Perfusionists would do

- + It WOULD establish minimum standards of education, training, and competence for persons engaged in the practice of perfusion in Australia and New Zealand.
- + It WOULD assure that the health and safety of the citizens of Australia and New Zealand are protected from unqualified practitioners, or from the unprofessional practice of perfusion.
- + It WOULD assure that in the future anyone entering either Australia or New Zealand to work as a Perfusionist meets a high standard of practice.

What Registration of Perfusionists would NOT do

- + It WOULD NOT prohibit the employment of anyone currently working in Australia and New Zealand.
 - + It WOULD NOT increase health cost in Australia and New Zealand.
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Heart Lung Machine

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