

Clinical perfusion and critical care technology

Join the team and make a difference

These areas involve working alongside doctors and nurses, providing skilled technological expertise and managing equipment that is often responsible for keeping a patient alive.

What will you do?

As a **clinical perfusionist** (also known as a clinical perfusion scientist), you will operate heart and lung bypass equipment during open-heart surgery and take charge of the patient's blood circulation and breathing during an operation.

You will monitor all of the patient's vital signs, ensuring that he or she receives oxygenated blood even when the heart and lungs are unable to function during surgery. This calls for the use of highly technical, electronic and mechanical equipment.

Critical care technologists (sometimes known as intensive care unit technicians) need to have expert knowledge of the delivery of care to critically ill patients. Critical care technologists (CCTs) are a vital part of the healthcare team involved in treating the seriously ill; they enable the medical staff to focus on the treatment itself.

As a CCT, you'll manage, maintain, decontaminate and repair equipment, as well as operate it and analyse readings. You will need a sound understanding of electronics. You will also advise on when replacements are needed and liaise with external suppliers.

In both roles, you will routinely wear protective clothing. It may be necessary for

you to handle hazardous chemicals and substances and to work in a sterile environment.

What entry routes are available?

To work as a **clinical perfusionist**, you will need a BSc degree in a science subject, usually in biological sciences. You will then need to complete a postgraduate diploma in clinical sciences (perfusion) whilst undergoing an in-house training programme. On completion of your training you will be required to sit an examination to attain registration with the College of Clinical Perfusion Scientists of Great Britain and Ireland.

There are no minimum qualifications for trainee critical care technologists although hospitals will usually expect you to have a good knowledge of science and a range of GCSEs may be beneficial. Once you have joined the NHS, you will undergo on-the-job training for which you will be paid. Experienced CCTs are eligible to register with the Voluntary Registration Council for Healthcare Scientists.

If you have a first-class or upper second-class degree in a relevant subject, you may be eligible to join the NHS Clinical Scientists Training Scheme. This is a four-year programme of in-depth training in a specialist area, usually leading to an MSc or specialist postgraduate diploma, and registration with the Health Professions Council. For more information, visit www.nhsclinicalscientists.info

Where will you work?	What skills and qualities will you need?
Most work is hospital based. The roles involve plenty of time in operating theatres. You might also work in intensive care/high dependency units. Shift work is likely, as is being part of a 24-hour on-call rota.	• scientific ability and an interest in medicine and physiology
	• willingness to undertake a highly responsible role
	• accuracy and attention to detail
	• capacity to think and act rapidly
	• ability to work under pressure and concentrate for long periods
	• confidence to handle high-tech, specialised equipment
	• excellent communication skills
	• ability to cope with upsetting situations
	• good team working ability, you will be working with other members of the healthcare team

With GCSEs or an equivalent NVQ and/or previous work experience, it is often possible to start work as a trainee or assistant in healthcare science, combining on-the-job training with study so that you learn as you earn. For more information, see the *Clinical support worker* factsheet.

Some employers also offer cadet schemes, which involve a two-year training programme that gives you experience of different jobs within healthcare science.

For more information on the range of opportunities available in healthcare science, please visit www.nhscareers.nhs.uk/list/qualifications. This gives more specific details about what qualifications are necessary for each role. You can search for current vacancies and download job descriptions at www.jobs.nhs.uk

How can you develop your career?

There are excellent career prospects and you will be encouraged to continually expand your knowledge. With training, responsibility and experience, you could reach the highest level in the profession, attaining consultant status.

Find out more about what training is open to you and how you can develop your career, at www.nhscareers.nhs.uk/list/training

As well as moving into more senior and specialised roles within this area, you will also have the chance to take on additional responsibilities and progress within the organisation as part of the Career Framework. For more information about this initiative, please see the *Careers in healthcare science* booklet.

Pay

A new national pay system – Agenda for Change (AfC) – was introduced across the NHS in October 2004. This applies to all staff except doctors, dentists and very senior managers. These are examples of roles and the AfC bands at which they may be paid: healthcare science support worker (Band 2); healthcare science assistant (Band 4); healthcare science practitioner (Band 5); healthcare science specialist (Band 6); healthcare science advanced (Band 7); healthcare science consultant (Band 8a-c). For more information, visit www.nhscareers.nhs.uk/list/payandbenefits

To find out more about this area of healthcare science, please visit www.nhscareers.nhs.uk/list/working

For more information on the professional bodies relevant to healthcare science, please visit www.nhscareers.nhs.uk/list/contacts