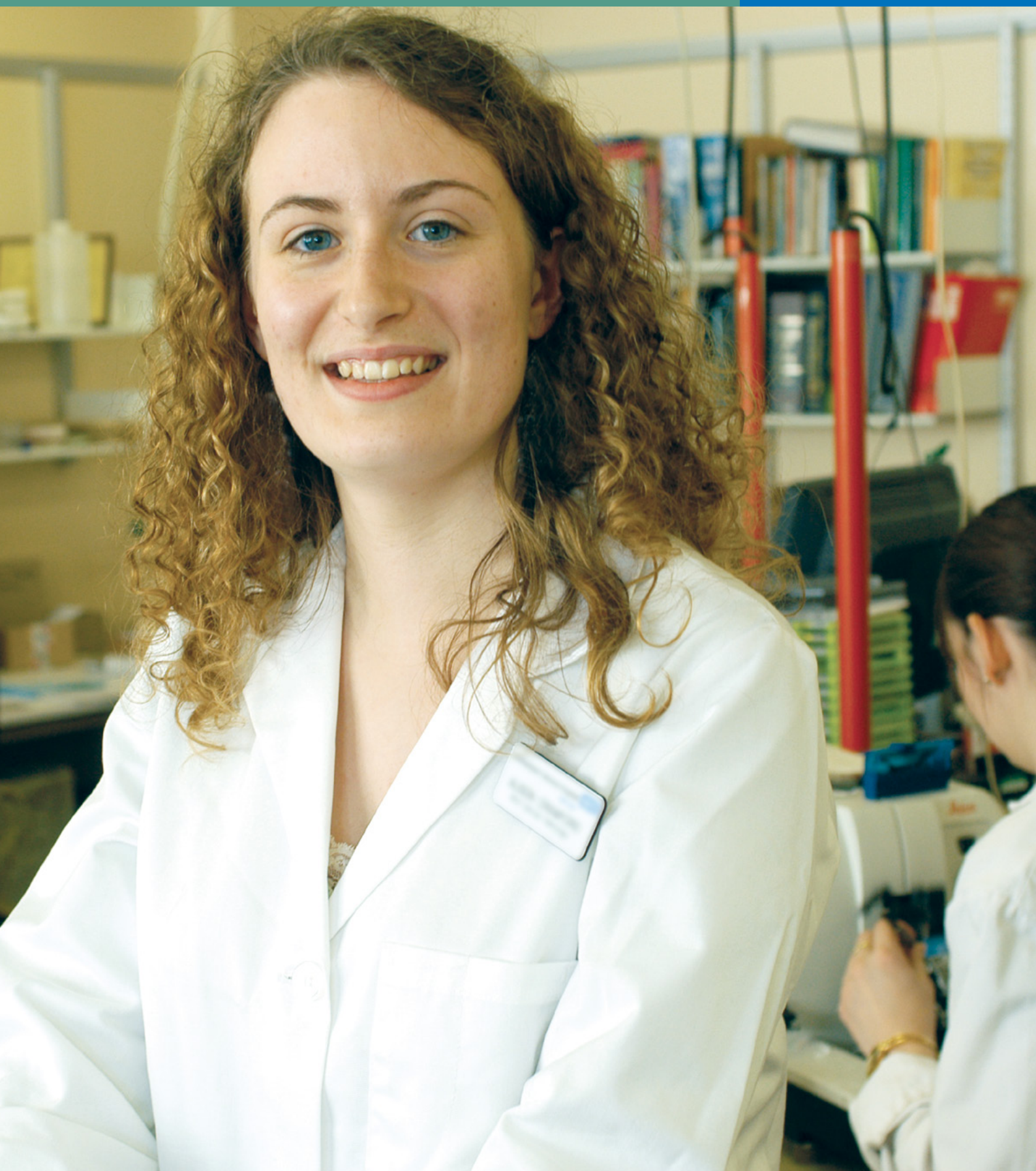
NHS Careers

Join the team and make a difference

Careers in healthcare science



Welcome to the NHS

The NHS offers a huge range of exciting and challenging opportunities for people who are passionate about making a difference.

With more than 350 different careers on offer, there is a job for you whatever your interests, skills or qualifications.

What's more, you'll be given every opportunity to build on your skills and learn new ones as part of the Career Framework – a system that demonstrates our commitment to skills development. See pages 12 and 13 for more information about this.

Scientists, accountants, porters, psychologists, nurses, information technologists and estate managers, to name but a few, are all needed to ensure the smooth running of the NHS. These people, and many more, work together as a team to deliver the very best care for our patients.

To find out more about becoming a member of the NHS team, call 0345 60 60 655, email advice@nhscareers.nhs.uk or visit www.nhscareers.nhs.uk

We look forward to hearing from you!

Contents

Foreword

In this booklet, you'll find out what this fast-developing area of healthcare can offer you, and learn how it fits into the day-to-day working of the NHS.

If you are passionate about technology or science, and about helping others, a career in healthcare science offers a wide range of opportunities.

Healthcare science staff play a vital role in the prevention, diagnosis and treatment of a huge number of medical conditions, as well as in rehabilitation. Rapid advances in science and technology mean this is now one of the most exciting, challenging and rewarding areas of the NHS.

Whatever your academic background, if you have an interest in science, you can find a role that's right for you. We offer a flexible working environment, excellent benefits and a wealth of opportunities to develop your career.

There is an exciting programme of change underway in healthcare science. It is looking at enhancing the training and education of professionals to equip them with the skills to lead the changes for healthcare science delivery for the future. For the most up-to-date information on entry routes into training and the changing career pathways, please visit the healthcare science section of the NHS Careers website.

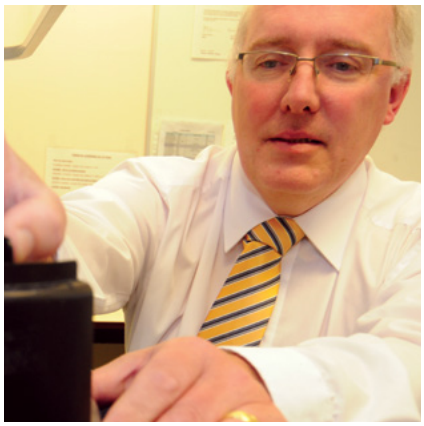
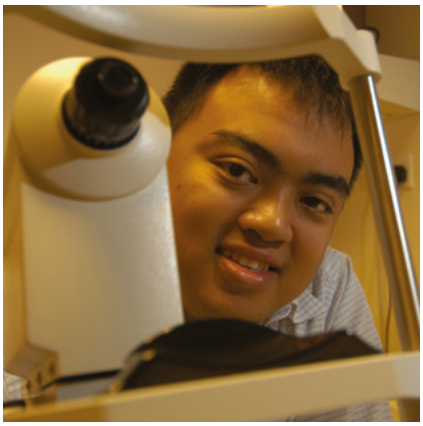
The NHS Careers team

For more information about working in healthcare science, please visit www.nhscareers.nhs.uk/hcs

If you have any questions, call our helpline on 0345 60 60 655 or email advice@nhscareers.nhs.uk





The NHS – a rewarding place to work

There are few careers that are as rewarding as one in the NHS, or that give you the opportunity to work with such a variety of people.

We actively recruit people of all ages, backgrounds and levels of experience. This helps us understand the different needs of the patients we serve every day and provide the best possible service.

Whichever area you join, you become part of a talented, passionate team of people, committed to providing the best care and treatment to patients. You will also enjoy one of the most competitive and flexible benefits packages offered by any employer in the UK.

Benefits of working in the NHS

Everyone who joins the NHS is guaranteed a salary that matches their ability and responsibilities, and given every opportunity to increase it through training and development.

On top of your basic salary, you will receive at least 27 days' holiday each year, plus a range of other benefits, including occupational health and counselling services.

Join one of the UK's best pension schemes

The NHS Pension Scheme is one of the most comprehensive in the UK. Every new employee automatically becomes a member and you will get an excellent package of pension benefits.

For more information about the pension scheme, and a full list of the benefits included, please visit www.nhscareers.nhs.uk/payandbenefits

PAY AND CONDITIONS

The NHS pay system, known as Agenda for Change, offers real benefits for all directly employed staff except doctors, dentists and very senior managers including:

- a standard working week of 37.5 hours
- holiday entitlements of 27 days per year, plus eight general and public holidays, rising to 33 days after ten years' service
- pay enhancements to reward out of hours, shift and overtime working
- better career and pay progression based on the application of knowledge and skills
- annual personal development review to support career aspirations.

Other benefits of working in the NHS include training, occupational health services, automatic membership of the NHS Pension Scheme (unless you choose to opt out) and study leave for sponsored courses.

To find out more about the different Agenda for Change bands, and see the most up-to-date starting salaries for each one, go to www.nhscareers.nhs.uk/payrates

FULFIL YOUR POTENTIAL

- The NHS is committed to offering development and learning opportunities for all full-time and part-time staff.
- No matter where you start within the NHS, you'll have access to extra training and be given every chance to progress within the organisation.
- You will receive an annual personal review and development plan to support your career progression.
- As part of the Knowledge and Skills Framework, within Agenda for Change, you will be encouraged to extend your range of skills and knowledge and take on new responsibilities.

See pages 12 and 13 for more on the Career Framework and examples of how an employee has progressed through the NHS.

CASE STUDY

Name: Richard Fernandez

Job title: clinical scientist in medical physics, Guy's and St Thomas' NHS Foundation Trust

Entry route: professional training scheme*

In his role as a clinical scientist, Richard faces new challenges every day, and it's this variety and diversity that makes the role so appealing.

There isn't a typical day in my job. One day I might be testing a gamma camera, making sure it's working properly for patient imaging. The next I might be giving a patient radioactive treatment for thyroid cancer. On other occasions I'll be advising staff on safety measures when dealing with radiation.

The challenges of the job are what I really enjoy and I love the variety and interaction with clinical staff and the general public.

I also enjoy teaching students on postgraduate nuclear medicine courses. What is also challenging is that it is one of the most regulated disciplines. It's vital to make sure we always meet the relevant regulations.

If you want to do this job you need a clear idea about what's involved in nuclear medicine. You obviously need an excellent grounding in physics and to be able to apply this theory. It's also essential to be able to explain complex nuclear physics in easily understandable language.

The key skills to this job really are in the title: clinical scientist. You have to balance working as a scientist with the requirements of a clinical setting.

* now called the NHS Scientist Training Programme

Helping you find the right work-life balance

The NHS is committed to maintaining a healthy work-life balance for all NHS staff. There is a real focus on specific areas that are designed to make your life easier at certain times during your career. These include:

- flexible working and flexible retirement
- childcare provision and support for carers in the workplace
- creating a healthier work environment
- training and development
- tackling discrimination, bullying and harassment

You can find more information about the initiative and the plans for the future at www.nhsemployers.org/healthyworkplaces

Manage your commitments in and out of work

The size and diversity of the NHS means we can offer you a range of flexible working opportunities.

Part-time roles and jobshare opportunities are often available, as well as term-time only, evening and weekend positions. We will do everything we can to help you combine your work for us with commitments in your life outside work – whether you're studying for a new qualification, raising a family or juggling other responsibilities.

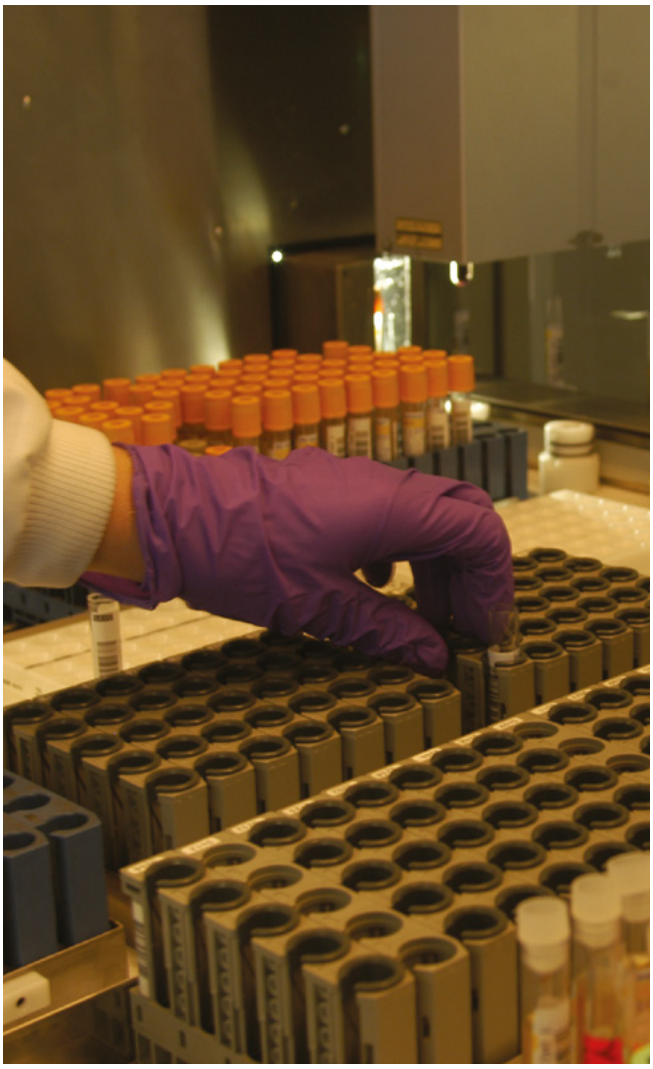
Many people take an extended break to look after young children or other dependants who need special care, or to study full time.

We will help you combine your work for us with commitments in your life outside work

As well as advice and support for people looking after sick or elderly relatives, we provide a range of childcare services for NHS employees, including:

- nursery care
- after-school and breakfast clubs
- holiday play schemes
- emergency care.

Get more information about the benefits and opportunities offered by the NHS at www.nhscareers.nhs.uk/payandbenefits



Your career in healthcare science

Healthcare science is one of the fastest-moving areas of the NHS and its importance will continue to grow.

On a day-to-day basis, the NHS relies on the healthcare science workforce to gather information about patients, recommend the best treatment and, in many cases, administer it themselves. They contribute to 80 per cent of decisions about patient treatment.

At the same time, they are continually developing and testing more sophisticated technology and techniques. Today's scientific advances will form the basis of tomorrow's treatments, providing safer and more effective ways to diagnose and manage medical conditions.

The four areas of healthcare science

The work of healthcare science staff is grouped into four main areas, based on the type of science involved in their work:

- life sciences
- physiological sciences
- physical sciences and biomedical engineering
- informatics

Life sciences

If you work in life sciences, you will play a crucial role in helping to improve our understanding of illnesses and their diagnosis. You might also be responsible for developing new treatments for common medical problems, such as infertility or allergies.

CASE STUDY

Name: Alison Crawford

Job title: medical laboratory assistant, Northampton General Hospital NHS Trust

Entry route: laboratory assistant after GCSEs

Since joining the NHS after her GCSEs, Alison has taken full advantage of the training opportunities to continue her education and develop her skills.

I joined the NHS straight from school aged 16, and spent six months supporting the biomedical scientists in the pathology department.

I was keen to take on more responsibility and develop my skills so I jumped at the chance to enrol for biology and chemistry A levels as part of my development.

The NHS funded the courses for me, and gave me time off when I needed it.

It is very satisfying for me to be able to put what I learn at college to good use while I am at work.

The training and development opportunities here are excellent. It's really encouraging to think that people from all backgrounds can have a great career in the NHS and be fully supported along the way.

Life sciences (continued)

The majority of your time will be spent in hospital laboratories but you may also work on hospital wards or in the community. In a hospital setting, you will often be working in a clinical pathology laboratory to analyse different samples from patients and give doctors the information they need to make an accurate diagnosis. You will also work with doctors to choose the most effective treatment. Genetics is often based in specialist hospitals.

Life sciences is divided into four areas, each with its own particular focus.

- blood science
- infection science
- cellular science
- genetics.

Physiological sciences

In this area of healthcare science, you will examine people directly, to look for any problems in the way their body is working.

You'll be part of a medical or surgical team, and your work will involve direct interaction with patients. You will use the very latest techniques and equipment to identify any abnormalities and help to restore body functions, such as problems with the heart and lungs or hearing.
You may also provide long-term care for patients, helping to improve their quality of life.

Most healthcare science staff in this area are based in hospitals, working in clinics or departments and operating theatres. However, there are increasing opportunities to work in the community at a health centre, visiting people in their homes or at school. You will work with patients of all ages, from newborn babies to the elderly.

Physiological sciences is divided into two areas, each with its own particular focus.

- CCVRS - critical care, cardiac, vascular, respiratory and sleep sciences
- neurosensory sciences

Physical sciences and biomedical engineering

In this area, you will work closely with other NHS clinical teams, applying your skills and knowledge of the physical sciences for both diagnosis and treatment.

You'll also be responsible for developing new techniques and technology to measure what is happening in the body and to diagnose and treat disease. These might include ultrasound, radiation, magnetic resonance and clinical photography, to explore or record the workings of the body.

Part of your role may be to ensure that the complex equipment used in modern hospitals is purchased, calibrated, maintained and used safely and effectively.

You might also develop techniques to design artificial limbs and body parts or improve facial reconstruction for those involved in accidents or born with disabilities.

In these and some of the other roles in medical physics and clinical engineering, you will have direct contact with patients.

Today's scientific advances will form the basis of tomorrow's treatments, providing safer and more effective ways to diagnose and manage medical conditions

CASE STUDY

Name: Katharine Kenny

Job title: trainee healthcare scientist, Oxford University Hospitals NHS Trust

Entry route: NHS Scientist Training Programme

Katharine studied physics at university and took options in medical physics and a Masters project in radiotherapy drugs. She wanted to use her physics knowledge in a more applied way, so medical physics seemed like the perfect option.

As a trainee healthcare scientist in medical physics, my job includes monitoring patients who have had radionuclide therapy and advising them about safety, measuring x-ray image quality and planning radiotherapy treatments.

In my role, I get to use my physics knowledge and work with advanced technology, but I'm also rewarded by knowing I'm helping people to get well. I always loved science and particularly physics at school so when I got the chance I did a week of work experience in the Radiation Protection Department of King's College Hospital, London – my local hospital.

Having the chance to study for an MSc, paid for by the Department of Health, is an amazing opportunity and not something offered by many graduate schemes. In the workplace-based components, trainees get to take part in all the most interesting work of the department, as well as trying out small projects and observing clinical procedures.

If you like science and interacting with people, try and visit hospitals to find out about healthcare science jobs. And if possible talk to people in a variety of jobs about their day-to-day work and interests.

Trainees get to take part in the most interesting work of the department

Informatics

If you work in informatics, you'll be responsible for developing and improving methods for acquiring, storing, organising and analysing biological data that supports the delivery of patient care.

You'll use areas of computer science including software tools that generate useful biological knowledge by manipulating 'big data'.

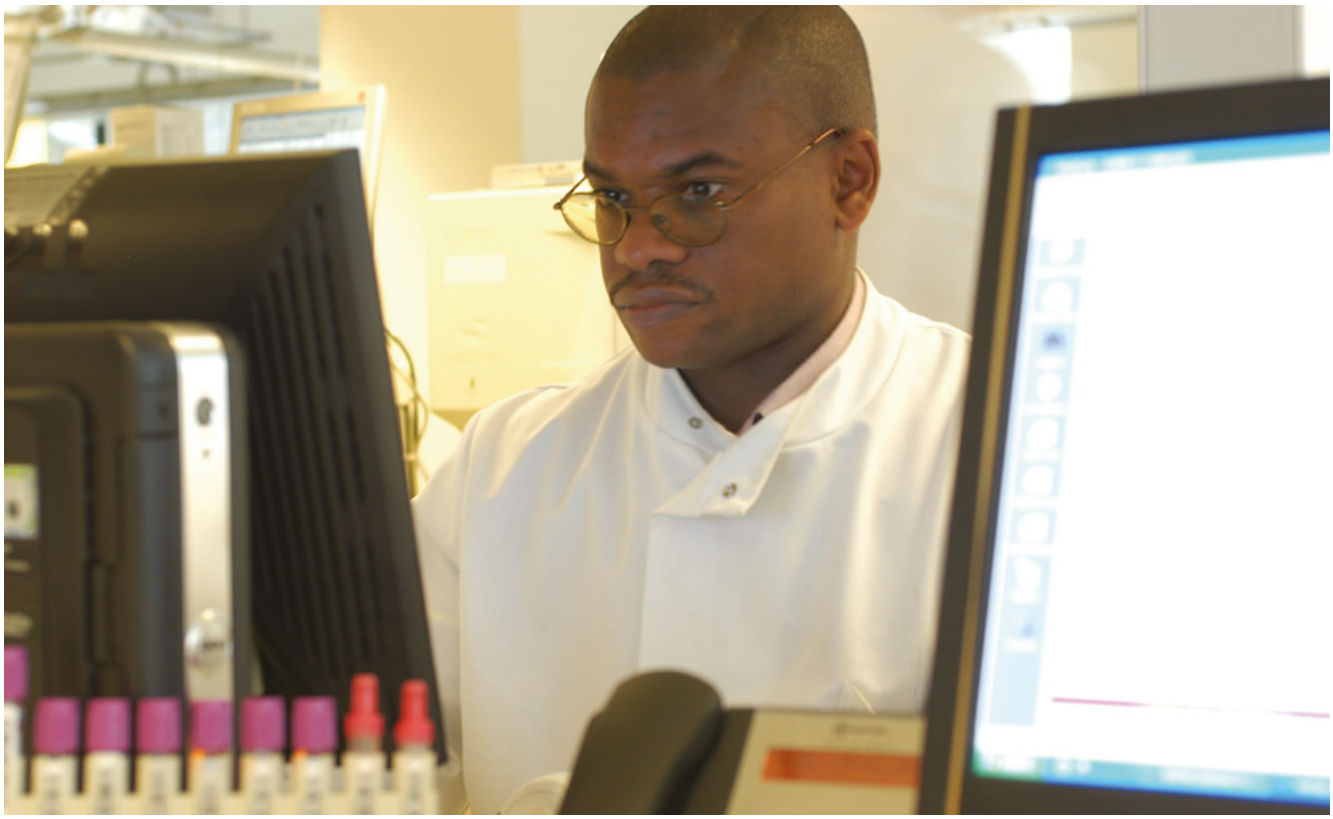
Informatics is divided into three fields:

- genomics
- health informatics
- physical sciences (medical physics and clinical engineering)

Your exact role will depend on the field in which you work. For example in genomics you might be supporting the 100,000 Genomes Project, connecting computing, biology and medicine; in health informatics, you could be ensuring that informatics data is used efficiently and to the required standards; or in physical sciences and engineering, you could be designing the equipment and software that does the processing of the data.

You will work as part of a multidisciplinary team that includes clinical scientists, doctors specialising in genetics, specialist nurses, genetic counsellors, informatics specialists (such as clinical informaticians), information management and technology teams, and external providers of software and databases.

To find out more about the qualifications needed to work in healthcare science, visit www.nhscareers.nhs.uk/hcstraining



CASE STUDY

Name: Samantha Thorn

Job title: trainee healthcare scientist, University Hospital of South Manchester NHS Foundation Trust

Entry route: BSc Hons Healthcare Science (cardiac physiology)

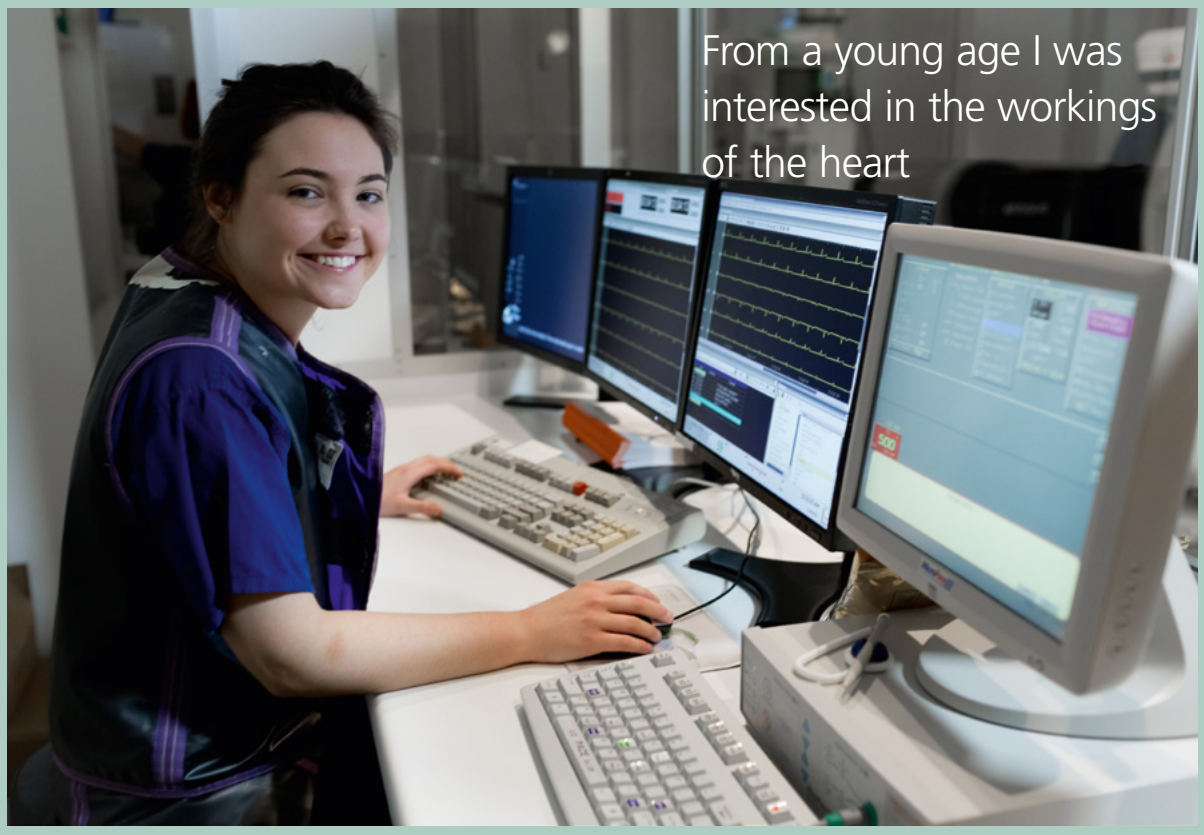
From a young age, Samantha was interested in the workings of the heart and chose biology, chemistry and physical education as her A level subjects.

Doing a clinically-based degree meant there was a lot more to it than lectures and exams.

I'm qualified to perform a range of diagnostic cardiac tests such as electrocardiograms (ECGs), exercise tolerance tests and 'tilt' tests, and 24 hour heart monitors. Every day is different and I interact with patients both in clinics and on the wards.

I am also a key part of the team during cardiac procedures like angiograms, angioplasty [mechanically widening narrowed or obstructed arteries] and pacemaker implantation. I monitor the patient's physiology, using ECG interpretation and blood pressure monitoring from inside the heart.

Working in the catheter labs is very exciting, especially during an angioplasty. It's extremely rewarding to know I've played a part in the procedure and helped to stabilise the patient.



From a young age I was interested in the workings of the heart

Career Framework

The Career Framework has been designed to improve career development and job satisfaction for NHS employees.

It encourages individuals to learn new skills and take on extra responsibilities that enable them to progress within the organisation. Many people take on additional responsibility within their own area, while others retrain and move to different roles.

The case study on page 20 describes how Professor Kevin Spencer has progressed within healthcare

	Ambulance service professions	Allied health professions	Dental care professions	Healthcare science
9 More senior staff	Clinical director of service	Director of therapies		**Head of regional genetics laboratory** Clinical service lead responsible for 75 staff and budget of £5 million
8 Consultant practitioners	Consultant paramedic	Consultant radiographer		**Head of radiotherapy physics** Responsible for department and teaching/ training medical staff and students
7 Advanced practitioners	Advanced paramedic	Specialist speech and language therapist		**Senior biochemist** Responsible for specialist section of the laboratory
6 Senior practitioners specialist practitioners	Specialist paramedic	Specialist occupational therapist	Senior dental technologist	**Scientist/postgraduate trainee** Part time MSc and on-the-job training
5 Practitioners	Paramedic	Dietitian	Dental technician	Cardiac physiologist
4 Assistant practitioners/ associate practitioners	Control room duty officer	Assistant practitioner in occupational therapy	Dental therapist	Critical care technologist
3 Senior healthcare assistants/technicians	Emergency medical dispatcher	Rehabilitation assistant	Dental hygienist	Newborn hearing screener
2 Support workers	Patient transport service driver	Therapy clinical support worker	Dental nurse	Healthcare assistant (audiology)
1 Initial entry level jobs				

science. You can follow his career path in the white boxes on the diagram below, alongside other potential paths in the different areas of the NHS.

The diagram below gives an illustration of a variety of NHS careers and where they may fit on the Career Framework for health. It is not exhaustive; details on other careers can be found in the relevant booklets and on the NHS Careers website.

Visit the NHS Careers website at www.nhscareers.nhs.uk/hcs

Health informatics	Management	Midwifery	Nursing	Wider healthcare team
Director of information management and technology	Director of human resources	Director of maternity services	Director of nursing	
Pictures archiving communication manager	Associate director of children's services:	Consultant midwife	Nurse consultant in stroke	
Clinical researcher	Head of accounts	Head of midwifery	District nurse (team manager)	Head of estates
Systems analyst	Project manager	Community midwife	Community psychiatric nurse	Chaplain
Librarian	Payroll manager	Midwife	Neonatal nurse	Catering manager
Clinical coder	General office manager		Community care assistant	Medical secretary
Medical records clerk		Maternity support worker	Senior healthcare assistant	Security officer
Support desk assistant		Healthcare assistant (maternity)	Healthcare assistant (nursing)	Maintenance assistant
Health records assistant			Nurse cadet	Porter

What opportunities are available?

Within healthcare science there are a range of different opportunities, each playing a vital role in the diagnosis, treatment and management of medical conditions.

This section gives a brief overview of the roles in each of the four broad areas of healthcare science. You can find more detailed information about all these disciplines at **www.nhscareers.nhs.uk/hcs**

Life sciences

Type of work	Examples of roles and responsibilities
Blood sciences	
Analytical toxicology	• investigating the effects of drug overdose and other harmful substances on patients
Clinical biochemistry	• analysing patients' samples to help with the diagnosis and management of their condition
Clinical immunology	• helping to diagnose and monitor conditions that attack the immune system, such as allergies or HIV
Haematology/transfusion	• diagnosing and monitoring blood disorders such as leukaemia, anaemia and haemophilia • finding the right type of blood for patients who need it, for example during an operation
Cellular sciences	
Cytopathology and cervical cytology	• screening cervical samples • examining other tissue samples for abnormalities
Histocompatibility	• preparing suitable tissue for organ and bone marrow transplants
Histopathology	• examining tissue samples under a microscope to reveal the structure of cells and tissues
Immunogenetics	• developing tests to check patients' immune systems
Reproductive science	• dealing with infertility treatments such as in-vitro fertilisation (IVF) • collecting eggs from patients and preparing them for fertilisation
Genetics	
Genetics	• analysing patients' cells to highlight any problems, for example during pregnancy • diagnosing some forms of leukaemia • examining patients' DNA to find inherited conditions and to predict the likelihood of them being passed on to the next generation
Infection sciences	
Medical microbiology and virology	• studying bacteria, viruses, fungi and parasites that cause infection • working in the prevention and control of epidemics
Specialist areas	
Anatomical pathology	• helping doctors identify the causes of death and assisting with post-mortems • supporting bereaved relatives
Quality management	• monitoring the quality of diagnostic tests to ensure they reach the right standards

Informatics

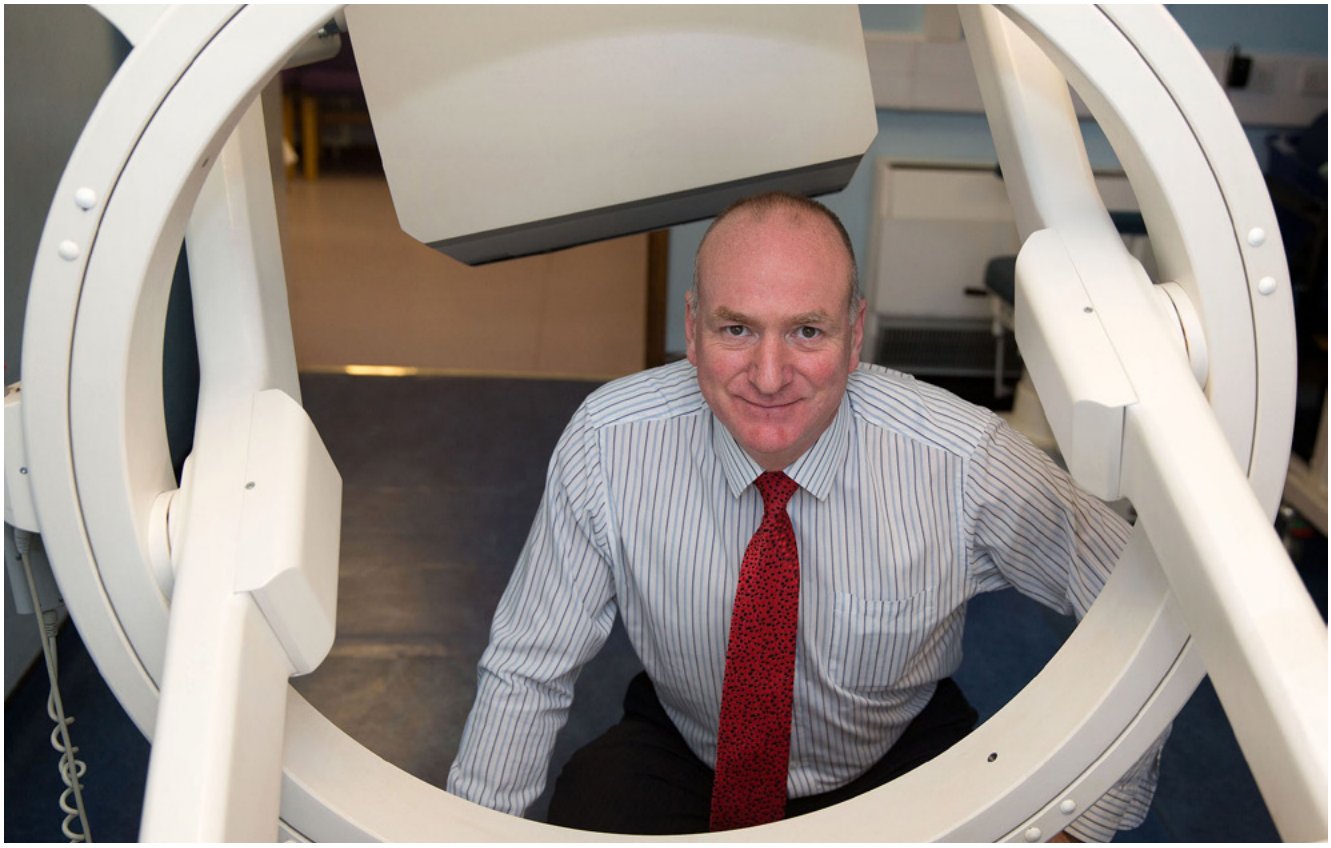
Type of work	Examples of roles and responsibilities
Clinical bioinformatics	
Genomics	• supporting the 100,000 Genomes Project, connecting computing, biology and medicine
Health informatics	• ensuring that bioinformatics data is used efficiently and to the required standards
Physical sciences	• designing the equipment and software that processes clinical genetics data

Physiological sciences

Type of work	Examples of roles and responsibilities
Cardiovascular, respiratory and sleep sciences	
Cardiac sciences	• assessing patients with suspected or known heart disease • measuring and analysing the mechanical and electrical function of the heart and providing treatment
Clinical perfusion	• managing equipment used to support patients' hearts and lungs during major operations
Critical care science	• ensuring that complex equipment for life support and the monitoring of critically ill patients is set up and used correctly
Gastrointestinal physiology	• measuring and assessing the activity in the digestive system • helping with diagnosis • providing treatment to improve patients' muscle tone
Respiratory science	• assessing patients who may have a lack of oxygen in their lungs, airways or blood • providing treatment and care to patients
Sleep science	• monitoring patients who have sleep-related symptoms to identify problems that need treatment and long-term care
Urodynamic science	• investigating urinary difficulties and helping to diagnose, plan and monitor treatment
Vascular science	• assessing patients who have problems with their arteries and veins • helping to identify disease and guide treatment
Neuro-sensory sciences	
Audiology	• measuring and evaluating people's hearing and balance • fitting hearing devices • offering support to help improve the quality of patients' lives
Neurophysiology	• investigating the function of the nervous system to help to diagnose and monitor neurological disorders
Ophthalmic and vision science	• investigating eye and vision disorders for diagnosis and treatment

Medical physics and clinical engineering

Type of work	Examples of roles and responsibilities
Medical physics	
Clinical pharmaceutical science	• manufacturing and supplying radioactive substances for use in nuclear medicine
Diagnostic radiology and MRI	• monitoring the performance of imaging equipment • advising on new techniques for improving results
Nuclear medicine	• developing and using techniques that involve radioactive substances to help diagnose and treat patients
Radiation safety physics	• ensuring the safety of patients and staff in areas where radiation is used by monitoring dose levels
Radiotherapy physics	• maintaining the precision and accuracy of radiation treatments for cancer
Clinical engineering	
Clinical measurement	• make clinical measurements on patients, for example analysing how children walk
Clinical photography	• providing different types of images, such as photography, fine art and graphic design, to assist with the diagnosis and treatment of patients
Medical engineering, medical device risk management and governance	• ensuring medical equipment is installed, used and maintained correctly and advising on the procurement of new equipment
Radiation safety physics and radiotherapy physics	• using specialist equipment to measure and calculate the doses of radiation received by patients during treatment and to check staff exposure to radiation
Reconstructive science (maxillofacial prosthetics)	• specialising in the reconstruction of jaws, faces and skulls for patients needing corrective treatment
Rehabilitation engineering	• assessment of the individual needs of disabled people and the prescription of assistive technology to meet those needs, including the design and development of custom-made devices and systems
Renal technology	• ensuring renal dialysis equipment is maintained and used effectively



Getting started

Whatever your age, education and qualifications, you can join the healthcare science team at a level that's right for you. You'll be given every opportunity to develop your career, if this is what you want. There is on-the-job training for every role, so you can earn while you learn. There's also the chance to study for formal qualifications, including degrees and postgraduate qualifications. Below are some of your options and entry routes.

Values and behaviours

If you decide to deliver NHS healthcare, whatever role you come into, you'll need to show your understanding of the NHS values and behaviours, which are part of the NHS Constitution.

Read more about the NHS Constitution:
www.nhscareers.nhs.uk/nhsconstitution

Apprenticeship and entry level roles

You can start as an apprentice, or in a trainee or assistant role, combining study with on-the-job training, so you learn as you earn. If you have GCSEs (or equivalent qualification) and/or some work experience, you can apply for a range of assistant jobs or apprenticeships, working in laboratories, wards and outpatient departments with clinical staff and equipment.

You will train while you work, by attending day or short residential courses that will be organised for you. Your training can last from a few months up to two years, depending on the role you choose. You could also go on to do a foundation degree in a specific area of healthcare science.

With A levels or an equivalent qualification, you can start your career as a trainee. As well as working and getting practical training on the job, you may be able to study for a degree or other professional qualifications, in a specific area of healthcare science.

There are also apprenticeship opportunities in healthcare science which are advertised on the NHS Jobs website.

Graduate opportunities

Undergraduate training in healthcare science has undergone considerable change. Three-year

For more information on healthcare science professional bodies, visit
www.nhscareers.nhs.uk/hcscontacts

BSc Hons healthcare science degree courses (the Practitioner Training Programme) are available where you can train for positions as a healthcare science practitioner in life sciences, physiological sciences, medical physics and clinical engineering.

These programmes include 50 weeks of work-based experience in the NHS and you will become increasingly specialised in the second and third years towards your chosen career path. Healthcare science practitioners perform a range of complex clinical, scientific and technical procedures. They are accountable for their own actions and for staff that they direct or supervise.

Postgraduate opportunities

If you have a degree in a relevant science subject, you can apply to join the three-year, work-based training programme (the Scientist Training Programme) in a specialism of healthcare science. There is an annual national intake for the Programme. You would be employed in a fixed-term training post working through a series of structured work placements as you learn in the workplace. Participants are given time to study for an MSc in their chosen specialism. Such training gives the opportunity to work as a healthcare scientist at the forefront of medical knowledge and research.

Higher Specialist Scientific Training (HSST) enables experienced healthcare scientists to work at consultant level. These individuals are trained in leadership and innovation as well as scientific and clinical expertise, and will play key roles in the future NHS. Staff doing HSST will also study for Royal College exams.

Pay

Most jobs are covered by the Agenda for Change (AfC) pay system. This covers all staff except doctors, dentists and the most senior managers. The NHS job evaluation system determines a points score, which is used to match jobs to pay bands and determine levels of basic salary. Each pay band has a number of pay points. Staff will usually progress to the next pay point annually until they reach the top of the pay band. For individual salaries of each pay band, visit **www.nhscareers.nhs.uk/payrates**

Your career in healthcare science could begin as a healthcare science assistant at AfC band 2, rising to consultant clinical scientist at bands 8d – 9, with roles between depending on knowledge, training and experience. For example, the typical AfC banding for a healthcare science practitioner in pathology is band 5, an entry-level cytology screener is band 3 and a medical engineering team manager is band 7.

Work placements

Arranging a work placement is the best way to find out if a career in healthcare science is for you.

It will give you the opportunity to experience the working environment, try the type of jobs you would be doing and to speak to people already working in that area of the NHS. Depending on the area of science you want to work in, this might be laboratory-based or could involve direct patient contact.

The number and type of work placements available vary depending on where you are in the country. For more information about opportunities in your area, please talk to your local NHS organisations.

A work placement will give you the opportunity to experience the working environment, try the type of jobs you would be doing and to speak to people already working in that area of the NHS

For more information about undergraduate healthcare science training in the NHS, visit www.nhscareers.nhs.uk/ptp

For more information about postgraduate healthcare science training in the NHS, visit www.nhscareers.nhs.uk/stp

For more information about Higher Specialist Scientific Training in the NHS, visit www.nhscareers.nhs.uk/hsst

For more information on pay for healthcare science staff, visit www.nhscareers.nhs.uk/payforhcs

CASE STUDY

Name: Rachael Andrews

Job title: trainee healthcare scientist, Cambridge University Hospitals NHS Foundation Trust

Entry route: MEng in mechanical engineering, including a taught module and final year research project in bioengineering

Rachael is a clinical engineering trainee on the Scientist Training Programme. A healthcare science career appealed to her because it provides opportunities to work directly with patients and undertake research.

Learning about bioengineering in my final year at university inspired me to research careers in engineering applied to medicine. I decided to apply for the Scientist Training Programme because it allows trainees to experience different areas within their chosen stream before selecting a specialism. The opportunity to study for an MSc while earning a graduate salary is another attractive feature.

The opportunity to study for an MSc while earning a graduate salary is an attractive feature

Clinical engineering covers a wide range of disciplines and I have chosen the rehabilitation engineering specialism, which involves assessing a patient's level of function, working alongside doctors, occupational therapists, physiotherapists and physiologists to recommend ways to improve or manage reduced function. I am currently working in the gait laboratory and a typical patient appointment involves a clinical engineer taking a patient's history, measuring lower limb segment lengths and passive joint motion ranges, attaching reflective markers for 3D data collection, and recording 2D video and 3D movement data. The clinical engineer then processes the data and writes a report for the referring doctor.

In the first year of my training, I shadowed clinical scientists and other staff members in several departments in my base hospital and also other hospitals across the country. My specialist training involves longer placements which allow me to apply and develop the knowledge and skills I gained through observing staff on my rotational placements.

I really enjoy meeting patients and working in multidisciplinary teams to solve problems affecting those patients. Seeing an improvement in a patient's level of function and, in turn, quality of life, is very satisfying.

CASE STUDY

Name: Professor Kevin Spencer

Job title: consultant biochemist and clinical lead, Barking, Havering and Redbridge University Hospitals NHS Trust

Entry route: BSc in biochemistry followed by a postgraduate training scheme - now the Scientist Training Programme (STP)

Kevin's career began as a biochemist. Since then, his passion for research as well as opportunities to progress in the NHS, has meant he is now a visiting professor at a major London university.

I decided I wanted to become a biochemist in my final year of university, after having the opportunity to spend some time in the biochemistry department at my local hospital. I joined the NHS as a trainee which enabled me to study for an MSc in clinical biochemistry. Following my traineeship, I was offered a permanent job as a biochemist, where I worked for two years before successfully applying for a senior post in Southampton.

I was always interested in research and was fortunate to be given the opportunity to pursue this alongside my senior biochemist duties, after finishing my MSc. I then got a job as a principal biochemist, where I was responsible for setting up a regional screening programme in east London to test and diagnose problems during pregnancy, such as spina bifida

Over the next few years, I progressed to consultant biochemist and then to honorary senior lecturer at King's College London. I was later named visiting professor. I also became head of the clinical biochemistry department, which serves a population of over three quarters of a million people and performs more than seven million tests per year. I also have had a very active research role.

There is no typical day in my job. One day I will be dealing with enquiries about patient results, and the next I am supervising technical work in the laboratory. I also teach at the hospital or university and manage a research team that require support on various studies and experiments.

I am very lucky. I have an incredibly varied role where no two days is the same – other than to say they are all hectic! I find it very rewarding and after more than 30 years in the NHS, I still get a kick out of what I do.

What's your next step?

We hope this booklet has given you some idea of the many opportunities on offer in healthcare science.

If you've decided you want to join the NHS in a healthcare science role, your next step depends on your starting point. Find out as much as you can about the qualifications you need and the opportunities that are available. NHS Careers can provide further information on how to apply for training and you can also consult your local careers adviser.

If you need a degree, UCAS can advise on which universities offer the relevant courses. Each university will be able to tell you what they look for in applicants. For example, getting some work experience is an excellent way of showing your commitment and enthusiasm. You can also use the coursefinder on our main website **www.nhscareers.nhs.uk/courses** to find accredited degree courses in healthcare science for the Practitioner Training Programme.

If you are already working, but are thinking about a change of career, consider volunteering in your spare time. This is a great way to find out if you like the work, and can sometimes lead to a more permanent position.

Here is a checklist of things you should be doing, whether you're still at school, studying for your degree or looking for a change of career:

- Have you explored routes into your chosen career? Will you need a degree or other qualification before you join, or will the NHS train you on the job? There may also be the opportunity to start as an assistant or through an apprenticeship.
- Are there any particular skills or experience that will improve your chances of getting into your chosen career?
- Have you enquired about opportunities to volunteer or do relevant work experience?
- Have you investigated further qualifications you might need for your chosen role?
- Have you searched the NHS Jobs website or spoken to your local trust to get an idea of the type of vacancies available?
- Make sure you keep up to date with any changes to healthcare science education and training opportunities by looking on the NHS Careers website.

Use our course finder to search for universities offering accredited BSc (Hons) healthcare science courses www.nhscareers.nhs.uk/courses

Whatever position you're in right now, the NHS Careers service can help point you in the right direction. Call us on 0345 60 60 655, email advice@nhscareers.nhs.uk or visit our website at www.nhscareers.nhs.uk

To search for jobs in healthcare science, go to www.jobs.nhs.uk, and for more information about professional bodies please visit www.nhscareers.nhs.uk/hcscontacts

CASE STUDY

Name: Emerson Priola

Job title: ophthalmic technician, Moorfields Eye Hospital NHS Trust

Entry route: trainee ophthalmic technician

Since making the switch from the office job he'd held since school, Emerson is now combining his two main passions – science and helping people.

For me, this is the perfect mix of working with machines and people. From school I had an NVQ3 in engineering, and I'm now using those skills to help people and make a difference in the community, which I'd always wanted to do.

I worked for six months under supervision, until I became proficient in operating the equipment and practised dealing with patients. I now work on my own, running tests and seeing up to 30 people every day. The patients range from children to people in their 90s, so it's important we communicate with each one accordingly.

As ophthalmic technicians we do tests, required by doctors, for a whole range of eye conditions. Many rely on patients telling us what they see, so it's important that we explain exactly what we're doing and what we need from them. This way we get more accurate results, which help with diagnosis and treatment.

With the support of the NHS, I am now continuing my training and education, to develop my skills and my knowledge of this area of medicine.

The dynamics of the eye are fascinating and I really love what I do here. Plus, the fact that I am helping people makes this very rewarding work. I really feel that I have found my place!

With the support of the NHS, I am now continuing my training and education to develop my skills and my knowledge

*Please note, NVQs are now more commonly referred to as vocational qualifications

Here are some other things you can be doing, depending on where you are right now. For all contact details, please visit www.nhscareers.nhs.uk/hcscontacts

Where are you now?	What should you do now?	Who can help?
Studying for GCSEs	• check what your likely exam grades/results will be • explore routes into your chosen career – will you need a degree or other qualification before you join, or will the NHS train you on the job? Can you start as an assistant? • are there any particular skills or experience that will improve your chances of getting into your chosen career? • enquire about volunteering or work experience • find out if you need any specific A levels, or equivalent qualifications	Subject teachers Your careers adviser Professional bodies NHS Careers National Careers Service
Studying for A levels or another course at your school or a local college	As GCSEs, plus: • consider the option of a healthcare science apprenticeship • if you need to study a particular higher education course, find out which universities offer it • search www.nhscareers.nhs.uk/courses for BSc (Hons) degrees in healthcare science • investigate any further qualifications you might need for your chosen role • search the NHS Jobs website at **www.jobs.nhs.uk** and speak to your local NHS organisation to get an idea of current vacancies.	Subject teachers Your careers adviser UCAS NHS Careers Professional bodies National Careers Service
At university	As A levels, plus: • find out more about the Scientist Training Programme (STP) from the NHS Careers website.	University careers service NHS Careers Professional bodies NHS Jobs
Looking for a new career	As A levels, plus: • Find out if you will need to retrain before you apply for new roles or if the NHS will train you while you are working.	Careers service (you may have to pay to use these services) NHS Careers Professional bodies Jobcentre Plus NHS Jobs UCAS National Careers Service

FOR FURTHER COPIES OF THIS BOOKLET PLEASE CONTACT:

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