

NHS Healthcare Scientist Training Programme (STP)

Key dates:

Applications usually open in early January and only stay open for about 3 weeks for 'direct entry' applications from final year students and graduates (NB: a later closing date may apply for people who already work 'in-service' in NHS healthcare science roles)

What do healthcare scientists do?

The healthcare science team play a vital role in the prevention, diagnosis and treatment of a huge number of medical conditions, as well as in rehabilitation. The STP provides training for individuals who aim to become future managers in the healthcare science team, with responsibility for progressing the service provided by the team and strategic developments in their specialist area. Being a senior healthcare scientist in the NHS is very different from being at the cutting edge of discovery in a research institution, it is a managerial position where you need to manage costs as well as people. For those interested in life sciences, for example, if you would rather spend your days in the lab, explore practitioner training (www.nshcs.hee.nhs.uk/ptp-join/nhs-practitioner-training-programme) or technician/technologist/lab posts.

What is the STP?

Under the STP, NHS trusts are funded to offer salaried training posts (£26,000 salary approx.) throughout England. It is a three-year, fixed term, integrated training programme of workplace-based learning and a Master's degree in a chosen specialism. The following pathways are available:

- **Clinical bioinformatics** - including genomics, physical sciences and health informatics
- **Life sciences** - including andrology, clinical biochemistry, clinical immunology, genomics, haematology/transfusion science, histocompatibility and immunogenetics, histopathology, microbiology, reproductive science and genomic counselling
- **Physical sciences and biomechanical engineering** - including clinical engineering (eg rehabilitation engineering), clinical pharmaceutical science, medical physics (eg nuclear medicine, radiotherapy physics, radiation safety, imaging (ionising), imaging (non-ionising), MRI and ultrasound) and reconstructive science)
- **Physiological sciences** - including audiology, cardiac science, critical care science, gastrointestinal physiology, neurophysiology, respiratory and sleep science, urodynamic science and vascular science

In the first year, STP trainees undertake four different rotations, the first in their 'home' and then three related specialisms. Years 2 and 3 involve specialist training, an elective placement (which could be in industry or study abroad) and a project exploring the trainee's own area of interest. The MSc component equates to approximately one or two days per week although not all employers give time off for study. A lot of self-reflection is required to document your progress. Those who have been through the training comment that it is an intense process. Balancing both work and study means that it isn't a 9-5 job.



Much of the learning is self-directed and you need to be proactive in seeking out your supervisor and asking them questions - no-one will just tell you what you should be doing and when.

That said, trainees agree that it is very rewarding to know that your role can make a difference to people's lives, so it is worth all the effort.

Upon completion of the STP, trainees will be able to apply to the appropriate professional register and to posts as scientists in the NHS. There is no guarantee of a job at the end of the training, although the general idea of the STP programme is that there will be positions available for everyone who successfully completes it.

Applying for the STP

Recruitment takes place on an annual cycle. 'Direct entry' posts for graduates are advertised over a short period (approx. 3-weeks) usually in January. Interviews take place around March / April time with outcomes known by the end of May. New trainees commence their post in autumn. During the 3-week application period, positions available in each region are listed on the National School of Healthcare Science (NSHCS) website: www.nshcs.hee.nhs.uk/join-programme/nhs-scientist-training-programme.

Applications are online. Make sure you read all the advice on the website before applying. Applicants will have a maximum of two choices of specialism (choose two that are linked in some way to show focus) and as many preferences of location as there are posts for each specialism. Your choice of location will not affect your likelihood of getting a position; whilst the NHS tries to give you your preferred location, if you are successful at interview but your location choices aren't available, you'll be offered a position in your specialism elsewhere, so be prepared to be geographically mobile.

If any of the questions refer to your chosen specialism and you have chosen more than one, use the space provided to answer for both specialisms.

Keep up to date via Twitter @nshcs or @HealthCareersUK or search for #NHSSTP).

There are usually around 300-350 training posts on offer each year. **Competition is tough** - In 2016, there were approx. on average 22 applicants to every STP post but there are wide variations within this, for example clinical immunology had the highest competition ratio with 80 applicants per post whereas clinical bioinformatics had 5.25 applicants per post. Medical Physics usually has the most places followed cardiac sciences, audiology and genomics.

In 2017, the key questions on the application form included:

1. **Your knowledge, motivation and commitment to the training programme**

In less than 250 words, please state why you have applied for the Healthcare Scientist Training Programme. Give details of your motivation, suitability and future career development or aspirations. Describe what actions you have undertaken to increase your knowledge, experience and understanding of healthcare science and the training programme for your chosen specialism(s).

2. **Your commitment to healthcare, science and technology**

In less than 250 words, please describe your commitment, interest and enjoyment of scientific practice and technology. Please provide examples of how you seek to develop, improve and adopt innovative processes in your work or studies.

3. Values and behaviours

The NHS Constitution* values and behaviours are paramount to the delivery of healthcare services. In less than 250 words please describe how within your own experience you would display these qualities.

4. Team working and leadership

In less than 250 words describe occasions where you have worked as part of a team and outline the skills you used to benefit the outputs of that team. Also, please describe a situation or situations when you have taken the opportunity to lead others and identify how you managed any challenges that arose, or have taken the opportunity to lead others and identify how you managed any challenges that arose.

*To read the NHS Constitution, see www.gov.uk/government/publications/the-nhs-constitution-for-england/the-nhs-constitution-for-england. When answering, also try to show skills/experience needed for your chosen specialism(s). Candidates also have to take online aptitude tests including Numerical Reasoning and Logical Reasoning, so be prepared. Practice tests are available at www.trytalentq.com.

The Careers Service also has links to other practice tests, www.sheffield.ac.uk/careers/applications/psy. Extra time is permitted for eligible applicants such as those who have a disability. Candidates are then shortlisted for interview based on their application and test result.

Interviews for STP

Interviews are held on a national basis in March / April. Approximately three times as many candidates are shortlisted as there are training posts. Where candidates have applied and been successfully shortlisted for more than one specialty/theme they will be required to attend additional interviews, which may be on different days. Candidates who identify different preferred geographical locations but all relating to one specialty/theme will only be brought in for interview once. All interviews are held in the same place (Birmingham), using national guidelines for selection to ensure all candidates are treated fairly and equally.

Interviews use the 'multiple mini interview' format. In previous years, this has consisted of four separate interview stations with two interviewers at each station. Each 'station' assesses different aspects:

General aptitude for science and understanding of scientific services in society; Specialism specific questions to assess knowledge and skills; values and behaviours; leadership and management potential. Each candidate spends 10 minutes at each station, with a 2-minute interval between each one. You will be briefed about the format of the interview beforehand.

Answers are scored and then those scores are counted and placed in rank order with the top candidates receiving job offers. Before interview, candidates are asked to list their preferred locations so offers are made for particular regions according to score. Relocation is a **strong** possibility not just for the STP but throughout your career.

Assessment criteria

Academics

As a minimum, you will need a 2.1 or a first in a relevant honours degree. Applicants with a relevant 2:2 degree will also be considered if they have an MSc or PhD. For all candidates, evidence of research experience (e.g. in the form of a higher degree or equivalent evidence of scientific and academic capability), is considered desirable. The most commonly accepted degrees include:

- **Life Sciences:** biomedical sciences, biology, microbiology, genetics or biochemistry
- **Genomic Counselling:** biological or equivalent sciences, nursing or psychology (with a supplementary genetics short course)
- **Clinical Bioinformatics:** Maths (at least A level standard) plus genetics, biology, computer science, health informatics (degree courses with significant IT content or equivalent) for genomic bioinformatics and health informatics or computer science, scientific, engineering or maths (that contains a significant level of mathematical and computer programming knowledge and skills) for physical sciences bioinformatics.
- **Clinical Pharmaceutical Science:** chemistry, life/biological sciences which are chemistry related (e.g. biochemistry or pharmacology), pharmaceutical sciences or pharmacy.
- **Physiological Sciences** - physiology, pure or applied physics, engineering, biology or human biology
- **Physical Sciences and Biomedical Engineering:** pure or applied physics, engineering, applied mathematics

Science degrees related to medicine may be considered suitable if relevant to the specialty or theme for which you are applying.

Skills and attributes

Show that you have the right mix of skills and experience for the specialty / theme(s) you are applying for (check the job description). More generally, the NHS states that it is looking for:

- high achieving graduates
- people who are passionate about science or technology
- people who want to apply their skills and knowledge for the benefit of patients and the public
- people who seek constant improvement and innovation

The NHS says that it wants people who can undertake complex scientific and clinical roles, defining and choosing investigative and clinical activity and making key judgments about complex facts and clinical situations. Some roles involve working directly with patients so think about what 'people' skills you may need (and hands-on caring experience) as well as being involved in innovation, research and development.

The STP will ultimately lead on to managerial roles, so think about the sorts of skills you will need to fulfil that function including leadership, interpersonal skills, ability to motivate others, communication skills, initiative, the ability to offer new ideas, etc. You also need to exhibit a willingness to take responsibility for your own learning and personal development, knowing what sort of training / exams you will follow and professional bodies and learned societies that represent your profession.

Experience and insights

Applicants are strongly encouraged to visit at least one laboratory or scientific department in an NHS Trust workplace or clinic for a short period of time before applying.

Open days are advertised on the NSHCS website but are very popular. If there isn't an open day for your specialism, contact the relevant healthcare science manager at a few hospitals to see if you can arrange a visit (contact details are usually on the hospital's website, otherwise call the hospital's general enquiry number and ask who heads up the healthcare science team in your specialism).

You will be expected to demonstrate a good, overall understanding of what the NHS does and how it does it, along with some of the latest issues facing the NHS, which you could get from a visit. This includes:

- Knowing what scientists in your chosen specialism(s) do eg, clinical, training, research, audit, management and leadership
- Being aware of the different staff within your chosen area – and the differences between them
- Understanding 'state registration' (HCPC) and why it exists
- Finding out about quality management including quality control, external quality assessment, etc
- Keeping up to date with NHS news/politics

According to those already working as healthcare scientists in the NHS, there is now more emphasis on candidates showing enthusiasm and motivation for the role (which can be demonstrated by taking the initiative to visit a lab or attend a study day) rather than candidates having extensive healthcare science work experience in the NHS. This is because recruiters know how difficult it is to obtain such work experience. You could try contacting the Human Resources team for hospital trusts to enquire about work experience, visits or study days. If they can't help, try contacting relevant hospital healthcare science managers directly - if they have enough enquiries from different people they might set up a visit day!

You can show relevant experience in other ways, for example, project work as part of your undergraduate degree, summer vacation work in a science setting or through a research-based Masters or PhD. Relevant volunteering, for example working with patients who have health issues related to your area of interest, can help you stand out. You could also try attending some relevant healthcare networking events - you never know who you might meet there who could help you get experience or an insight into your chosen specialism. Go along to NICE public events, science festivals, Cafe Scientifique, Sheffield Women in Medicine Group, etc.

For other ideas read the Careers Service information sheet on Health Related Volunteering in Sheffield.

Specialist knowledge

In addition to skills, make sure you read up extensively on your chosen specialism so that you know the latest developments and the science behind it. Read patient information leaflets and hospital websites, relevant scientific / health journals and academic publications.

Scotland and Northern Ireland

At present, there are separate clinical scientist training schemes for the NHS in Wales, Scotland and Northern Ireland. These are administered completely independently of the NHS STP in England so you can apply for all schemes if you wished to do so. To find out more, please go to the relevant websites:

- Scotland: www.nes.scot.nhs.uk/education-and-training/by-discipline/healthcare-science/all-healthcare-science/clinical-scientists.aspx (advertised in early 2017)
- Northern Ireland: www.nidirect.gov.uk/healthcare-scientist

Other science-related roles in the NHS

If you are unsuccessful gaining a place on the NHS STP you could investigate other routes into the profession. One route would be to start out as a healthcare science associate or assistant and work your way up, perhaps applying for the STP as an internal candidate later on. You may even decide that you prefer a more 'hands-on' career as a senior practitioner or technologist or team leader – many people progressing from the STP don't get to do the hands-on work as they have other developmental and strategic responsibilities.

If you want to look for entry level positions, search NHSjobs using search terms such as healthcare science assistant (Band 2 or 3 pay scale), healthcare science associate (Band 4) or - if you already have relevant experience - healthcare science practitioner (Band 5). Also try using your chosen specialism or area of scientific interest as a search term because individual hospitals might use a variety of different job titles to refer to similar roles. For example, those interested in genetics or genomics should use those as search terms along with search terms like technician, technologist or laboratory assistant.

If you do decide to apply for entry level positions, these are advertised on an ad-hoc basis throughout the year and may have closing dates within a week or so of the advert going live. Some might close early if they receive a lot of applications so don't leave it too late to apply. Make sure you get the basics right, ie spelling and grammar, this is the number one reason why most people are rejected along with not clearly demonstrating how their skills, knowledge and experience match the job description.

Once you get into an entry level position, take every opportunity to show enthusiasm. For example, offer to show visitors around or ask to shadow colleagues in other roles that interest you. Dress smartly to show this job matters to you.

If you are interested in more practical work in the NHS, investigate the Practitioner Training Programme rather than the STP.

As the NHS is increasingly outsourcing lab work, investigate private providers such as Serco, Synlab, Unilabs, Abbott Diagnostics, Roche Diagnostics and others if you are interested in the practical side of things (do an internet search for NHS pathology or lab outsourcing).

If you have programming skills and want to use your science in a different way, investigate clinical bioinformatics, this is a growing specialism in the NHS.

For more information on the different NHS healthcare roles
www.healthcareers.nhs.uk/Explore-roles