



Healthcare Science Annual Report **2021-22**

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Introduction

We support the training and development of postgraduate scientist staff and other key groups in the Healthcare Science workforce

Our Annual Report for 2021-22 covers our four areas of activity:

Commission/
funding of training posts

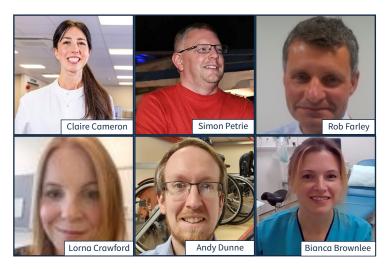
Quality assurance of training

Supporting Trainees and Supervisors

CPD and e-learning

The core team, here at NES Healthcare Science, act as a national focus for Healthcare Science education and training. We are here to help you. The Healthcare Science workforce is the 4th largest clinical-registered group of NHS staff with approximately 7000 staff in post across NHS Scotland. With some 50 sub-specialties, it covers life sciences such as laboratory testing, clinical physiology such as cardiac testing and physical sciences such as medical physics.

Meet the 2021-22 NES Healthcare Science core team:





Farewell and good luck to our HCS NES colleague and former Principal Lead,
Owen Mills who has left to return to service full time in a new position as Head of the Rehabilitation Engineering department for NHS Highland, Raigmore Hospital, Inverness.

Foreword

2021-22 has seen a transition to new ways of engagement within the training community. Online delivery is now very much a new normal, but our core mission remains as the oversight and support of that training.

March 2022, as this report is being written, is just after a delivery of our webinars for trainees and supervisors held in February 2022. Much improved on the first online series in 2021, around 80 attended at each one-hour session. These covered: patient centred aspects of the training agenda, responsibilities of trainees and supervisors, innovation, a session led by our higher specialists, and a showcase of posters with the theme of 'communication matters'. Regarding the latter, clear science communication has been a matter of life and death over the last two years - the Healthcare Science community has played an outstanding role in the national response and now has a vital role to play in the recovery phase.

We supported the recruitment of 22 clinical scientist trainees via 122 online interviews. This year saw 1192 applications, down from the 1675 last year but nevertheless still exceptionally challenging for applicants. This year's outturn means interviewees had a 1 in 5 chance of appointment, and there were 54 applicants for each training post.

We supported **27** postgraduate bursaries to in-service staff, all biomedical scientists, (compared to 37 in 2020-21) from a lower applicant pool of **46** bids compared to previous years of 55-60. The reduction in applicants may have been due to service pressure on the laboratory community and staff opting to defer advanced practice training.

In monitoring the state of training, the key line of enquiry throughout lockdown has been the impact on progression.

We monitor over **270** active trainees, mainly postgraduate but also including **47** practitioner-level clinical physiologists. There are over **60** biomedical scientist postgraduates and **106** clinical scientists. In monitoring the state of training we have 88% of eligible trainees responding to our training progression requests. Training centres are recognised by us over a 4-year cycle: at present **47** centres are recorded covering all strands of Healthcare Science

We have delivered **9** interactive workshop training courses to **83** delegates over the last year. Using a blend of self-directed online learning and small group webinars reinforcing our virtual way of working.

The Healthcare Science Turas Learn platform currently offers 19 different CPD courses. They are aimed at all streams of Healthcare Science, and support early leadership and trainer preparation. 3242 CPD modules have been completed online since the 1st of April 2021 and a further 890 modules are currently in progress.



Robert Farley
Associate Director for Healthcare Science
NHS Education for Scotland

Healthcare Science Training Commissions

From fully funded trainees to postgraduate bursary awardees, Turas Training Programme Management (TPM) system tracks specific elements of the workforce in training

Our Healthcare scientist trainee cohort includes supernumerary pre-registration Clinical Scientists and practitioner-level (graduate) staff undertaking advanced-practice scientist development. Training involves either 3-year STP or an equivalent Master's level programme.



Information for
Healthcare Science
Trainees on the various
Programmes including
our Trainee Handbook
are available on our
Turas Learn page
Click below.

Practitioners

Healthcare Science Practitioners are graduate-level staff who, in many areas, make up the bedrock of service delivery. Some practitioner staff such as Biomedical Scientists undertake a recognised full-time undergraduate programme with placement that includes state registration, much like nursing or allied health professionals. We offered funding support for equivalence and recognition of prior learning to in service

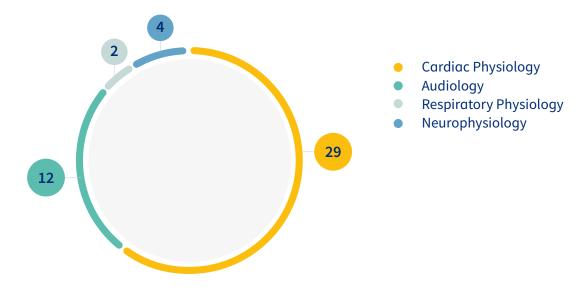
staff towards registration. This is referred to through the report and highlighted in case studies page 17-20. Further details can be found on Turas learn, link on page 20. Two practitioner groups that use NHS-employed work-based trainees are clinical technologists and clinical physiologists. Our case studies later describe their respective roles.

Clinical Physiologists

In 2021 we tracked 47 practitioner-level clinical physiologists. Many are undertaking the part-time clinical physiology programme at Glasgow Caledonian University, which runs biennially. The intake in 2021 include 17 Scottish Government sponsored cardiac physiologists as part fulfilment of the 2019 workforce Plan commitment for 30 additional

trainees. Some other in-service trainees are developing competences through in-house arranged programmes of training called "equivalence". Regardless of pathway, trainees join accredited registers operated by the Academy for Healthcare Science/Registration Council for Clinical Physiology.

Trainee Clinical Physiologists by type as at March 2022, n=47



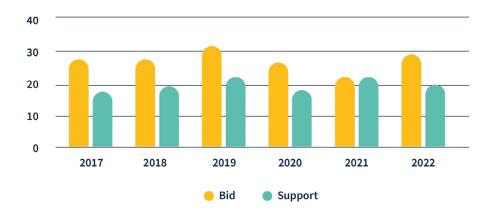
Clinical Scientist Training

As at March 2022 we were monitoring 102 Clinical Scientist trainees across 9 broad themes /specialties. 12 Clinical Scientist trainees were on pathways using the Scientist Training Programme (STP).

Specifically, in 2021 we were able to support an intake of 22 Clinical Scientist trainee posts to in an attempt to meet the demand for 23 posts from services' expressions of interest. Prospectively, 29 expressions of interest were received with 20 NES-funded posts in prospect later in 2022.

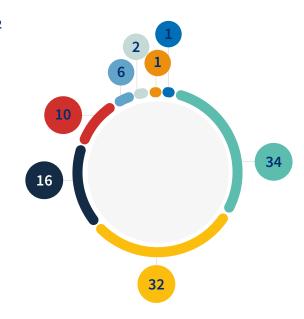
Case studies page 13-14. Further details can be found on Turas learn, link on page 14

Clinical Scientist commissions: Expressions of interest and subsequent appointments that calendar year



Clinical scientist trainees monitored n=102 March 2022

- Medical Physics & Clinical Engineering
- Genomic sciences
- Microbiology
- Biochemistry
- Reproductive sciences
- Cardiac sciences
- Cellular sciences
- Max-Facial sciences



Higher Specialist Scientist Trainees

The 20 in-service trainees, commenced in 2020 continued their training towards higher specialist / consultant scientist level qualifications/ recognition. This initiative is funded by The Scottish Government.

These trainees are working at level 7 at a minimum of the NHS Scotland career framework for health. They are undertaking programmes of development that mirrors Higher Specialist Scientific Training

Trainees' plans are being reviewed annually and occasional networking opportunities offered. Five of the cohort led an online session at the February 2022 national event for all Healthcare Science trainees.

Case studies page 21-22

The HSS plan of development for the consultant trainee must incorporate:

- scientific and clinical specialism development.
- research skills development to doctoral level
- leadership and management development.

Higher Specialist Scientist cohort commenced 2020, at March 2022

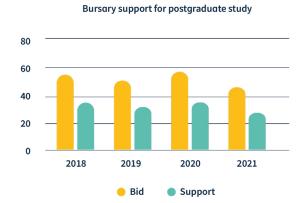


Postgraduate Bursaries Supported at NES

Our competitive bursary funding contribution is for in-service staff to follow postgraduate/post-registration advanced-practice development. Scoring is done by 7–10 independent assessors.

The awards support development across the four pillars of practice – our Common Core List, namely: scientific specialty; safety and improvement; people and leadership; and research.

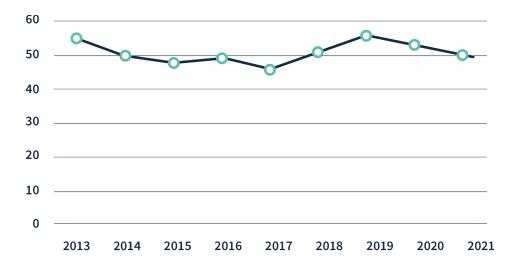
Irrespective of subsequent years NES support, candidates retain their National Training Number during their planned programme.



The cut-off level for support over the years has remained steady at around 50%.

Case studies page 15 & 16

Threshold for bursary award, assessed score %



Providers of academic programmes are distance-based and part-time.

Postgraduate Bursaries Supported at NES

In 2021, NES HCS supported 27 postgraduate bursary awards from 43 bids. Currently we are tracking 46 individuals, mainly Biomedical Scientists, who are progressing towards more senior roles in life science disciplines.

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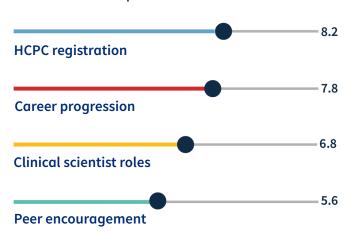
Bursary destinations n=27 (2021)



NES HEALTHCARE SCIENCE - Annual Report 2021-2022

Equivalence/Recognition of prior learning

I am interested in equivalence because

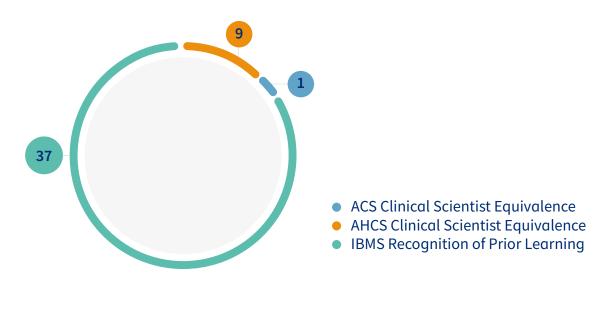


This fee support was to allow existing NHS Scotland Healthcare Science staff to apply for recognition of their learning and experience in preparation for higher roles and/or in some cases regulation-registration.

The influx of qualified but unregistered staff, particularly in the laboratory service, to support the covid response has reinforced the utility of having pathways to recognise prior experience and learning. Many highly qualified staff joined service in relatively low banded support roles, but clearly have the potential to progress once suitably registered. "Equivalence" recognition has been an important feature of Healthcare Science training pathways to help secure the workforce.

We established a small fund to assist applications to relevant professional bodied for assessment/recognition of non-accredited degree transcripts, prior learning and experience.

Equivalence application support type n=47



Case Study NES supporting Clinical Scientist training programmes



Abigail Attwell Trainee Clinical Scientist: Clinical Engineering, NHS Lothian.

During my GCSEs I completed work experience within Clinical Engineering and knew that path was for me! I undertook a Medical Engineering undergraduate degree at Cardiff University before going back to the Alternative and Augmentative Communication service I had my experience in to work as a Specialist Clinical Technologist for 2 years. I loved working there, being part of a multidisciplinary team of health and education professionals, interacting with patients that we helped to communicate, and also having experience of manufacturing and augmenting bespoke solutions for our complex caseload. It was rewarding, whilst helping me to get to know the NHS and how it works.

This time as a Clinical Technologist showed me the strategic change that I could be involved in at a Scientist level. Additionally, I was aware that this area of Clinical Engineering was very niche, and I wanted to expand my scope. Therefore, I applied for the NES-funded Scottish Clinical Scientist Training Scheme in 2019.

I started by studying Biomedical Engineering MSc at Strathclyde in which I completed a project within Rehabilitation Engineering. After completing my Foundation Year, rotating around different areas of Clinical Engineering within the Health Board, I am now specialising in Device Risk Management and Governance. I am involved in projects that work with clinical teams around the whole Health Board from GPs, community care, paediatrics to adult acute care, to help them work with equipment to care for patients with better outcomes for everyone.

NES supporting Clinical Scientist training programmes

Abigail Attwell

Trainee Clinical Scientist: Clinical Engineering, NHS Lothian. Completing the Foundation Year included spending some time in clinical measurement departments which is helpful for my Specialism Year, as I am now in a position to see the 'big picture' of the projects we come up against; understanding both the logical, most efficient 'work-as-imagined', nuanced with the more realistic 'work-as-done' due to clinical pressures within patient facing departments.

I believe the NES-funded Training Scheme has given me a great opportunity to be in the Clinical Engineering field at a time when our role is expanding and becoming even more intertwined in both acute and community clinical environments.

> Further Information about Clinical Scientist pre-registration training programmes is available on our Turas Learn page. Click below.

Case Study NES supporting Postgraduate Bursaries



Dawn Chessor, Senior Specialist Biomedical Scientist, Cellular Pathology, NHS Highland

The Path to Success

I graduated from Robert Gordon University with an Honours in Applied Biomedical Science, and following a gap year in New Zealand, I took up my first position as a Medical Laboratory Assistant in Blood Transfusion at Aberdeen Royal Infirmary. Although this role was fulfilling and challenging it was not what my heart was set on so when a position arose in Cellular Pathology at Victoria Hospital I jumped on the opportunity, despite not having the required experience. Nevertheless 4 months later, I started my dream role as a trainee Biomedical Scientist in Cellular Pathology at Victoria Hospital.

As my experience progressed with completion of the Specialist Portfolio in 2016, my hunger to keep learning grew and this is where NES first began to support my development. NES funding enabled me to complete an MSc in Biomedical Science Part-Time at Glasgow Caledonian University in 2017, a vital milestone required for progressing my career in the future.

NES supporting Postgraduate Bursaries

Dawn Chessor, Senior Specialist Biomedical Scientist, Cellular Pathology, NHS Highland

My Role and Aspirations

Then in May 2019, I took up my current role as a Senior Biomedical Scientist – Health and Safety Lead for Cellular Pathology at Raigmore Hospital, which is laboratory and managerial based. Following on from my previous role, I continue to be involved in the preparation of tissue specimens for the diagnosis of cancers; however I am predominantly responsible for the laboratory's health and safety including risk assessments and workplace inspections. Being new to this role when the COVID-19 pandemic hit developed my skills in health and safety very quickly, however also highlighted major gaps in my knowledge. So in response to my learning needs, I secured NES funding for an MSc in Health, Safety and Environmental Management (Online) with the University of Portsmouth.

Under the current financial climate caused by the pandemic and Brexit, I would not have been able to start this MSc, thus limiting my knowledge development and newfound skills. NES funding is pivotal to Healthcare Scientists training and development and without it, many would miss the opportunities to grow and improve. On completion of this degree I hope to enhance an improved safety culture within the laboratory and work towards being more environmentally sustainable.

Updates on our Postgraduate bursaries is available on our Turas Learn page.

Click below.

NES supporting Equivalence routes to HCPC registration

Heather McLellan

Senior Specialist Biomedical Scientist, West of Scotland Specialist Virology Centre, GGC NHS Highland I have been a biomedical scientist in the West of Scotland Specialist Virology Centre since 2016 and have received support and training from NES throughout my career. My current role is as a Technical Manager, with responsibility for training, at the Regional Laboratory West. This lab was set up as an extension of the West of Scotland Specialist Virology Centre in response to the COVID pandemic. This was a brand new, purpose built lab which has involved the recruitment and training of almost 100 staff since its inception. Many of these recruits were recent graduates, employed as support staff who have been critical in the implementation and maintenance of the COVID screening service in the West of Scotland.

This was the first lab role for the majority of our staff and I became aware very quickly of their ambition to progress to Biomedical Scientists. With undergraduate degrees ranging from pharmacology, immunology and anatomy, to those who had done biomedical science degrees which they later realised were not accredited - unfortunately the road wasn't going to be as straightforward as they had hoped. Informing all these young, smart, enthusiastic staff that they would need to have the IBMS assess their degree, and likely undergo further study before they progress in their careers wasn't the highlight of my year!

IBMS degree assessment costs over £300, and involves a lot of document gathering and certification, that's before you consider the cost of top-up modules and the logistics of how to arrange that whilst working. When I received the email from NES saying that bursary applications would be accepted for IBMS degree assessments I was delighted and immediately passed it on.

NES supporting Equivalence routes to HCPC registration

Heather McLellan

Senior Specialist Biomedical Scientist, West of Scotland Specialist Virology Centre, GGC NHS Highland Almost 20 of our staff were awarded the bursary and have either received or are in the process of having their degrees assessed. Some have even started top-up modules or begun entirely new degrees in order to allow them to become biomedical scientists.

Given that the majority of our staff were initially employed on fixed term contracts, I believe that this financial support has not only helped them personally and professionally - it may have contributed to us retaining staff who may otherwise have left for opportunities elsewhere. Our staff retention has been fantastic and I genuinely believe that staff remain engaged because of support and development opportunities like this. Managing to retain these staff has benefited the service as we've managed to avoid the "revolving door effect" which can lead to training, skill and knowledge gaps which can be challenging for any lab.

The team have stepped up in the response to the pandemic, working 24/7 shifts and making sure we provide an effective service to GG&C. For me personally, I'm delighted that we've been able to not only provide entry and experience for these staff, but also that this bursary and subsequent assessment, will provide a tangible benefit for them.



These folks are the future of biomedical science, and this bursary has helped them in their career development, which the service will reap the benefits of.



Heather McLellan, Senior Specialist Biomedical Scientist



NES supporting Equivalence routes to HCPC registration

Sophia Younis

Assistant Practitioner, NHS Scotland Regional Laboratory (West), GGC Equivalence Bursary awardee Equivlence Bursary Awardee statement In 2017, I graduated from University of Dundee with an Honours Degree in Biomedical Science. I began working as a Medical Technologist in the Biochemistry Laboratory at Q2 Solutions Livingston. My time at university cemented my understanding of biomedical sciences as the field which fuels my interests and as the area I would very much like to work in.

I started my employment as an Assistant Practitioner in 2020 for NHS Scotland Regional Laboratory (West) in November 2020. I have supported the COVID 19 diagnostic testing service in which I perform a range of routine clinical laboratory tests for Greater Glasgow and Clyde and I provide support to a large team within the Healthcare Science discipline. Working for the NHS has permitted me to broaden my horizons and challenge certain preconceptions which would have previously amounted to fear of the unknown.

Receiving the bursary for my IBMS degree assessment has been important to support my development and a step closer towards my lifelong career as a Biomedical Scientist. I am extremely passionate about gaining my IBMS state registration as I strive to achieve the NHS values. I am also eager about patient health and wellbeing and people's experiences of the NHS. I believe the healthcare system prides themselves on giving their employees the opportunity to advance their skills and develop their careers. I am extremely passionate about gaining my hcpc state registration as I strive to achieve the NHS values.

NES supporting Equivalence routes to HCPC registration

Niamh Cormack

Assistant Practitioner, NHS Scotland Regional Laboratory (West), GGC Equivalence Bursary awardee Equivalence bursary awardee statement: Whilst having a degree in Immunology has provided me with a good background to kick-start my career in the Healthcare Science field, it has also limited me in how I can progress this career within the NHS. The NES funding that I have been granted has allowed me to get my degree assessed without having to provide the funds myself. I think if this was the case I would have postponed carrying this out, and therefore would have taken longer to reach my long-term goal within the NHS, which is ultimately to become a Biomedical Scientist.

I am thankful to NES for this opportunity and I am now looking forward to the next steps in my career path.

Details about the various Equivalence routes to HCPC registration is available on our Turas Learn page Click below.

Case Study NES supporting Healthcare Science Higher Specialist trainees



Graham Henderson Lead Clinical Scientist, Gait Analysis & Environmental Controls SMART Centre | Astley Ainslie Hospital

After completing an undergraduate honours degree in Mechanical Design Engineering I was successful in getting a place on the Scottish Medical Physics and Engineering Training Scheme. I initially completed a Bioengineering degree at the University of Strathclyde which provided the theory side of the training. The clinical side of my training was based at the SMART Centre, which is the South East Scotland Mobility and Rehabilitation Technology Centre in Edinburgh. I completed training rotations in different rehabilitation engineering services before focusing on two areas which were gait analysis and environmental controls.

After qualifying as a Clinical Scientist I worked for a few more years at the SMART Centre before moving down to Newcastle upon Tyne to take up a role as a Lead Clinical Scientist working in a Custom Design Service and Gait Analysis Service. It was at this point in my career that I was given the option to start the Higher Specialist Scientific (HSS) training scheme. As I was based in England this was the National School of Healthcare Science scheme which involves a DClinSci academic component in conjunction with building up a portfolio of evidence to demonstrate that you meet the Standards of Proficiency for being a Consultant Clinical Scientist.

By February 2020, I had successfully completed year one and some of the year two modules. This included modules on healthcare management and leadership and also included specialist engineering modules which provided me with experience outside of my usual area of expertise of rehabilitation engineering.

At this point in my career, I relocated back to Edinburgh to take up a post at the SMART Centre. This meant that my funding via NHS Education England was no longer available and I could no longer continue with the DClinSci because the academic fees were not being funded.

Case Study NES supporting Healthcare Science Higher Specialist trainees

Graham Henderson

Lead Clinical Scientist, Gait Analysis & Environmental Controls SMART Centre | Astley Ainslie Hospital Fortunately, I found out that NES were offering HSS development training allowance and I applied in October 2020 and discovered I was successful the following month. This provided me with the funding required to continue on with the DClinSci. I was also fortunate that my department were willing to support me by giving me some time to work on HSS training and were able to supervise my research project.

With my funding now in place I was able to complete the rest of year 2 and I made a start on some of the modules of year 3. I also started work on my research project which forms a large part of the DClinSci programme. In addition to the academic side I completed other key pieces of work including undertaking a scoping review of environmental control services and doing a quality improvement project about virtual consultation appointments in the gait lab. These pieces of work will be part of my portfolio of evidence for meeting the Higher Specialist Scientist Standards of Proficiency.

Recently I have taken up a more senior position within the SMART Centre and I am line managing a small team of Clinical Scientists. I can further develop in this role by using the skills and knowledge relating to leadership and management that I have gained through my HSS training. In addition I would like to use my research project to develop links with local Universities and to get involved in grant writing to help ensure that future research and development is undertaken at the SMART Centre. My HSS training will help me to continue implementing new technologies within the services that I lead and to work with colleagues to develop new services within the assistive technology field to meet the healthcare needs of the future.

Information about the Higher Specialist Training Equivalence routes on our Turas page Click below.

Quality Monitoring of HCS Training in Scotland

NHS Education for Scotland Healthcare Science have a duty to quality assure and monitor all Healthcare Science training in Scotland. In order to carry this out we undertake a range of Quality Assurance (QA) processes including:

Trainee tracking through Turas Training Programme Management (TPM)

Training Centre Recognition

Trainer Recognition

Annual Review of Competency Progression (ARCP) reporting

Training Plan submission

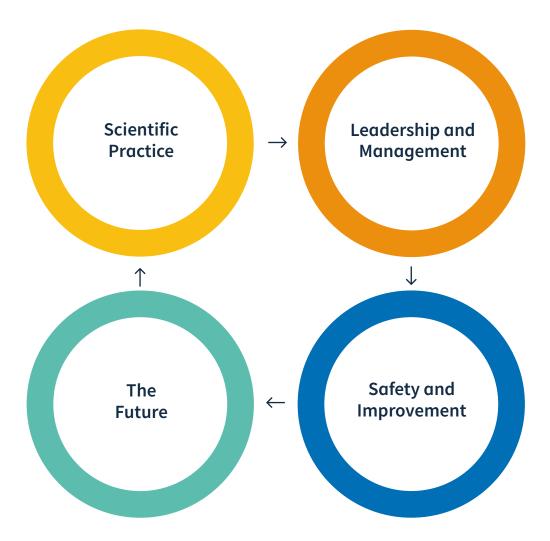
Exit Surveys

Annual confidential trainee survey

Annual confidential supervisor survey

Our agenda is to ensure high quality training is in place for all disciplines across Healthcare Science and ultimately to promote patient safety. We liaise with a variety of external departments such as The Academy for Healthcare Science (AHCS) and the National School of Healthcare Science (NSHCS) to ensure QA standards for training are consistent across the various HCS disciplines within the United Kingdom. We work to ensure standards contained within various documentation are upheld, including the HCPC Standards of Education and Training. We also liaise with various forums, networks and advisory groups to ensure our approach is appropriate and manageable for the various disciplines within Healthcare Science.

The four domains which contain our Common Core list attributes



NES Healthcare Science also promote quality of training in their communication of the shared common attributes that all scientific staff should seek to achieve. Our Common Core List (CCL) identifies shared attributes for NHS scientists, across four domains and challenges trainees to consider their wider development as future scientific leaders.

Tracking Trainees Through Turas Programme Management (TPM)

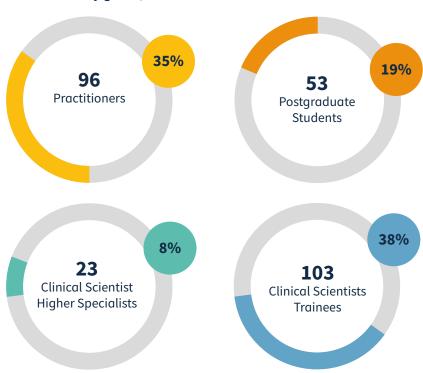
NES Healthcare Science track trainees from beginning to end of their training period through the Turas Training Programme Management (TPM) System. Trainees are provided with a National Training Number (NTN) which identifies their training journey. The TPM system holds information such as the start and end dates for training, the training programme, health board, and supervisor(s) details.

Trainees may be entered into this system after direct entry into a trainee position, following a funding award such as the Postgraduate bursary or Equivalence award, or commencement on a training pathway out-with these routes. National Training Numbers are provided irrespective of whether the trainee is currently receiving funding from NHS Education for Scotland.

As of the 31st of March 2022, a total of 275 trainees with National Training Numbers are being tracked within the Turas TPM system. These trainees are on a variety of training pathways, within various staffing grades and specialisms.

The following data represents the proportion of trainees within each grade/ level:

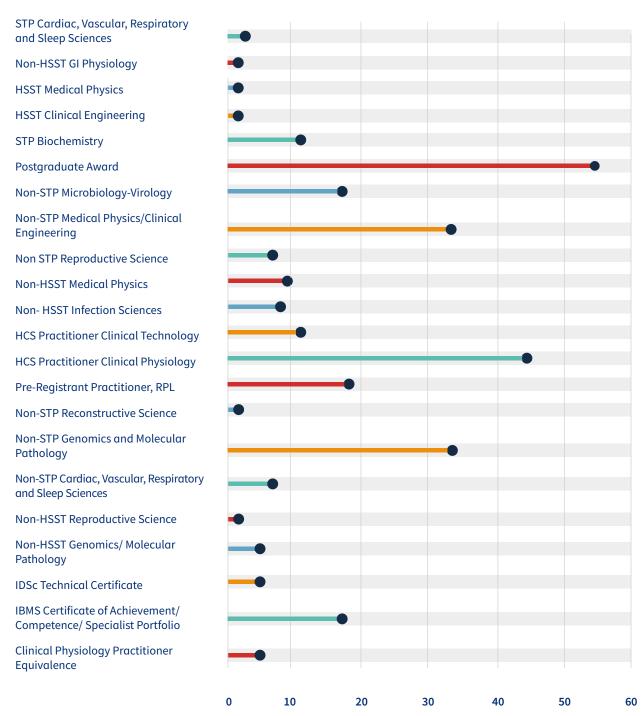
NTN holders by grade/level



On the 31st of March 2022, there were trainees from 22 different specialisms with various training programmes within Healthcare Science disciplines. The following training programmes are currently represented within the TPM system:

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NTN holders by Training programme:



NES Healthcare Science do not track all training which is being carried out within Healthcare Science disciplines. However, it is important to collect data on training roles within the various Healthcare Science disciplines to contribute to workforce planning and inform the allocation of funding.

Information on the requirements for obtaining a National Training Number and the process for doing so can be found on our Turas Learn pages on Quality Assurance.

001(v1) Obtaining a National Training Number (NTN)

National Training Number

NES Healthcare Science monitors workplace training via departmental self-assessment, training group reviews and progression monitoring of individual Healthcare Scientist trainees. More information about our quality monitoring is on the Turas site at https://learn.nes.nhs.scot/12094/welcome-to-healthcare-science/quality-monitoring

By obtaining a NTN, you will be joining the Healthcare Science community who participate in these quality monitoring processes to satisfy NES, HCPC and Education and Training standard requirements,

To obtain a NTN you will:

- Be training in a Healthcare Science post in a department that has undergone NES self-assessment
- Have a clear and agreed training plan
- Have a training supervisor
- Perform an annual review of progression (ARCP)
- · Agree to participate in NES surveys and respond to requests for information
- Notify the team for any changes to your details such as completion of training, change of training location etc.

Details on how to obtain a National Training Number are available Click below.

Training Centre Recognition

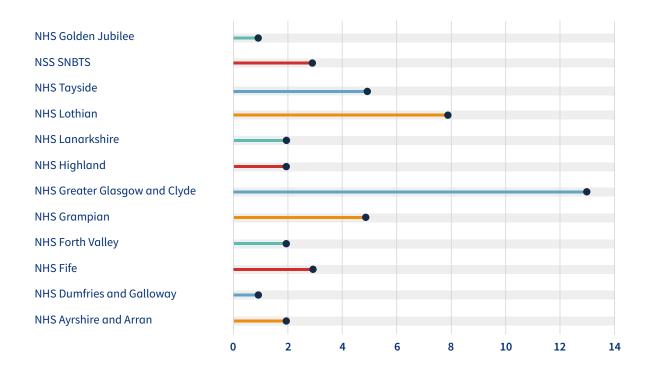
Our quality monitoring of training centres serves to assure that standards of Healthcare Scientist training are consistent across Healthcare Science disciplines. Poor quality training can be a proxy for unsafe clinical practise, so our activity also has a patient safety thread.

The basis of this self- assessment is a composite drawn from NES Healthcare Science's approach to postgraduate scientist identity, NHS Education for Scotland's Quality Assessment tool 2010 NMAHP, the NES Medical Deanery QA approach, Health Education England's National School for Healthcare Science approach to placement accreditation, and HCPC standards of Education and Training.

For the Scientist Training Programmes (STP), this includes specific monitoring arrangements for the recruitment (programme admission) of clinical scientist STP trainees and of their practice placement and participating in this Quality Assurance tool is essential for postgraduate scientist STP host departments.

We recognise that many Healthcare Science departments are routinely assessed through other accreditation governing bodies such as UKAS, MHRA or professional bodies to uphold high standards of service and training and we revised the process in 2020 to a straight-forward self-declaration of compliance with our standards. We audit a small sample of responses with a call for evidence. Therefore, in making the declaration, departments must have available supporting documentation should it be requested.

As of March 2022, **47** Training centres across NHS Scotland completed the full accreditation and audit process. The following data in the graph below represents the NHS Boards that have participated



Please note that from the 47 centres accredited some of these centres encompass multiple specialisms represented here. The table below details the distribution of the various Healthcare Science Specialities and number of centres that have participated in the Training Centre Recognition as of March 2022.

Healthcare Science Speciality	No. of centres accredited
Anatomical Pathology	2
Andrology	3
Audiology	1
Blood transfusion	8
Bioinformatics	1
Biomechanics	2
Cardiac Physiology	4
Cervical Cytology	2
Clinical Biochemistry	10
Clinical Immunology	4
Clinical Embryology	1
Clinical Measurement Electron Microscopy	1
Diagnostic Radiology	2
Equipment Management	5
Gastrointestinal Physiology	1
Genomics/Genetics, Molecular Pathology	5
Haematology	8
Histopathology and Cytopathology	7
Histocompatibility and Immunogenetics	1
Information Technology	1
Medical Electronics	1
Medical Engineering & Design	4
Microbiology	6
Neurophysiology	1
Nuclear Medicine	6
Phlebotomy	1
Radiation Protection	5
Radiotherapy Physics	5
Rehabilitation Engineering	5
Respiratory Physiology	2
Toxicology	1
Urodynamics	1
Ultrasound, Laser, Non-ionising Radiation	5
Virology	6
Vision Science	1

Guidance for the accreditation process and the list of participating centres including the self-assessment Microsoft Form is published on our NES Healthcare Science Turas Learn site. This is an ongoing process for quality assurance at NES and we welcome all Healthcare Science training centres to participate in this streamlined self-declaration process.



Find out about Training Centre Recognition on our Turas Learn page. Click below.

Progression of Training

We monitor progression of training to help assure training and offer support to trainees

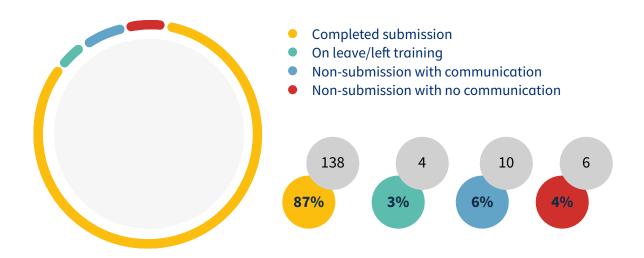
Annual Review of Competency Progression

Annual Review of Competency Progression (ARCP) reports are requested yearly to ensure trainees are receiving appropriate competency reviews.

In September 2021 all NTN holders who had been in post for one year or longer, and their supervisors, were contacted to request submission of an ARCP report. 158 requests for ARCP reports were sent out. All responses were gathered within the Microsoft Forms app within Microsoft 365. In total 142 responses were received, giving a response rate of 89.87% including submissions, and non-submissions with acceptable reasoning. Acceptable reasoning for four non-submissions included three trainees on maternity leave and one trainee who had taken a position out-with the NHS prior to completion of their scheme.

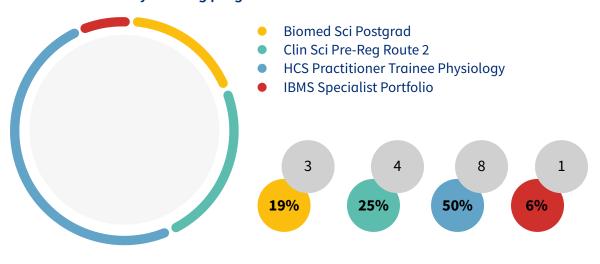
All ARCP reports were uploaded onto the personal records of each trainee within the Turas TPM system.

Annual Review of Competency Progression



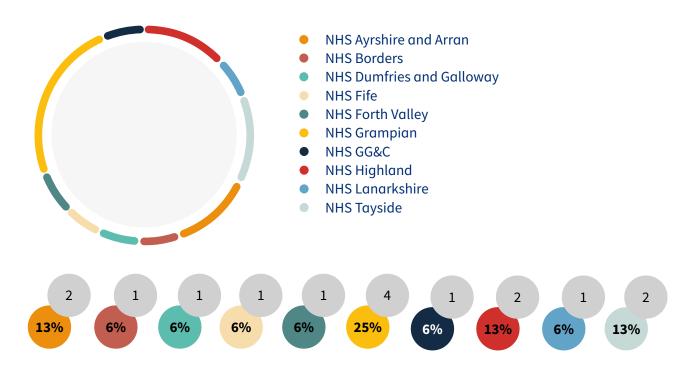
An ARCP was not submitted for 16 trainees, however 10 did communicate with NES citing the reason for delay which included extended leave and changes to NHS trust. Of the 16 non-submissions the following training programmes were represented:

Non-submissions by training programme



Of the 16 non-submissions the following Health Boards were represented:

Non-submission by health board

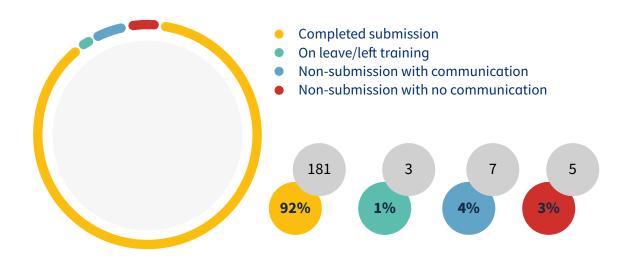


Training Plans

Training plans for all registered NTN trainees

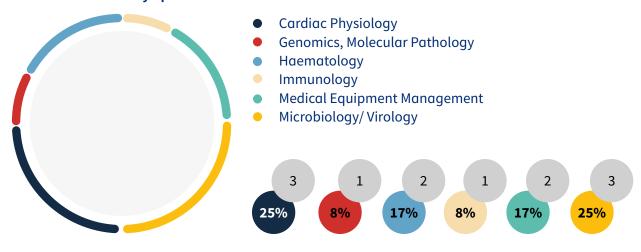
Completed Training Plans are requested from all NTN holders within three months of the start of their training. The importance of a training plan has been demonstrated in the past with trainees without a formal plan reporting more issues with their training. A Training Plan which is agreed between the trainee and supervisor provides the structure for a supported training system and a framework to assess issues and training delays against.

In total 196 requests for Training Plans were sent out, **184** responses were received to give a response rate of **93.88**% including submissions and non-submissions with acceptable reasoning. Acceptable reasoning for three non-submissions included two trainees on maternity leave and one trainee who had taken a position out-with the NHS prior to completion of their scheme.



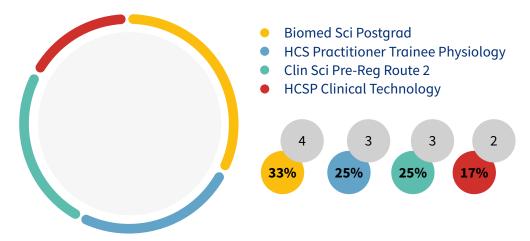
Of the 12 trainees who did not submit a Training Plan the following specialisms were represented:

Non-submissions by specialism

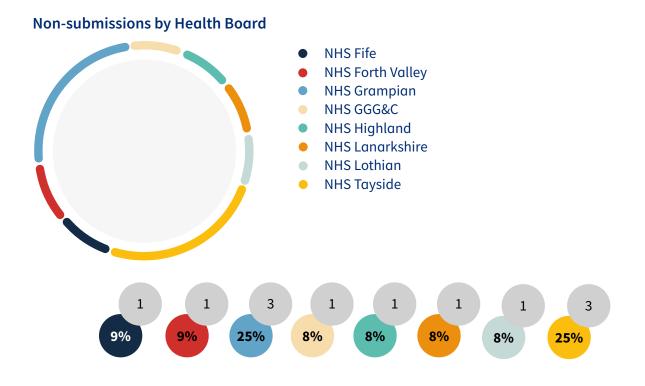


Of the 12 non-submissions the following training programmes were represented:

Non-submission by training programme



Of the 12 trainees who did not submit a Training Plan the following Health Boards were represented:



ARCP and Training Plans

An overall response rate for the ARCP and Training Plan QA processes represented here of 89.87% / 93.88% is a very good result, however the very small number of trainees who have not provided a submission with no communication are very likely to be the ones with substandard training and/ or supervision.

Non-responders of ARCP and Training plans without communication

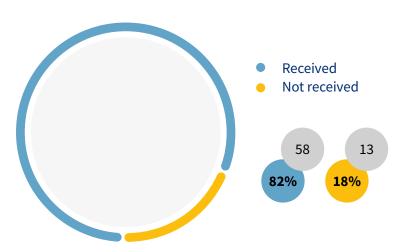
As of March 22, we had not received any communication from 6 ARCP requests, and 5 Training plan requests, and we are unable to address any issues or comments for not participating in our Quality monitoring processes. All of the six departments were undertaking various training programmes such as STP Equivalence, Postgraduate bursaries, IBMS Specialist Portfolio and the Clinical Physiology Practitioner programme.

Visit our Quality Assurance page for further details on ARCP and Training Plans

Exit Survey

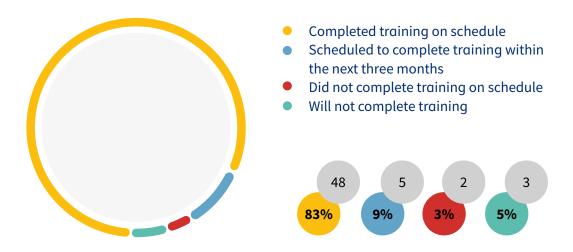
It is important to review not only trainee progress during the training programme but also the subsequent position the trainee moves onto after completion of their training. The exit survey was sent out to 70 trainees (and their training supervisors) who were identified from Turas TPM as being due to complete their training in 2021. The exit survey was completed for 58 trainees (82.86%).

Exit Survey



Of the 58 trainees who completed the exit survey 48 completed their training on time, and five others were on schedule to complete on time within the next three months. This gives a total of 53 trainees (91.38%) who were expected to complete on time. This is a very impressive figure given the issues surrounding the pandemic and its impact on training. Only two trainees did not complete their training on time, and only three trainees left the training scheme without completing it.

Training Completion



Post training information was available for 52 of the 58 trainees. The majority of trainees (49, 94.23%) were continuing to work within the same department, and a total of 51 (98.08%) were still working within the NHS. Only one trainee moved to a position out-with the NHS. This trainee was on an HSST equivalence scheme and did not complete the scheme before accepting a position out-with the NHS.

Although 49 are continuing to work within the same department, three commented that their post was temporary with no guarantee of permanent funding. Of the three who are either working elsewhere within the NHS, or working out-with the NHS, two were training within Clinical Physiology and one was training within Medical Physics.

Feedback and Annual Surveys

Individual postgraduate scientist trainees and supervisors are also invited to respond to our annual surveys.

Trainee Feedback

Every year we contact our individual postgraduate scientist trainees, and their supervisors, and invite them to respond to our annual surveys. This provides an opportunity for our Healthcare Science community to give us confidential feedback. Questions are related to the quality and progression of training, providing reassurance that training is going according to plan. Our surveys complement our other quality assurance processes (including the training plan and ARCP cycle) as a tool used to gauge the state of training.

Our 2021 trainee survey involved all Healthcare Science trainees in receipt of a NES National Training Number (NTN) and was completed by 95 out of 235 trainees (40% response rate). The breakdown of trainees by level/career stage and discipline is shown below.

Trainees by Level/ Career Stage







Trainee Feedback

All trainees and supervisors are contacted and asked to provide the NES Healthcare Science team with an agreed training plan each year. We encourage any trainee who does not feel they have an agreed training plan to contact us. This year only 4.2% of respondents reported that they did not have a clear and agreed training plan at the time of survey (Nov-Dec 2021). However, 10.5% reported their progress was not documented and signed off, and 6.3% did not believe that their level of feedback and supervision in the workplace was sufficient (see table below).

Do you have a clear and agreed training plan?
Is your progress documented and signed off?
Do you believe that your level of feedback and supervision in the workplace is sufficient?
Do you feel a valued member of the team?

Yes	Partly	No
75	16	4
64	21	10
55	34	6
65	21	9

The number of respondents who reported they did not have an ARCP or formal review has increased slightly, from 28% in 2020 to 29.5% in 2021. Last year we attributed this to the COVID-19 pandemic and the impact it had on both trainees and supervisors. It is possible this is still the reason, but we are currently seeking clarification where no formal review has been reported.

Most of the surveyed trainees (86.3%) reported using e-learning resources regularly within the last year for both professional development and mandatory training. We have developed and hosted a wide range of e-learning resources on our Turas Learn website and more information about this can be found in pages 42-44.



The staff who have delivered my training have all demonstrated great competency in the fields which they have been instructing me in.



I have enjoyed the learning I have been able to do that was possible with the funding I have received. Although it has been very challenging, I know it will benefit me in the long run. I do find sometimes within the workplace there isn't a lot of appreciation for anyone currently undertaking additional studying outside of routine working which can be challenging.

Supervisor Feedback

Our 2021 supervisor survey received a 49.6% response rate (57 out of 115 invited), comprised of 52.6% from Life Sciences, 31.6% from Physical Sciences and 15.8% from Clinical Physiology. A further breakdown of both the quantity and the level/career stage of trainees that these supervisors support is shown below.

How many trainees do you support?



What level/career stage of trainee(s) do you support?



Feedback from previous surveys informed us that respondents wanted clearer guidance on support for Quality Assurance in training. In 2019 we updated our guidance on how to develop a training plan with working examples. This has proven beneficial with year-on-year increases of supervisors reporting that putting a training plan in place is straight-forward, 100% in 2021 compared to 97.8%, 89% and 82% in 2020, 2019 and 2018 respectively. More importantly all respondents this year reported having at least a partially clear and agreed training in place with their trainee(s).

Do you feel supported in your role as a trainer?

7 respondents (12.3%) reported that they did not feel supported in their role as a trainer and 3 respondents (5.2%) reported they currently had a trainee who was experiencing difficulties. We endeavour to ensure Healthcare Science staff do not begin supervisor roles without formal training. To further support training last year, we re-launched our previous face-to-face Train-the-Trainer and Trainees-in-Difficulty courses as virtual equivalents available on our Healthcare Science Turas Learn website.

These comprehensive learning programmes combine e-learning modules, short quizzes, and a final interactive workshop. We offer these courses to all Healthcare Science trainers/supervisors and encourage them to complete the programmes as early in their career as possible. More information on these can be found on Page 44.



I wish I had more time to devote to accessing and interacting with the NES offerings.



The main support challenge as training supervisor/ co-ordinator isn't one of materials or access to them - it's one of resourced staff time to spend accessing what already exists and delivering to trainees.

Trainee and Supervisor surveys are available on our Turas Learn page
Click below.

NES Healthcare Science CPD Resources

Transition from Knowledge Network to Turas Learn

We have completed the migration of all our resources from our Knowledge Network communities to a public area on our Healthcare Science pages within Turas Learn. Turas Learn is a free depository for learning material available to all NHS staff in Scotland. Our Healthcare Science pages are now your one-stop shop whether you are looking for information, CPD resources or e-learning modules. We would welcome any feedback regarding our new website, particularly if you have any suggestions for additional content.

We need your help!

We have an area of our Healthcare Science pages dedicated to promoting CPD resources and we have the expertise to develop or signpost various e-learning resources for your speciality. We offer support in terms of developing these resources and hosting them on Turas Learn. We are also currently trying to determine training gaps and identify priority learning needs to help the COVID-19 response. Please get in touch with us at HCS@nes.scot.nhs.uk if you want to discuss this with us.



To access our CPD resources page on Turas Learn
Click below.

Healthcare Science on Turas Learn

Turas Learn is NES's platform for learning and support resources, with a dedicated Healthcare Science page. If you have already accessed applications such as Turas Appraisal you simply add Turas Learn to your dashboard by clicking the 'Add Applications' link. https://learn.nes.nhs.scot/



Continued Professional Development (CPD) Short Courses

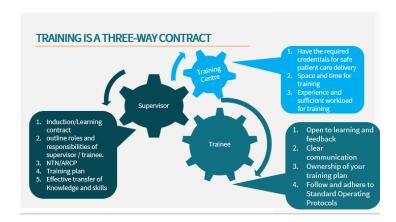
The Healthcare Science (HCS) Turas Learn platform currently offers 19 different CPD courses. There are many generic CPD courses and some dedicated to different streams of HCS. 3242 CPD modules have been completed online since the 1st of April 2021, and a further 890 modules are currently in progress.

Irrespective of the stage you are at in your career, we would encourage you to contact us at HCS@nes.scot.nhs.uk to develop ideas for learning material. Can you think of a knowledge gap in your specialism? We can work with you to convert your ideas into e-learning material to host on Turas Learn. Advantages of Turas Learn courses include flexibility in content and assessments with a record of an individual's participation in learning. By identifying gaps in knowledge, sharing and delivering learning with measurement assessment we are benefiting the whole HCS community and NHS patients.



Trainer Preparation

We offer the generic courses 'Train-the-Trainer' and 'Trainees-in-Difficulty' to support trainer preparation, using a blend of self-directed Turas Learn online learning and small group workshops on MS Teams. Over the last year, for these two trainers' courses, we have delivered 9 interactive workshops to 83 delegates.



Leadership

The Early Years leadership programme examines leadership, introduces teamwork, examines managing meetings and time management. This is delivered as four Turas Learn modules consisting of video presentations, with transcript available, and a short quiz at the close of each module. Our first round of interactive virtual workshops will be hosted from April 2022 onwards.

NES Healthcare Science Events

Annual Trainees and Supervisors Event - 9th -11th February 2022



NHS Education for Scotland's tenth national Healthcare Science conference for our trainees and supervisors was hosted as a virtual event offering online webinar sessions over 3 days from the 9th -11th February 2022. Our sessions offered 5 hours of generic Healthcare Science training with the themes; Training - Whose responsibility is it anyway? Healthcare Science next steps; the experience of HSS Trainees, Patient centredness, Inspiration and innovation in training, and Communicating our science.

Attendance stats:

	Attended:	Expected:
Webinar 1:	82	124
Webinar 2:	84	128
Webinar 3:	76	116
Webinar 4:	79	124
Webinar 5:	77	126

Evaluation Feedback from the event was overall very positive with over 80% respondents noted the webinars as very useful. Suggestions for next years event as a one day hybrid event, 68% responded they would attended in person with 32% virtually. There were mixed reviews such as 'Meeting other trainees and networking/sharing experience is important - this is easiest in person'. Grateful for the virtual sessions - easier to attend, but would find the occasional "in person" event useful. Further suggestions for future events included comments 'A wider range of professions and higher education trainees', 'to hear from supervisors - their experiences of training'.

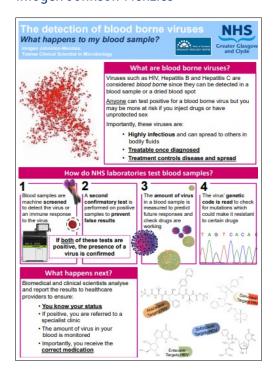
Our virtual event offered the opportunity for trainees to showcase and enter our poster competition.

This year's competition was based on the theme –'Can you explain science in an interesting way to the public?' Our challenge this year was to produce a simple poster message that explains an engaging aspect of your work in a compelling and non-technical manner. Why does it matter? What difference does it make to the patient reading the poster? As we have seen, communicating concisely and clearly is a key skill: never more so that during the pandemic!

We had lots of good creative posters submitted from 13 healthcare scientist trainees.

Congratulations to our overall winner Imogen Johnson-Menzies with a poster entitled "The detection of blood borne viruses - what happens to my blood sample?"

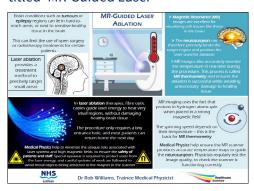
Poster winner - Imogen Johnson-Menzies



Runners up were - Christel Garcia-Petit and Jolene Peddie for the poster titled 'Are you suitable for Genetic Testing'



Robert Williams - for the poster titled 'MR-Guided Laser'



Abigail Attwell - poster titled 'What does a Clinical Engineer do?'



NES Healthcare Science Webinars

The NES HCS team have been supporting a series of webinars covering varies aspects of our offerings in Healthcare Science. All of our previous or upcoming events are signposted on our Turas Learn page to support and promote CPD.

Our past webinars included the following;

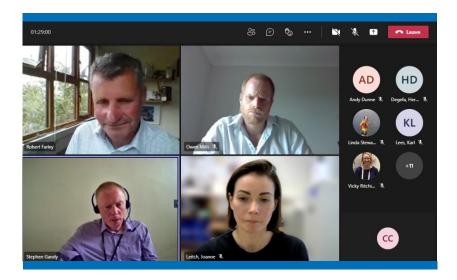


Welcome to Healthcare Science Training in Scotland" webinar - Friday 29th October 2021 (12:30-1:30pm) on MS Teams. An introduction to all new or continuing trainees in Healthcare Science to present an overview of our support of the training experience. 35 attended.

"Equivalence – The What's, The Why's and The How's" webinar Friday 17th September 2021 (12:00-12:45pm) on MS Teams. This was an overview of the various routes to Equivalence to advocate our equivalence fund support of applications to AHCS, ACS and IBMS for STP/Clinical Scientist portfolio assessment, and IBMS assessment of undergraduate degrees for Biomedical Scientist recognition. A total of 38 attended the event.

"Annual Review of Competency Progression (ARCP) Q&A" webinar Friday 30th July 2021 (10:00-10:45am) on MS Teams. Assuring the Quality of Training, Supporting Trainee Progression. This was an overview of the underlying purpose of why ARCP monitoring is one vital part of NES's quality monitoring activity, as well as giving trainees comfort about their progress, and assuring everyone that training is going to plan. A total of 25 attended the event.

"Higher Specialist Scientist Q&A" webinar Friday 23rd July 2021 (10:00-10:45am) on MS Teams – 'The long haul and getting the most out of your HSS development'. This webinar had a variety of speakers from Trainers, HSST trainees, Catherine Ross CHCSO, and representative from the National School of Healthcare Science giving an overview of how to demonstrate equivalence, how to plan and keep on track with development to demonstrate leadership, research and speciality knowledge with the emphasis on consultant scientist level. A total of 27 attended.



To access our
Upcoming Events page
on Turas Learn
Click below.

Celebrating Success in Healthcare Science

Recognition of our Healthcare Scientist colleagues

During Healthcare Science week, the first annual awards ceremony of the Scottish Government Chief Healthcare Science officer Awards was hosted to celebrate the skills and expertise of Healthcare Scientists across NHS Scotland. This well attended virtual ceremony provided a platform to share best practice throughout our profession and to recognise the innovation, transformation, high quality of education and leadership in service delivery.

There were over 50 nominations submitted to recognise and support colleagues for their achievements over the past few years in Healthcare Science for the various award categories'

The Transformer	Winner - Point of Care Team, NHS Lothian Runner up - John McLean GGC
The Educator	Laura Metcalfe, NHS GGC
The Sustainability Champion	Jean Ngoie , HNS Tayside
The Innovator	Scottish Microbiology & Virology Network (SMVN) SARS CoV-2 (covid-19) TESTING Technical Group
The Researcher	Nuclear Medicine, North East Sector - NHS GGC
Rising Star	Winner - Emma-Jayne McElhinney, NHS Lothian Runner up - Sohail Ali, NHS Lothian

Further details of the awards and of the winner are published in the Scottish Government HCS Bulletin <u>Link</u>.

Promoting Healthcare Science

The Healthcare Science communities promoting the professions across Scotland

Healthcare Science Week | Digital Campaign 2022



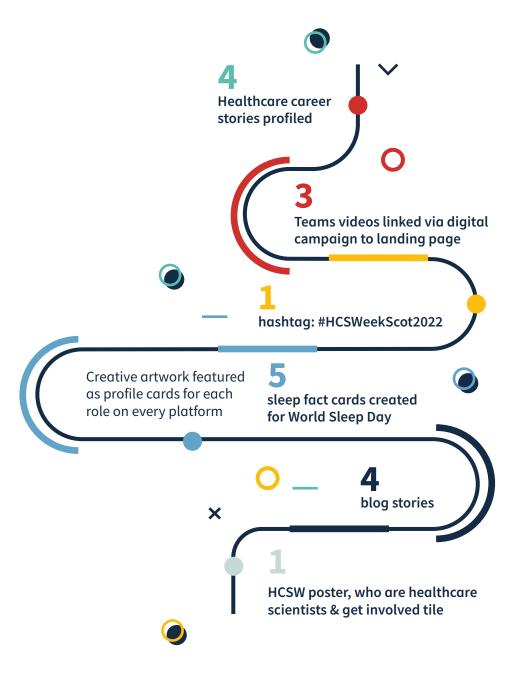


Healthcare Science Week is an annual week-long programme designed to promote and celebrate the amazing work of Healthcare Science professionals. The aim is to raise awareness of the wide range of careers and roles within Healthcare Science, highlighting the difference they all make to patients' lives. It gives each one of us the chance to tell the public and other health professionals how science and technology is vital in modern patient care and changes lives for the better. It's also an invaluable opportunity for existing Healthcare Science staff to inspire the next generation by promoting the new career structures in local schools and colleges.

For this year's Healthcare Science week 2022, a digital campaign was run in collaboration with the NHS Scotland Careers team and Scottish Government CHSO to promote a program of events for Healthcare Science Week 2022. The campaign was promoted on various social media platforms of Twitter, Facebook and Instagram to reach out and engage for raising awareness. A Healthcare Science Week 2022 placard was created to get our Healthcare Science colleagues involved and share their stories on social media, explaining why they love working in Healthcare Science using the hashtag #HCSWEEKSCOT2022.

NHS Scotland Careers team Overview of the Campaign

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Campaign deliverables were to raise awareness and highlight roles in Healthcare Science job family and to highlight real life Healthcare Science career journeys to support the campaign week. The aim was to inspire the audience into this career path and routes into the NHS, engage the Healthcare Science community, raise awareness of Healthcare Science job profiles, educate on what these are, and the importance of these roles in the NHS.

Engagement on the NHS Scotland Careers Website

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3,360 total page views

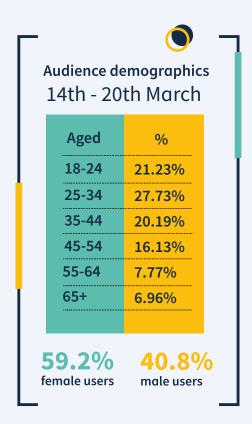
14th - 20th March at an increase of

7.6%

versus the week before

9,751
unique page views
for total site

14th - 20th March
HCSW Campaign Week



NES HCS promotion during Healthcare Science week

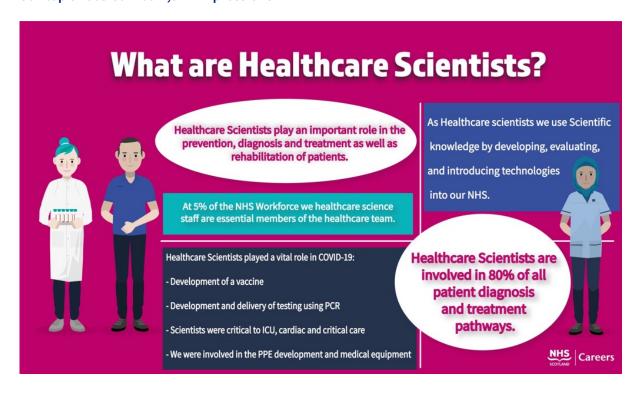
Our Social media campaign goal was to raise awareness but also to engage our Healthcare Science colleagues to get involved and promote @hcsnes on the platforms Twitter, Instagram and Facebook. We also created a sub-page on our Turas Learn website for ideas on how to promote and raise awareness of the various disciplines and roles in Healthcare Science including the campaign banners.

During Healthcare Science week on our <u>@hcsnes</u> social media, we posted **15** tweets/posts, made **24,300** impressions, our profile visits were **2,362** with **19** mentions and **32** new followers in the week.

It was good to see our fellow Healthcare Science colleague's engagement and promotion sharing the banners for 'I love working in Healthcare Science because', creative videos shared from the SNBTS Jack Copland centre team and the British Academy of Audiology to name a few, all interacting by sharing the hashtag from the campaign in collaboration with our Scottish Government colleagues at CHSO #hcsweekscot2022.



Our top tweet earned 7,544 impressions



Top media Tweet earned 2,677 impressions



For links to Careers and Promoting Healthcare Science, visit our Turas Learn page. Click below.

Communications

Communication to our Healthcare Science community is key to ensuring up to date information about our offerings, resources, and signposting of relevant events to Healthcare Science.

We utilise various communication platforms to our Healthcare Science colleagues such as:

- Annual Report
- Mailchimp
- NES Healthcare Science Website
- Turas Learn Healthcare Science e-Learning.
- Quarterly Notice Board

A new addition to our communication was the launch of our social media platforms that went live from June 2021 on Twitter, Facebook and Instagram. With the handle @hcsnes on all 3 platforms to capture a wider demographic for our audience.

Since we activated our Social media platforms, as of March 2022 we had **227** followers on Twitter, **34** on Facebook and **31** on Instagram.

To keep up to date with our news and communications follow us on our social media handle @hcsnes

NES Healthcare Science Advisory Group

NES has an Advisory Group to act as key stakeholders on a range of HCS education and training matters. Our members review and critique NES Healthcare Science activity. The group comprises of representatives from the three Healthcare Science strands, education sector, workforce and government stakeholders

The last meeting was held in September 2021 as a virtual online discussion centred on our commissioning, CPD, and quality monitoring. Ideas were explored to improve CPD resources, sharing and signposting learning opportunities with our Medical Directorate colleagues, suggestions for social media promotions, and to improve engagement with our trainee surveys.

Our advisory group membership, meetings and minutes are available on our NES website.

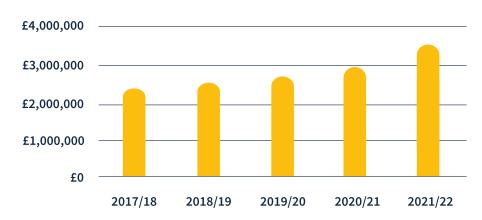


Visit our NES
Healthcare Science
webpage for our
Advisory group
meeting and minutes
Click <u>here</u>

NES Healthcare Science Financial Summary

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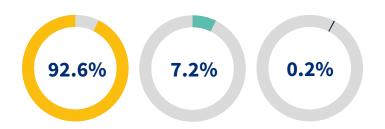
NHS Healthcare Science budget '21-22



NES Healthcare Science recent spending distribution



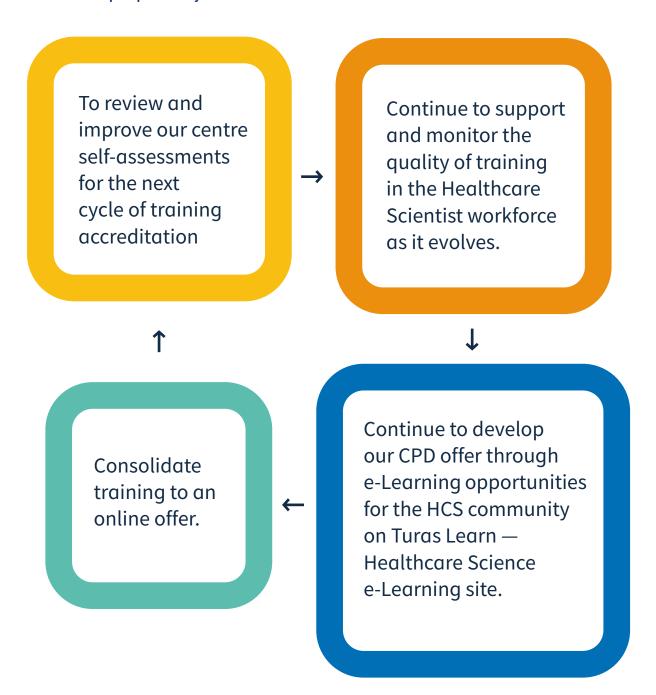
Distribution of spend '21-22



In person training and events spending were depressed owing to the pandemic

NES Healthcare Science 2022-23 Objectives

These build upon previous years and include:



Acronyms

ACS Association of Clinical Scientists
AHCS Academy for Healthcare Science

ARCP Annual Review of Competency Progression

CCL Common Core List

GSP Good Scientific Practice

HCPC Health and Care Professions Council

HCS Healthcare Science

HEE Health Education England

HEIW Health Education and Improvement Wales

HSS(T) Higher Scientific Specialist (Training)

IBMS Institute of Biomedical Science

IPEM Institute of Physics and Engineering in Medicine

MLA Medical Laboratory Assistant
NES NHS Education for Scotland

NSHCS National School for Healthcare Science

NTN National Training Number

OSFA Objective Final Structured Assessment

OLLD NES Organisational Learning and Leadership Development

PTP Practitioner Training Programme (graduate-level)

RCCP Registration Council for Clinical Physiology
RCT Registration Council for Clinical Technologists

RPL Recognition of Prior Learning

SG Scottish Government

STP Scientist Training Programme (Postgraduate level)

TPM Training Programme Management

TURAS NES app that includes TPM

NES Healthcare Science Annual Report 2021-2022

This resource may be made available, in full summary form, in alternative formats and community languages.

Please contact us on **0131 656 3200** or email **altformats@nes.scot.nhs.uk**.



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