

NES HEALTHCARE SCIENCE

Annual Report 2022 – 2023



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

I Contents

Introduction	01
Foreword	02
Commissioning	09
Our Healthcare Science Workforce	10
Healthcare Science Training Commission	14
Healthcare Science Funding Update	23
Equivalence Recognition of Prior Learning (RPL) application fee support 2021/22	27
Case Studies	39
Assurance and Monitoring Of Training	56
Quality Monitoring of HCS Training in Scotland	57
Monitoring Trainee Progress	59
Training Centre Recognition	65
Progression of Training (ARCP)	72
Training Plans	76
Exit Survey	79
Feedback and Annual Surveys – Trainee Feedback	83
Feedback and Annual Surveys – Supervisor Feedback	89
Summary of combined Equality, Diversity and Inclusion (EDI) responses	94

CPD and e-Learning **100**

New Healthcare Science education and training website 101

Leadership and Trainer programmes 102

CPD and e-learning resources 2022/23 104

NES Healthcare Science Events 2022/23 109

The Wider HCS Community **118**

Celebrating the success of our Healthcare Science colleagues 119

Promoting Healthcare Science / Healthcare Science week 2023 121

NHS Healthcare Science Careers 133

Communications 136

NES Healthcare Science Advisory Group 138

NES Healthcare Science Objectives 2023/24 139

Acronyms 140

©NHS Education for Scotland 2023

You can copy or reproduce the information in this document for use within NHSScotland and for non-commercial educational purposes if referenced in full. Use of this document for commercial purposes is permitted only with the written permission of NES.

NESD1794 | Designed by the NES Design Service

Introduction

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

Our Annual Report for 2022/23 will review the following key areas of activity:

- Funding both postgraduate and practitioner-level training positions/courses
- Tracking trainees throughout their training (using the Turas Training Programme Management (TPM) system)
- Quality assuring all Healthcare Science training throughout Scotland
- Providing CPD including face-to-face training, e-Learning and CPD resources/suggestions
- Promoting Healthcare Science - highlighting careers opportunities, providing conferences/meetings and support for various groups

In addition, NES Healthcare Science links with UK agencies, Scottish Government, and other stakeholders to represent NHSScotland's best interests.



Foreword

From NES Healthcare Science Associate Director, Dr Robert Farley

The 2022/23 reporting period ended with a revitalising return to our trainees' event at COSLA in February 2023 that was blended with an online offer. This integration of online and in-person attendees was positively rated. There was clear appetite from trainees to hear more from established staff about career stories – in keeping with the no wrong path principle expounded by NHS Scotland Careers. Whatever the path, our core mission remains as the oversight and support of that training. Whatever the circumstances – online or in-person – training needs to continue.

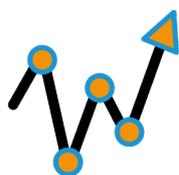


In February 2023 and over three days we ran a series of one-hour webinars on topics of generic interest to Healthcare Science (HCS) trainees and their supervisors. The in-person event’s plenary was streamed online as a webinar too adding to the 80-plus delegates attending in-person at COSLA. We covered relationships vs competency; the path to advanced practice; leadership; strategic developments affecting HCS; and career planning in uncertain times. Trainees produced posters telling their 12-year-old self about career choices – all worthy ambassadors for their professional area.

In 2022, we supported the recruitment of **42** Clinical Scientist trainees. Data from 7 specialties covering 24 posts yielded 1,163 applicants alone – confirming that at nearly 50 applicants per post (similar to the last report), there is no shortage of graduates wanting to join NHS postgraduate scientific training. Exceptionally, our intake included a one-off cohort of 13 cardiac physiology STP¹ trainees in response to securing a cohort following the 2019 workforce commitment for this group by Scottish Government. This is the largest single specialty intake of Clinical Scientist trainees to date and was facilitated in the absence of the undergraduate pathway being available for 2022. For other specialties we received **29** expressions of interest for new trainees. Our core intake of around 20 trainees was boosted by 9 through savings made during the pandemic. 43 expressions of interest were received for the 2023 intake with 4 posts being fully fundable.

Reference

1. [STP Scientist Training Programme – 3-year and work-based in Scotland to Clinical Scientist registration.](#)



our core intake of around 20 trainees was **boosted by 9** through savings made during the pandemic

During 2022/23 we supported 30 postgraduate bursaries to in-service staff, all Biomedical Scientists, (compared to 27 in 2021/22) and from an applicant pool of 36 bids compared to previous year of 46.

In monitoring the state of training, the key line of enquiry throughout the pandemic was the impact on progression. At the end of March 2023, we were monitoring **258** active trainees, mainly postgraduate but also including **48** practitioner-level clinical physiologists. There are **53** Biomedical Scientist postgraduates and **119** postgraduate Clinical Scientists either directly sponsored or as in-service equivalence candidates. In monitoring the state of training, we have **83%** of eligible trainees responding to our training progression requests. Training centres are recognised by us over a 4-year cycle: at present **66** centres are recognised and a further **6** are in progress as recorded covering all strands of Healthcare Science. In response to the COVID-19 related influx of science graduates to our laboratories, we supported **37** staff to undergo Recognition of Prior Learning assessment by the Institute of Biomedical Science, as a start to acquiring HCPC registration as a Biomedical Scientist.

From the 1st of April '22 to 31st March '23 we delivered 15 interactive, mainly online, workshops to **136** delegates. Three of our four learning programmes for trainers and leadership have corresponding interactive online workshops; we supported **15** e-learning modules and have in prospect a further **6** dedicated Healthcare Science tailored resources authored in partnership with service. **2,659** learners have interacted with our HCS CPD with **2,959** CPD modules completed and over 500 in progress.

Thanks to everyone who has supported our work over the last year. We look forward to a further year's fruitful collaboration.

Dr Robert Farley

NES Healthcare Science Associate Director

Meet the 2022/23 NES Healthcare Science core team

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. We are the 4th largest group of NHS staff with approximately 7000 Healthcare Scientists 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.



Dr Robert Farley (PhD) is the Associate Director for Healthcare Science at NHS Education for Scotland.

In this role Robert Farley leads on NES commissioning of postgraduate training, quality assurance of that training and NES's CPD and learning resources for Healthcare Science. Before joining NES he was seconded to Scottish Government in a policy role for the Healthcare Science workforce. A chartered engineer, his NHS service has been in Bioengineering and Medical Physics in Glasgow, Inverness and Edinburgh. He is an HCPC-registered Clinical Scientist and has been a registration assessor partner with them. He is a member of the Academy for Healthcare Science Regulation Board. In 2017 he acquired Higher Specialist Scientist Equivalence, also with the Academy for Healthcare Science.



Lorna Crawford, Principal Lead for Quality Assurance

Lorna has worked as a Principal Lead within the NES HCS team since 2017. Within the team her focus is on monitoring and supporting trainee progression and the management of the Quality Assurance processes, including Training Plans, Annual Reviews of Competency Progression and Centre Recognition.

She is a Principal Clinical Scientist working as a Training Officer within the West of Scotland Centre for Genomic Medicine. She is involved in training within multiple higher education institutions and holds an Honorary Senior Lecturer position within the University of Glasgow. In 2022 she gained Higher Specialist Scientist registration and became a Fellow of the Academy for Healthcare Science.

She is a member of various committees and works closely with the Association of Clinical Scientists and the National School of Healthcare Science to assess Clinical Scientist trainees at various points of their training. She also holds the role of Partner within the Health and Care Professions Council, overseeing the accreditation of training programmes with a direct route to registration.



We are the
4th largest
group of NHS staff
with approximately
**7000 Healthcare
Scientists** in post
across NHS Scotland



Claire Cameron, Principal Lead for Communications

Claire has been a member of the NES HCS team in the role as Principal Lead Scientist since 2017. The main role and focus of her work is to lead the communications of the NES HCS activities and offerings, social media engagement, developing publications, Healthcare Science career promotions and supporting the NHS Scotland Career website to update the Healthcare Science career profiles. Claire also supports the team with CPD development and delivery.

As a registered Biomedical Scientist, her other joint role is working in service as an Education and Training Manager for the department of laboratory medicine, NHS Lothian. Her NHS career began as a Medical Laboratory Assistant (MLA) before undertaking her trainee role towards registration as a Biomedical Scientist and onto further specialism in Transfusion Science with an MSc at Edinburgh University.

She is a member of various committees such as the IBMS Scottish Training Forum and an active IBMS external verifier assessing Biomedical Scientist trainees for their HCPC registration.



Bianca Brownlee, Principal Lead for CPD

In this role Bianca Brownlee primarily works to support Continuing Professional Development resources delivered on the Turas Learn platform. From identifying gaps in the HCS offer to content design and delivering of training. Assisting in QA of training, workforce commissioning and communications.

Joining the core team in 2020, whilst jointly working flexibly for NHS GG&C as a clinical vascular scientist, using ultrasound and other non-invasive techniques to image and assess blood flow, a small niche specialism. Completing training in vascular ultrasound in 2011 with a MSc in Medical Ultrasound from the University of the West of England and gaining full accreditation with the Society for Vascular technology.

In 2022 joining the Clinical Physiology Executive Board to bring experience and insight from physiological science to the HCS team at NES.

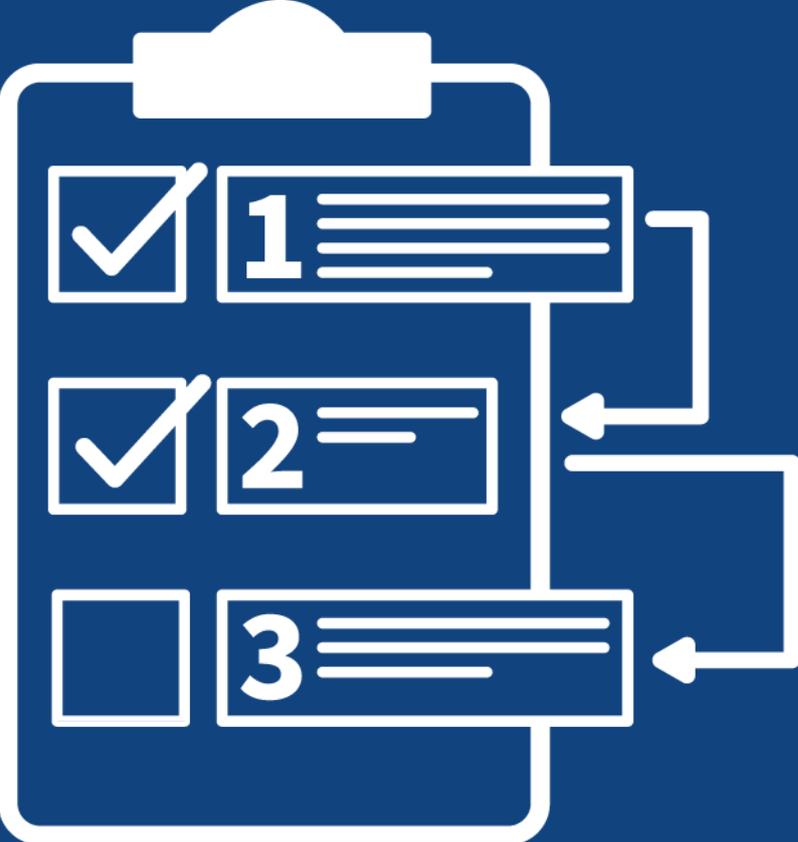


Andy Dunne, Principal Lead for CPD

Andy has worked as a Principal Lead within the NES Healthcare Science core team on a sessional basis since 2020. The primary focus of his work is the development of learning resources, in collaboration with colleagues from service where appropriate, to provide CPD opportunities for our Healthcare Science workforce and wider community. These resources include comprehensive learning programmes and e-learning modules hosted on our Turas Learn platform, in addition to interactive workshops and webinars hosted on MS Teams.

Andy began his training as a Clinical Scientist in 2011 within the West of Scotland Mobility and Rehabilitation Centre (WestMARC) in Glasgow. Since achieving state-registration with the Health and Care Professions Council (HCPC), he has continued to work in WestMARC's Wheelchair and Seating service as a Senior Bioengineer. His expertise is providing specialised seating equipment, to patients unable to sit in a standard wheelchair, and investigating Adverse Incidents, to determine what was at fault and prevent similar incidents.

Commissioning



Our Healthcare Science Workforce

The Healthcare Science (HCS) workforce is the 4th largest clinical-registered group of NHS staff¹, with approximately 7000 staff in post across NHS Scotland.

HCS encompasses a wide variety of professional groups, outlined on pages 11-13, divided into four broad themes:

- Life Sciences
- Physiological Sciences
- Physical Sciences and Biomedical Engineering
- Data Science

The profile of HCS was raised throughout the COVID-19 pandemic, with testing data from laboratory services reported daily: this was vital for government and health service strategic planning.

Reference

1. [Scottish Government. Healthcare Science - education and training provision: baseline review \(online\)](#) 20 October 2022



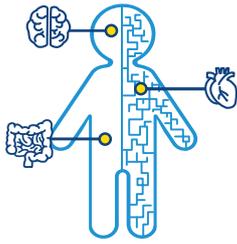
Our workforce is responsible for approximately **80%** of all the **diagnostic tests** throughout the patient pathways

Our workforce is responsible for approximately 80% of the all the diagnostic tests throughout the patient pathways but also supports and collaborates the work throughout the health service. Working with the Scottish Government and other stakeholders, NES HCS aspires to continue to raise our workforce profile and establish defined HCS workforce data.



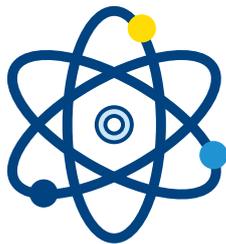
Life Sciences

- Anatomical Pathology
- Blood Transfusion
- Clinical Biochemistry
- Clinical Immunology
- Cytopathology
- Decontamination and Sterile Services
- Genetic Science
- Haematology
- Histocompatibility and Immunogenetics
- Histopathology
- Microbiology
- Molecular Pathology
- Reproductive Sciences (Clinical Embryology and Andrology)
- Virology



Physiological Sciences

- Audiology
- Cardiac Physiology
- Clinical Perfusion Science
- Critical Care Science
- Gastro-Intestinal Science
- Neurophysiology
- Ophthalmic and Vision Science
- Respiratory and Sleep Science
- Vascular Science



Physical Sciences and Biomedical Engineering

- Biomedical Engineering
- Clinical Measurement and Development
- Clinical Pharmaceutical Science
- Imaging with Ionising Radiation
- Imaging with Non-Ionising Radiation
- Medical Equipment Management
- Medical Illustration
- Nuclear Medicine Physics
- Radiation Protection and Monitoring
- Radiotherapy Physics
- Reconstructive Science
- Rehabilitation Engineering
- Renal Technology



Data Science

- Clinical Bioinformatics and Genomics
- Data Science and Modelling
- Health Informatics



Healthcare Science Training Commission

From fully funded trainees to postgraduate bursary awardees, the Turas Training Programme Management (TPM) system monitors specific elements of the workforce in training. Our Healthcare Scientist trainee cohort includes postgraduates who can be 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.

The diversity of the scientific workforce is represented by our current training number allocations, that spans both graduate and postgraduate trainees.

Trainee types (total estimated 258 at March 2023)

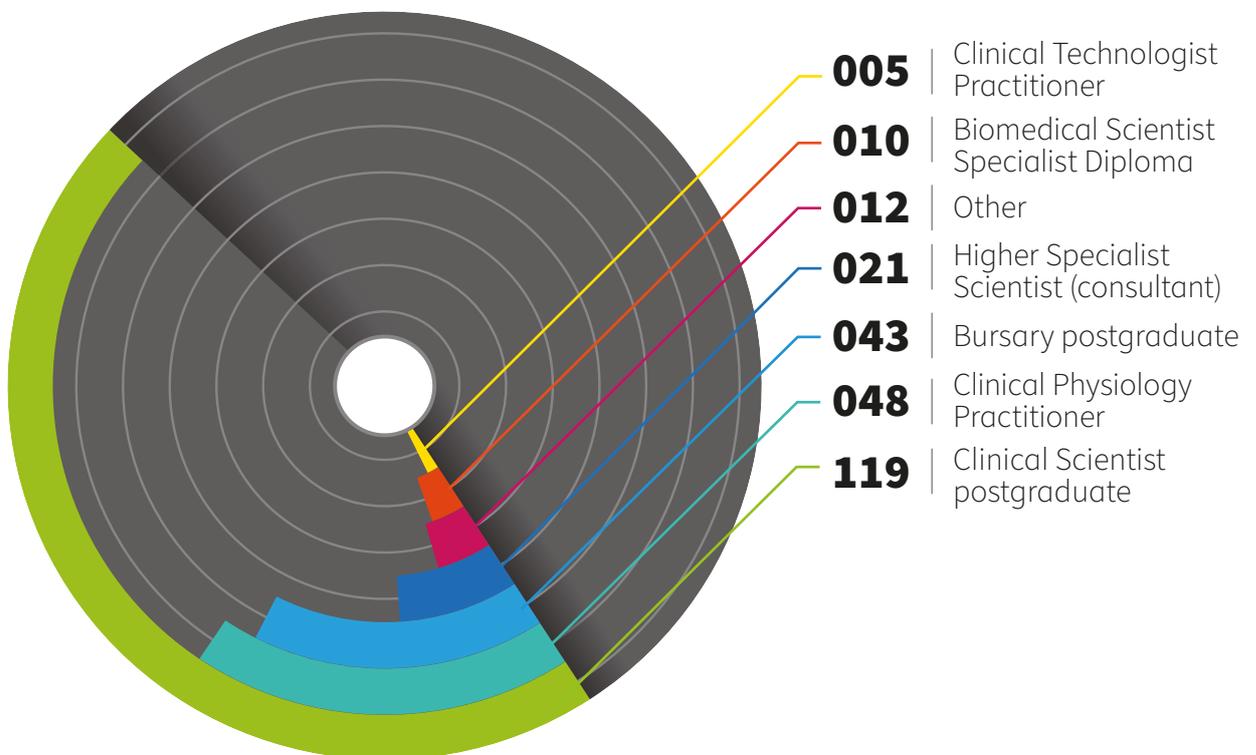
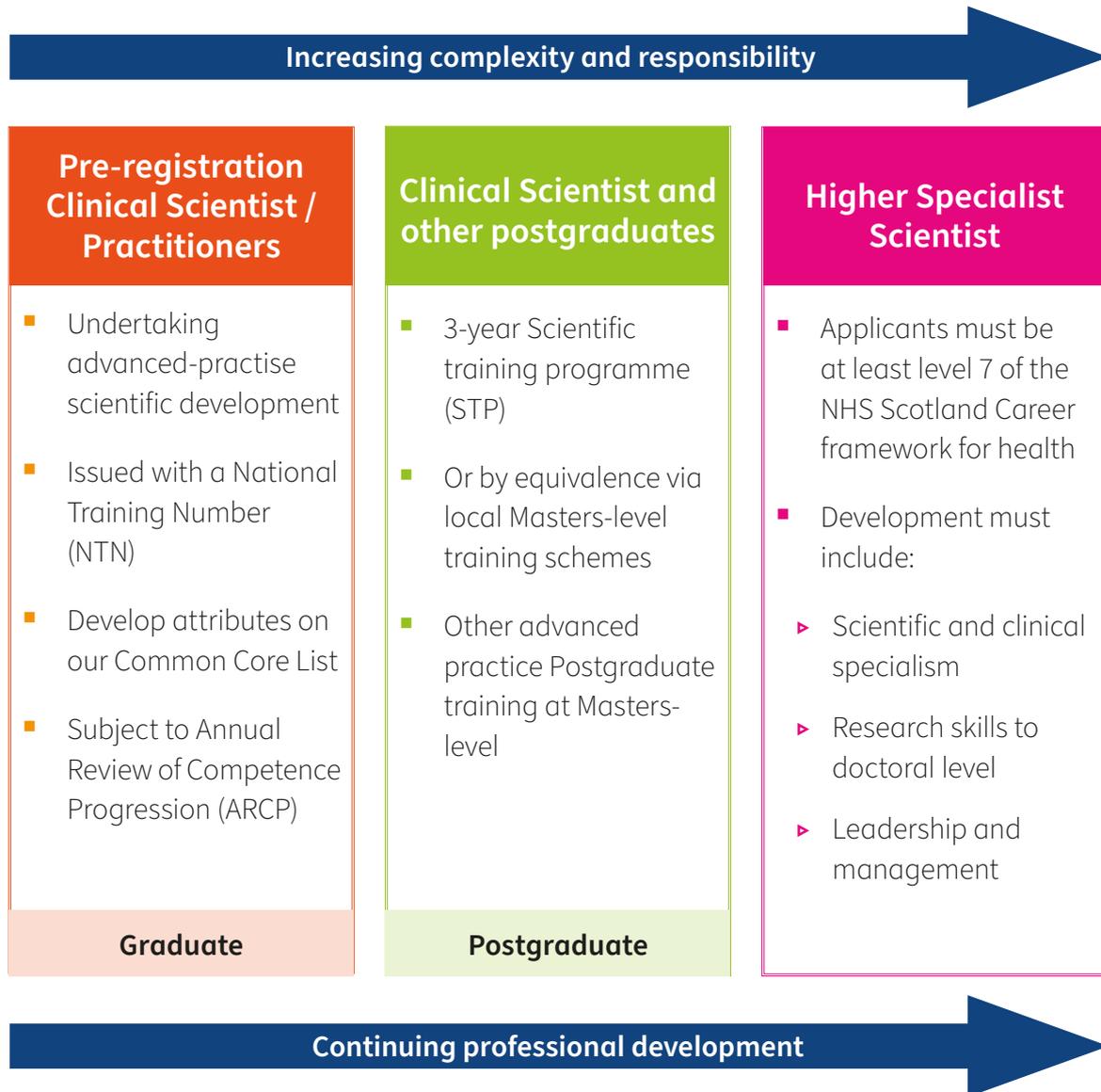


Figure 1 demonstrates the diversity of the current Healthcare Science training cohort.

Figure 2 below outlines the career progression of a Healthcare Scientist.



NES Healthcare Science also promote quality of training with 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, challenges trainees to consider their wider development as future scientific leaders, and is a common dominator for all types of trainees in Healthcare Science.



Figure 3 above demonstrates the CCL domains.

Further information about our Common Core list and current postgraduate Healthcare Science training can be found on our [Information for Trainees page](#).

NES Healthcare Science issues all Healthcare Science trainees within Scotland, regardless of whether they are NES-funded or not, a [National Training Number \(NTN\) – detailed on page 59](#) of this report. We also provide them with our [Trainee Handbook](#) when they commence their training.

Visit our [training website](#) for more information

Practitioners

Healthcare Science Practitioners enter service as AfC Band 5 graduate-level staff who, in many areas, make up the bedrock of diagnostic 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. Some specialties, such as clinical physiology and clinical technology use work-based training pathways to develop Practitioner staff. For NHS employed staff, we monitor the progression of Practitioner trainees along with postgraduate trainees and quality assure their training.



we are monitoring
258 active trainees,
mainly postgraduate
but also including
48 practitioner-level clinical physiologists



Clinical Physiology Practitioners

Clinical physiologists have been a workforce focus following direct investment in the cardiac physiology group in 2019/20 and – as this report is written - a national review of paediatric audiology. We are currently monitoring 48 such trainees at various stages of their 4-year programme.

Clinical Physiology Practitioners at 31/03/23

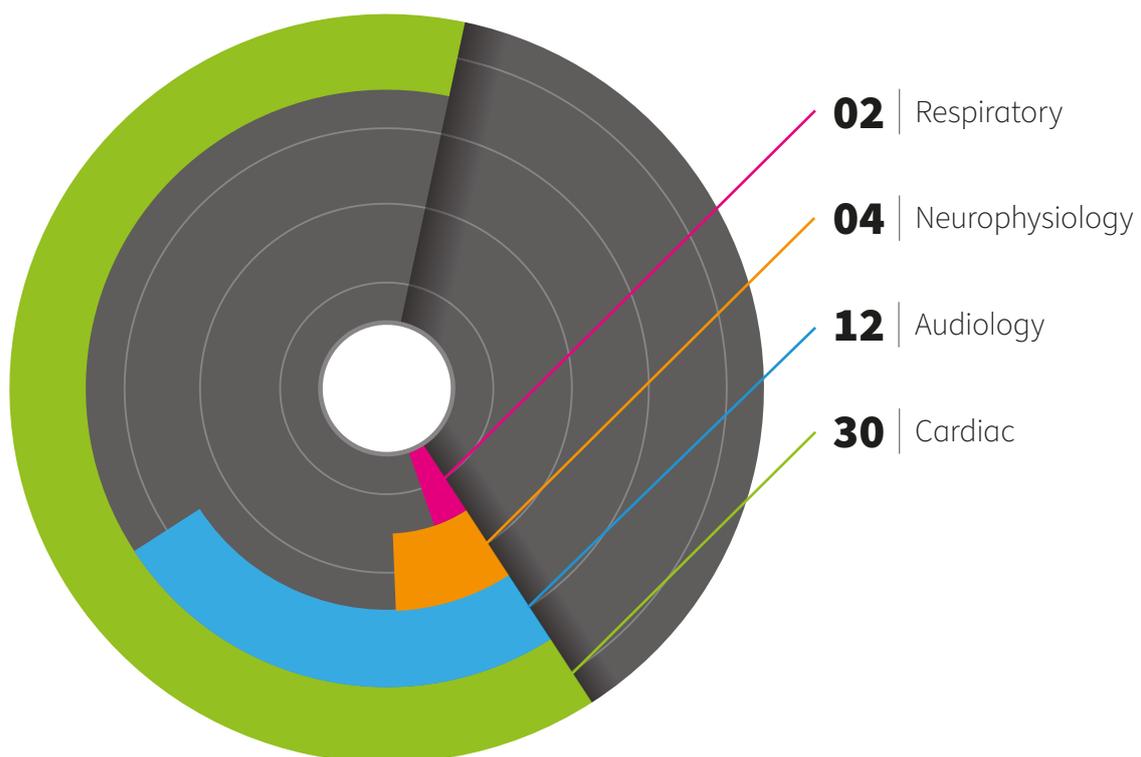


Figure 4 above outlines the number of Clinical Physiology Practitioners we are monitoring on TPM

Clinical Scientist trainees

At the end of March 2023, we were monitoring 119 Clinical Scientist trainees across 11 broad themes / specialties. 27 Clinical Scientist trainees were on pathways using the Scientist Training Programme (STP). Specifically, in 2022 we were able to support an intake of 42 Clinical Scientist trainee posts by fully meeting demand for 29 posts from services’ expressions of interest plus a Scottish Government cohort of 13 STP trainees in cardiac physiology. For 2023’s intake 43 expressions of interest had been received prior to our March reporting deadline. 4 fully fundable NES-funded posts are in prospect later in 2023, although we may try and co-fund posts to increase the number. The shortfall has arisen from unfunded COVID-19 extensions and the additional recruitment of trainees in 2022.

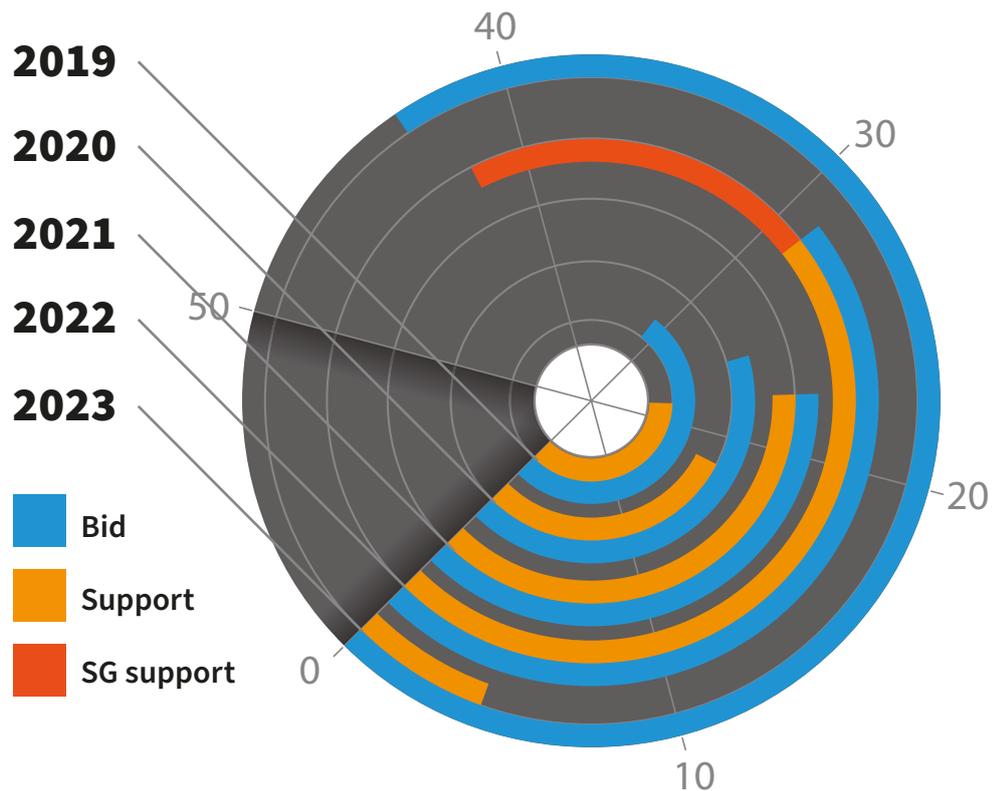


Figure 5 above outlines our commissioning of Clinical Scientist trainees 2019-2023



Clinical Scientist trainees in progress March 2023

Audiology	4
Biochemistry	10
Cardiac Physiology	20
Clinical Pharmaceutical Science	1
Genomics	24
Histocompatibility and Immunogenetics	2
Infection Science	16
Maxillofacial Science	1
MPCE	32
Reproductive Science	6
Respiratory Physiology	3
Total:	119

Table 1

Clinical Scientist trainees on the STP curriculum

in progress March 2023

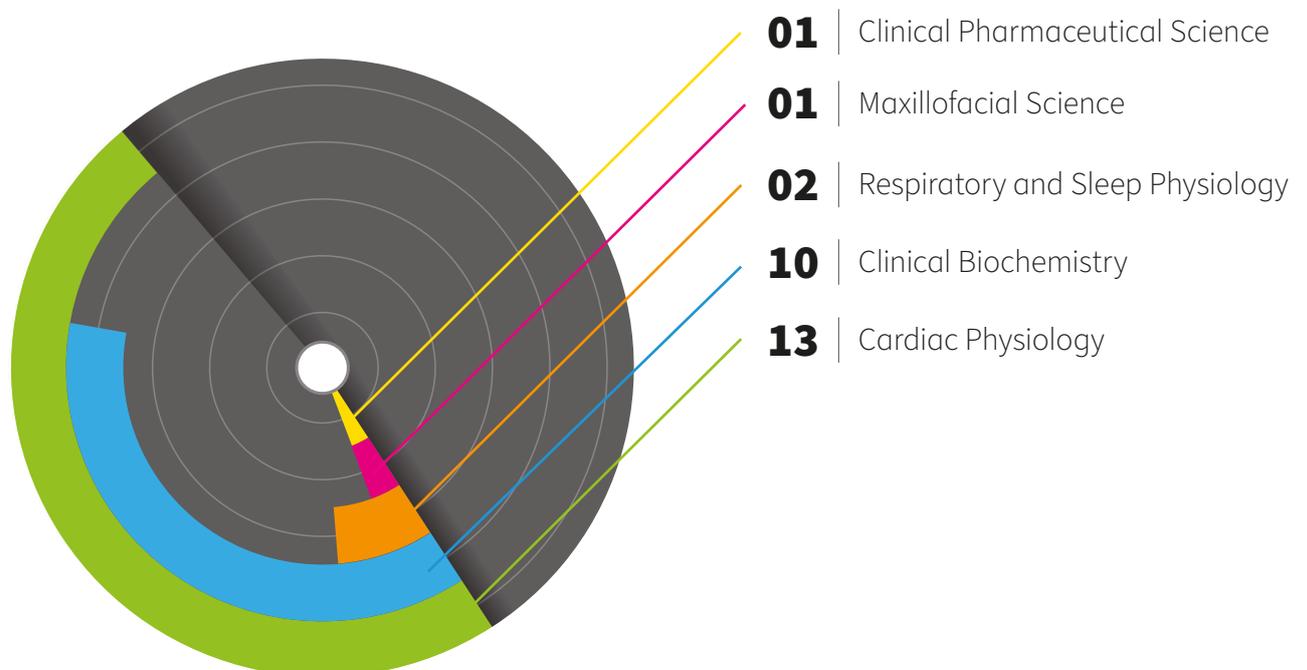


Figure 6 represents the Clinical Scientist trainees on the STP curriculum

Higher Specialist Scientist

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 a minimum level 7 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. Higher Specialist Scientist Training covers scientific development, leadership and innovation/ research as core pillars of their training plan.

Higher Specialist Scientist trainees cohort 2020

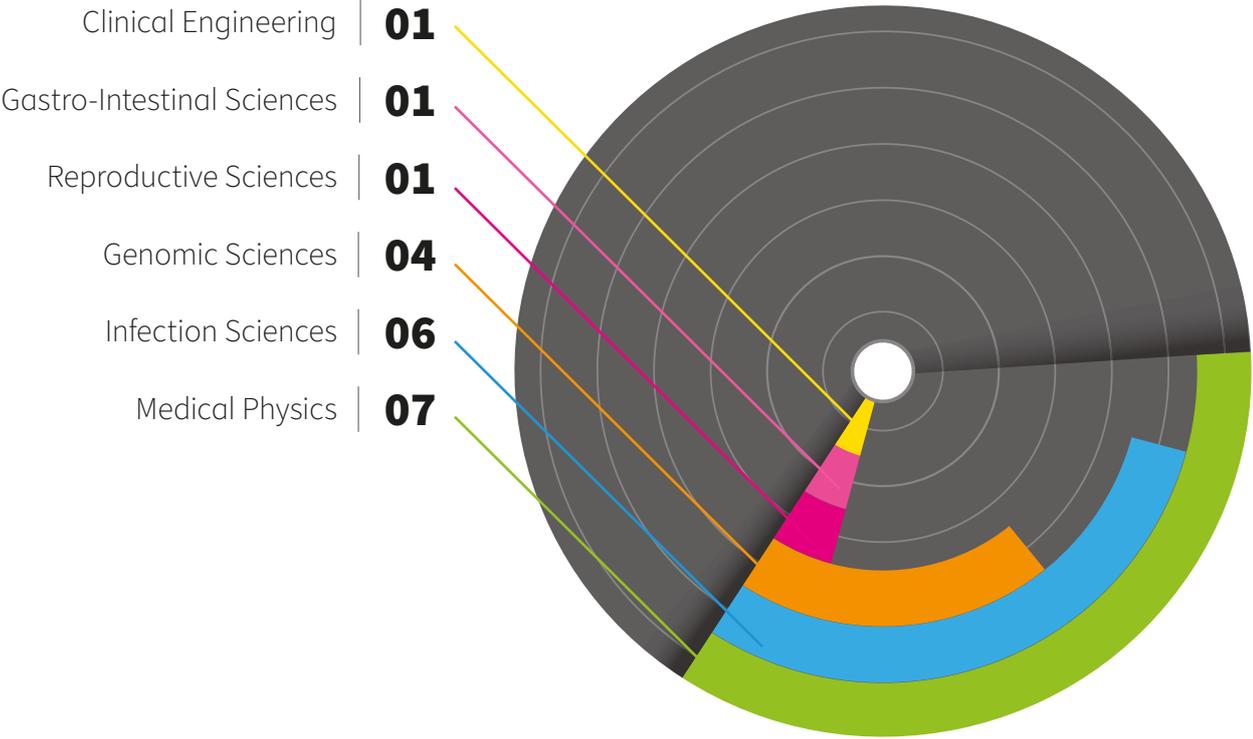


Figure 7 above shows the various disciplines funded on the HSS Equivalence Cohort 2020



I hope to combine knowledge gained from the MBA degree with my scientific and clinical experience to improve and ensure quality and consistency in the virology service and promote this both locally and nationally. In the final years of my HSS training, I will undertake the FRCPath part two virology professional exam. Obtaining this qualification will ensure I have achieved the in-depth knowledge of clinical virology required and ensure my confidence as an independent specialist clinical virologist. I aim to provide consultant level clinical and interpretive advice to clinical staff in charge of patient management, if necessary challenging that management and advising an alternative approach or treatment.



- quote from our HSST equivalence cohort

We have begun an impact assessment of the training of this cohort in terms of the current contribution they make and future impact once training is complete. This assessment will be published later in 2023 and shared with Scottish Government.



Read our [case studies on page 39](#)

Healthcare Science Funding Update

Equivalence-route Clinical Scientist application fees 2022/23

During 2022/23 we offered support to in-service staff applying for Clinical Scientist equivalence recognition either via the Association of Clinical Scientists (ACS) or the Academy for Healthcare Science (AHCS). Equivalence leads to registration with the Health and Care Professions Council (HCPC) and is useful for some sectors in terms of career advancement and as a professional hallmark; 15 of the 24 applicants supported were from the Physiological Sciences sector.

Clinical Scientist Equivalence Awards as of March 2023

Audiology	6
Cardiac Physiology	2
Genetics	5
Medical Physics	1
Microbiology	3
Neurophysiology	1
Respiratory Physiology	3
Vascular Science	2
Vision Science	1
Total:	24

Table 2



During 2022/23
we supported
**32 postgraduate
bursaries**
to in-service staff

Postgraduate Bursary support for in-service staff

In-service NHS Healthcare Science Practitioners (AfC band 6 and below) were invited to undertake further development and join the national postgraduate scientist trainee cohort.

In 2022/23 we offered 32 postgraduate bursaries following 41 bids for support. Our bursaries are to assist in-service staff (mainly Biomedical Scientists) undertake specialist development, usually at Masters-level. The average level of award was £2150. Postgraduate staff are tracked using our quality system identical to the Clinical Scientist trainees and practitioner trainee groups.

Such development has a major “distance learning” element with universities from around the UK supporting trainees depending on chosen scientific speciality.

Postgraduate bursaries awarded

(32 of 41 bids)

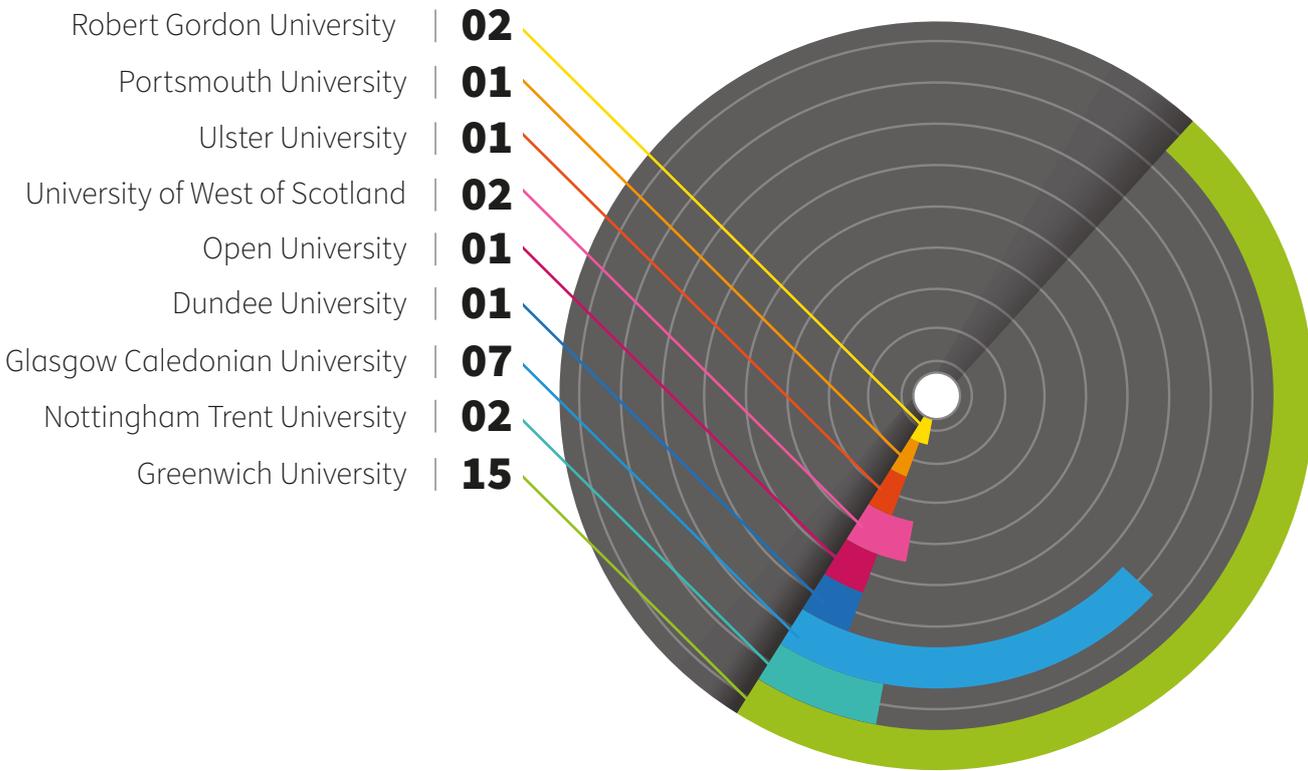


Figure 8 illustrates the chosen universities for our postgraduate Bursaries awardees

Applications for support are graded by a panel of up to 10 assessors. We have tracked the threshold for awards over several years and expect to revise the approach for April 2023.

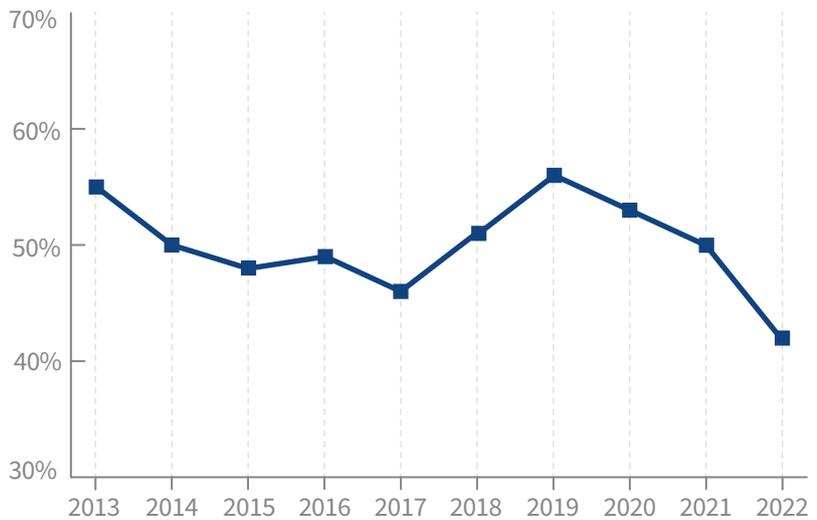


Figure 9

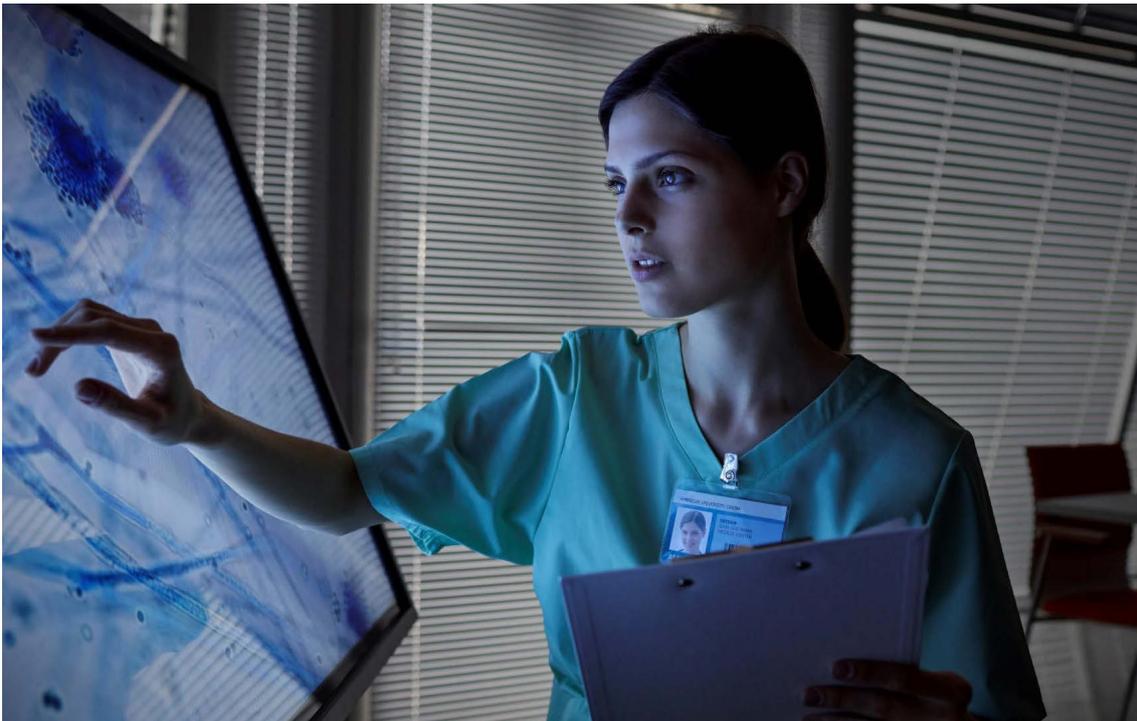


We offered support
to 14 individuals
of whom we
**expect 12 to
complete the
BAA's Higher
Training exam**

Paediatric Audiology - support for BAA's Higher Training Scheme module equivalence exam

During 2022/23 a Cabinet Secretary directed review took place concerning NHS audiology services and following concerns about paediatric audiology provision. The review is due to report after March 2023. In the course of the review, NES Healthcare Science agreed to meet the exam fee costs for experienced NHS audiologists to sit the British Academy of Audiology (BAA) examination in paediatric assessment. We offered support to 14 individuals of whom we expect 12 to complete the exam. This assessment pathway offered by BAA is a temporary one and designed to encourage experienced staff to formalise their knowledge without sitting an entire programme.

Equivalence Recognition of Prior Learning (RPL) application fee support 2021/22



Feedback Survey Report from the Bursary Applicants in 2022

A bursary funding opportunity was established at NES HCS in September 21-March 22 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 registration.

The NES Equivalence fee support fund was initiated in response to the recruitment drive of qualified but unregistered staff, especially in the laboratory services, to support the COVID-19 response workforce which reinforced the requirement to utilise alternative pathways for recognition of prior experience and learning. In HCS across NHS Scotland, there are many highly qualified staff who joined service in low banded support roles but who have the potential to progress in their career once they are suitably registered.

This fund was offered to assist these alternative pathways towards registration by offering the application fee support to relevant professional bodies for assessment/recognition of non-accredited degree transcripts, prior learning, and experience to identify the requirements for Biomedical Scientist registration or to apply for Clinical Scientist equivalence registration. The typical cost of such is up to £400; support to individuals was capped at this level.

A total of **46** staff applied, where the majority being science graduates seeking degree assessment from the Institute of Biomedical Science (IBMS-RPL), this is represented in [Figure 10 on page 31](#). Other applications were for Clinical Scientist registration equivalence with the Association of Clinical Scientists (ACS-CS) and the Academy for Healthcare Science (AHCS-CS).

“Equivalence” recognition has been an important feature of Healthcare Science training pathways to help secure the workforce.



What Is Equivalence?

Equivalence is when the outcomes of two processes are directly comparable even though the paths to achieving them are different. When equivalence is shown to exist between a new qualification and the qualification or experience an individual already has, repeated education or training becomes unnecessary.

Equivalence routes to registration in Healthcare Science

There are various routes to equivalence supported by professional bodies towards registration with the [Health and Care Professions Council \(HCPC\)](#) or the [Academy for Healthcare Science \(AHCS\)](#).

The three levels of equivalence are;

- Higher Specialist Scientist, Equivalence (Consultant Scientist)
- Scientist Training Programme, Equivalence (Clinical Scientist Training)
- Practitioner Equivalence



Various professional bodies support equivalence routes such as;

- the [Institute of Biomedical Science \(IBMS\)](#) with the Certificate of Competence by Equivalence or [Degree Assessment for further accredited top-up university modules](#)
- and the [Association of Clinical Scientists \(ACS\)](#) with the Certificate of Attainment

The Institute of Biomedical Science facilitate a Recognition of Prior Learning (RPL) assessment from non-accredited scientific Honours degree qualifications against [HCPC education standards](#) to determine whether candidates will require any supplementary education/top-up modules to meet [HCPC standards of proficiency](#) towards Biomedical Scientist registration.



A total of
46 staff applied,
the majority being
science **graduates**
seeking degree
assessment
from the Institute of
Biomedical Science

Feedback Survey results

In September 2022 we distributed a feedback survey to all the successful applicants to review their progress with their applications and their outcomes. This report details an overview of these responses to report how these funds were applied and what was the outcome of their designated registration pathway in Healthcare Science. From the **46** bursary applicants, we received 40 responses. From the 6 non-respondents, we received notification from their supervisors that 3 candidates had left the NHS or the department.

Equivalence Route

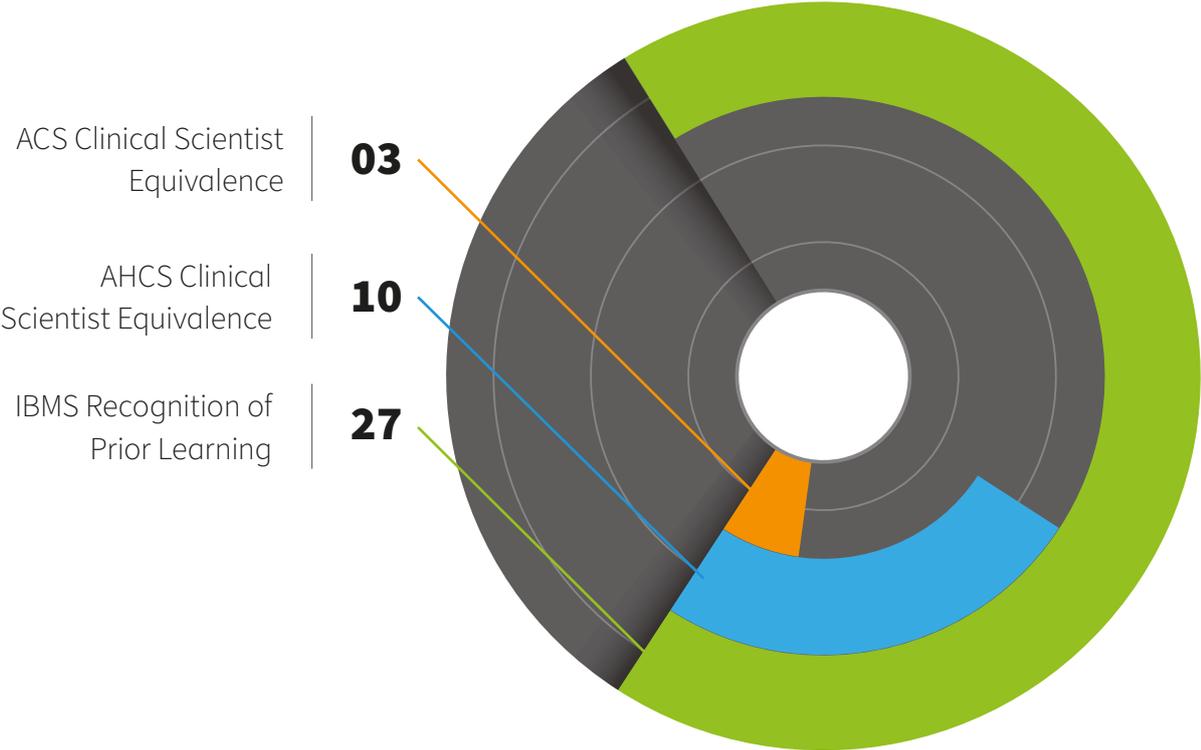


Figure 10 The various Equivalence routes to registration applied by the awardees

IBMS Recognition of Prior Learning accounts for the majority of bursary applications for the 'Equivalence route' at 86% with 12% applications to Academy for Healthcare Science (AHCS-CS) and 2 % to the Association of Clinical Scientists (ACS-CS) (see Figure 10 on page 31).

Life Sciences staff accounted for the majority of applicants for the Equivalence fee support fund

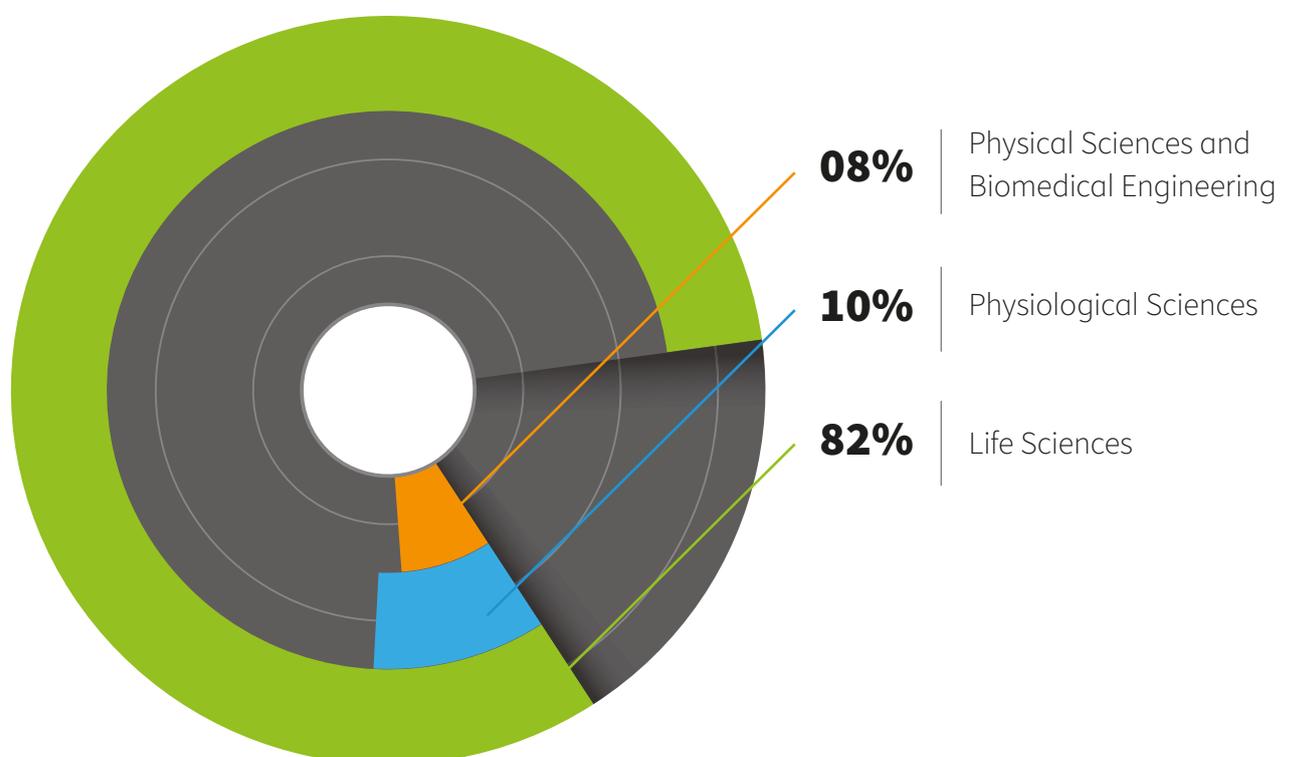


Figure 11 Bursary applicants for the Equivalence fee support fund by Healthcare Science theme

Life Sciences staff accounted for the majority of applicants for the Equivalence fee support fund at 82%, with the specialisms of Virology and Microbiology at the highest percentage. For Physiological Sciences, Neurophysiology was the highest specialism of these applicants (Figure 11).

Distribution of 'Job Title'

Maxillofacial Prosthetics service manager	1
Senior Respiratory Physiologist	1
Highly Specialist Cardiac Physiologist	2
Clinical Scientist	1
Highly Specialised Clinical Physiologist	1
Trainee Biomedical Scientist	1
Assistant Practitioner	10
Highly Specialised Clinical Physiologist	1
Trainee Clinical Scientist	3
Healthcare Support Worker	9
Medical Laboratory Assistant	3
Trainee Clinical Embryologist	1
Principal Healthcare Scientist	1
Healthcare Scientist	1
Biomedical Support Worker	3
MfP Deputy Manager	1
Total:	40

Table 3 shows bursary applicants for the Equivalence fee support fund by Job Title

It was good to see a variety of bursary applicants from different staffing groups and at various stages of their NHS career pathway (illustrated in Table 3 on page 33). The distribution of applicants was either at early career staff as a Support worker, Assistant Practitioner, or trainee Clinical Scientist and also including levels up to more experienced health professionals with job roles as highly specialised physiologist looking for equivalence registration.

What was your application outcome?

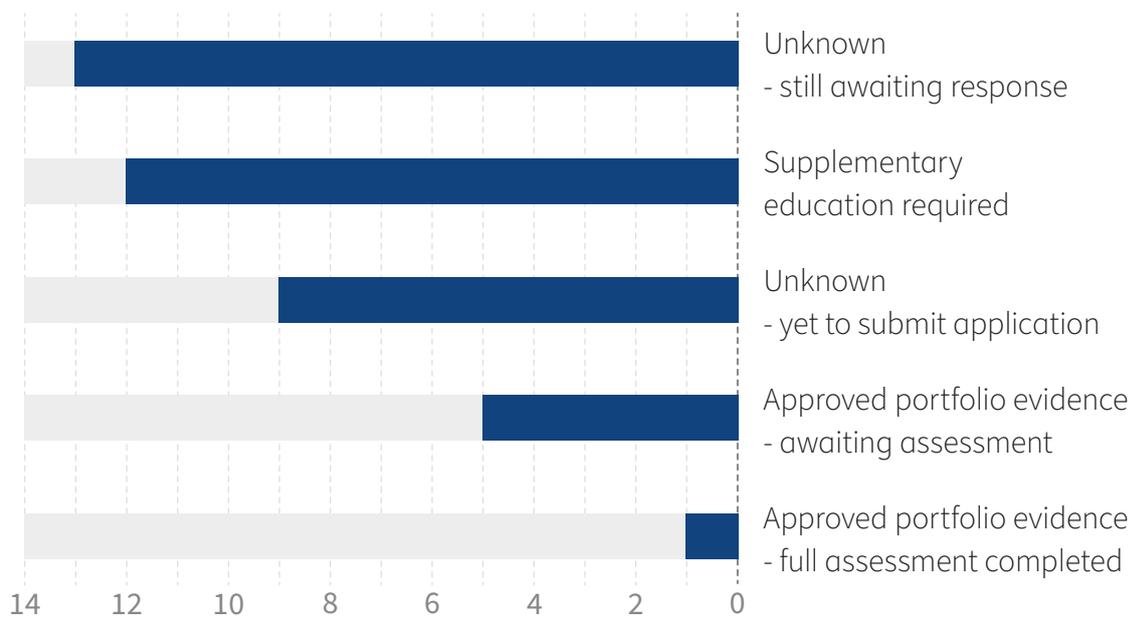


Figure 12 Bursary Application Outcomes

Bursary outcomes were varied as illustrated in Figure 12 (on page 34). For the 27 IBMS RPL bursary applicants; 9 were still awaiting a response from IBMS, 12 responded that supplementary education is required, 5 were yet to submit their application and 1 applicant had completed assessment with the approved registration portfolio and awaiting final assessment.

For Clinical Scientists equivalent registration; 4 applicants were still awaiting their response from the Professional body either ACS or AHCS, 4 were yet to submit their application form, 4 had their portfolio of evidence approved and awaiting assessment and 1 applicant had their portfolio evidence approved, full assessment completed and are now HCPC registered.

What is your estimated time to become registered?

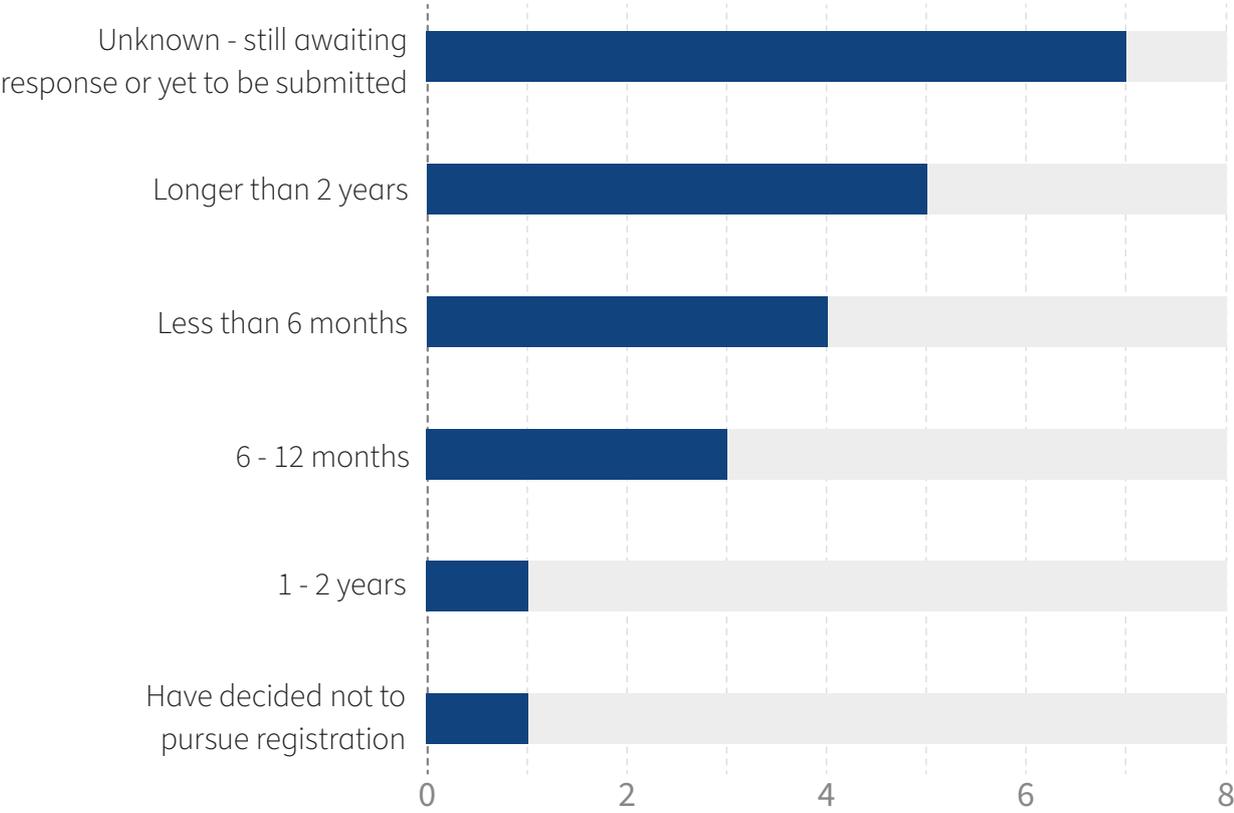


Figure 13 estimated time to registration after outcome received



The survey also looked at the estimated time to registration for the relevant Healthcare Science role (see Figure 13 on page 35). Of the respondents for the Clinical Scientist registration equivalence, the average time to become registered was less than 6 months. From the IBMS RPL applicants many reported longer than 2 years before they could apply for registration.

The respondents who requested bursary support for the IBMS RPL for Biomedical Scientist registration reported a variety of additional education qualifications required to pursue this career pathway. This varied from **2-8** supplementary top up accredited university modules where costings varied from **£650 - £8,500**.

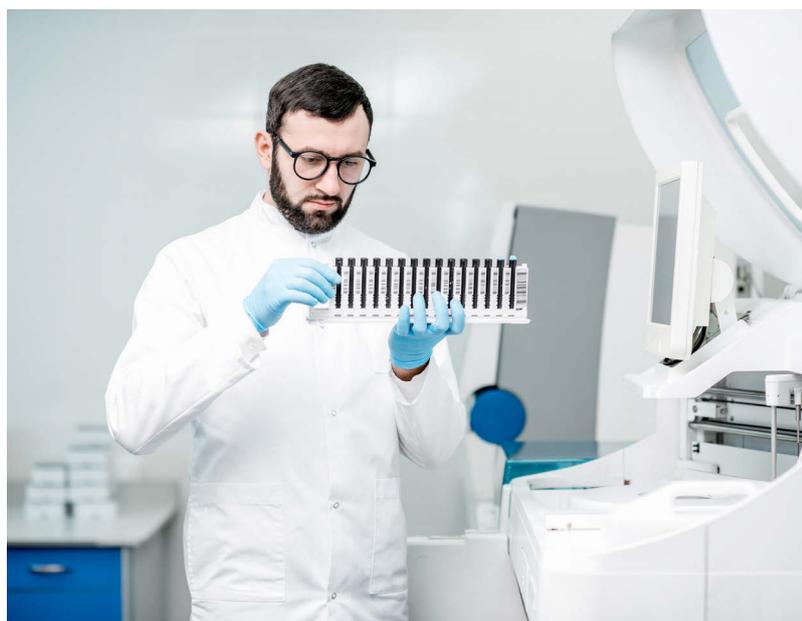


for the **Clinical Scientist registration** equivalence, the **average time to become registered was less than 6 months**

It was interesting to see the disparity of funding towards the supplementary education required for the registration route as some candidates were required to self-fund these costings for their career progression, others were fully funded by their employer or in one case, a respondent reported they would have to self-fund the qualifications totalling at £8,500. Subsequently they decided not to pursue this career route as it was unaffordable on a Healthcare Support worker Band 3 salary.

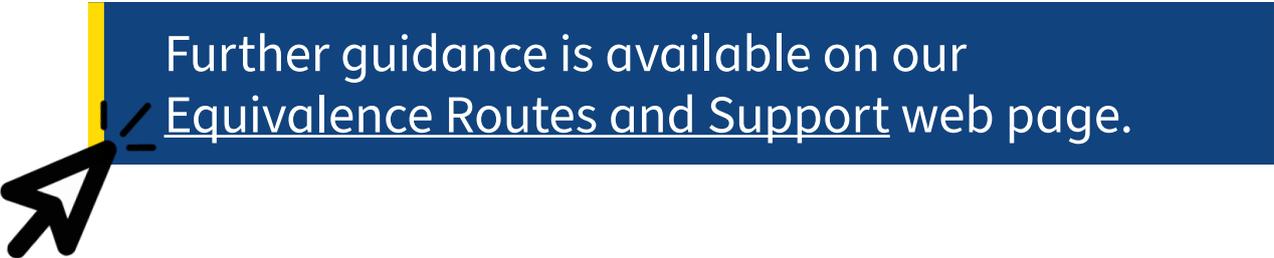
The common supplementary education modules reported from the IBMS RPL degree assessment outcome were as follows;

- Haematology/Blood Transfusion Science
- Medical Microbiology
- Clinical Immunology
- Cellular Pathology
- Clinical Genetics



It was reassuring to note that many of the applicants for the IBMS Biomedical Scientist equivalence registration route responded that they would apply to undertake the supplementary education followed by the IBMS Certificate of Competence as their intended route to registration with HCPC.

In conclusion, the equivalence/RPL bursary fund in 2022 for Clinical Scientist and Biomedical Scientist careers has helped support the NHS Healthcare Science workforce towards HCPC registration. Showing a commitment not only to their future career in Healthcare Science but also to maintaining standards of education, competence and conduct to providing assurance for service users, patients and the public.



Further guidance is available on our [Equivalence Routes and Support web page](#).

| Case Studies



NES supporting Practitioner Training Scheme for Clinical Physiologists

Kirsty Meikle, Cardiac Physiologist at NHS Lothian.

I studied mostly sciences, languages and PE at school, then went on to do a Physiology and Sport Science degree at Glasgow University.

After completing my Physiology and Sports Science degree I was keen to maintain an interest both the practical and scientific aspects of my studies. I worked part time throughout my studies in customer facing roles, then went on to work as a fitness assistant after graduating.

As my previous jobs had involved working in customer service roles, I was keen on pursuing a career that would allow me to work both with the public, and as part of a team. The Cardiac Physiology role within the NHS struck me as an opportunity to learn and develop new skills in a practical environment, as well as working closely alongside others.

I did all my training for my current role here in NHS Lothian, meanwhile completing the BSc Hons Clinical Physiology degree through Glasgow Caledonian University.

“ Working as part of a team is very **important to me**, and it makes me **proud** to see my colleagues all **working together.**”

My duties vary daily, however I would typically be either in the Cath Labs or pacing theatre in the morning, then in the ECG department in the afternoon for the pacing clinic, ETTs or tape analysis. I also sometimes work off-site covering clinics at SJH, ELCH or WGH.

The best part of my job, I really enjoy the patient interaction and getting to chat to them before a test or procedure. It's rewarding to see patients become more relaxed when you take the time to talk to them, and also hear their interesting stories.

Working as part of a team is very important to me, and it makes me proud to see my colleagues all working together. It's also very satisfying to follow the patient journey and see how we can all help them and treat them as individuals.

It is an incredibly rewarding job where you are always learning. No two days are ever the same and you never get bored!

For further guidance visit our [Information for Trainees page](#) on the NES HCS website.





NES supporting Clinical Scientist training programmes

Laura Heeps, Trainee Clinical Scientist, West of Scotland Centre for Genomic Medicine, NHS GGC

I am so glad I 
didn't give up... have
thoroughly enjoyed it so far – I have
been able to **build on all of my experiences**..."

In hindsight, I took a rather unconventional path to where I am today. I came to the end of school knowing that I had loved learning science but with no idea what to do with that fact. In my slight panic I decided to pursue the most glamorous and exciting scientific career I could think of, and went on to complete an undergraduate degree in Forensic Biology. After four years of being told it would never happen, I was fortunate enough to get a job in the field, and straight from my studies I began working at Cellmark Forensic Services as a Forensic DNA Analyst. It was here that my passion for genomics was truly ignited, and I quite quickly began researching fields out-with forensics that would allow me to explore this in much more depth.

My first job within the NHS was in the Extractions laboratory in the West of Scotland centre for genomic medicine at the Queen Elizabeth University Hospital in Glasgow – and from the moment I set foot in the department, I knew it was the place for me. Laboratory Genetics provides an extremely high level diagnostic service for patients whilst also prioritising innovation, in order to ensure that communities in Scotland always have access to the most up-to-date and relevant care. Doing this successfully in a field as fast-moving and dynamic as genomics, is no mean feat and it was for this reason that I found it such an exciting and rewarding place to be. In total, I gained around five years of experience within a variety of sections and the more I saw, the more I loved it.

The NES funded scientist training scheme was, to me, the perfect way for me to continue learning, developing and honing my expertise and it was on this that I set my sights next. It took me a few attempts to successfully gain a place on the scheme (interviews have never been my strong suit) but I was sure this is what I wanted to do so I tried to use each unsuccessful attempt as a learning experience and platform to build upon. And I am so glad I didn't give up. I am currently in my second year of the scheme and have thoroughly enjoyed it so far – I have been able to build on all of my experience so far, gain knowledge in a huge spectrum of disorders, work with professionals from a number of different disciplines and departments and collaborate with both familiar and new laboratory teams for diagnostic and development purposes. Throughout the training scheme so far, I have encountered a wide variety of modules including introductions to all the different genomic methodologies, common constitutional disorders, inherited and sporadic carcinoma and I have completed some external rotations in the histopathology and haematology departments. On top of this I have gained invaluable experience in professional practise ranging from practical service delivery skills to early years leadership and train the trainer exposure. I have also been fortunate to attend a number of conferences including the ACGS Summer Scientific meeting and the NES Healthcare Science Event.

I am very much looking forward to what my future within the worlds of both genomics and clinical science holds. I am hoping that after a successful registration I might continue to learn and develop on-the-job within genomics and, at some point, I would hope to be able to complete the FRCPATH Examinations.



For further information visit [our page on Clinical Scientist Pre-registration Training](#)



NES supporting Postgraduate Bursaries - MSc Degree Programme Case Study

**Louise Bann, Specialist Biomedical Scientist,
Lothian's Deputy Blood Transfusion Manager, Blood
Sciences at NHS Lothian**

I graduated from the University of Strathclyde in 2016 with a First Class Honours Degree in Biomedical Science. Throughout my time at university, I held an internship as a Medical Lab Assistant with a bio-pharmaceutical company and in the summer of 2015 I spent three months as a Research Assistant at the Complutense University of Madrid. These were both valuable experiences which provided me with practical lab skills however it had always been my intention to work in the NHS for the direct benefit of patients. Upon graduating, I joined the NHS at the Western General Hospital, Edinburgh as a Trainee Biomedical Scientist, where I worked for almost seven years.

During this time, I completed my IBMS Competency Portfolio which allowed me to gain HCPC registration and practice as a Biomedical Scientist within the NHS. Thereafter I obtained the IBMS Specialist Diploma in Haematology and Blood Transfusion which enabled me to progress to a Specialist Biomedical Scientist. This role was hugely rewarding in that I was able to directly contribute to the care and welfare of patients.

After gaining several years of experience, I decided to complete a Masters Degree in Biomedical Science to further improve my knowledge and abilities and to ultimately obtain a management position within the laboratory.

After considerable research, I decided the best option was to undertake the MSc Biomedical Science Degree by Distance Learning through Nottingham Trent University which allowed me to work and study at the same time. This degree is accredited by the Institute of Biomedical Science and is specifically designed for Biomedical Scientists working in the NHS. I was able to choose which modules to study and to tailor my classes around the blood sciences. The university also accepted my IBMS Specialist Diploma as course credits.

I applied to NES to help fund my Masters Degree, which was a relatively straightforward process with lots of guidance and information on the NES website. The application process required me to consider what I would achieve over the course of my studies and how this qualification would benefit myself, my laboratory and patients overall.



Ultimately, **all of these benefits** help me to facilitate the **optimum care of patients.**

I would certainly **recommend NES** as a source of **postgraduate funding** to anyone considering further education."

I completed my Masters Degree on a part-time basis over a period of two years. This equipped me with additional knowledge and skills, which I found hugely beneficial in my role as a Specialist Biomedical Scientist. Shortly after completing my Masters, I was promoted to the position of Quality Team Manager at the Western General Hospital, Edinburgh. However, with a strong passion for blood transfusion, it had always been my intention to get back into the blood bank laboratory and thereafter I secured my current position as NHS Lothian Deputy Blood Transfusion Manager at St. John's Hospital, Livingston. Without the Masters qualification and NES funding, I would have been unable to advance into these positions. I am thoroughly enjoying my role in blood transfusion where I feel I am able to improve the care and management of patients.

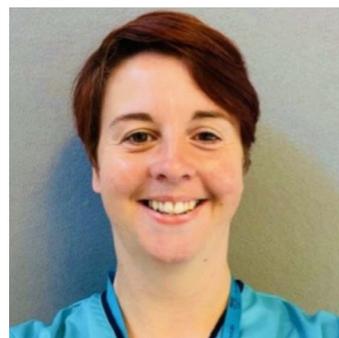
As stated, funding support from NES was vital in obtaining my Masters Degree and helping me progress my career within the NHS. Not only is a Masters level qualification a formal requirement for management positions, but it has undoubtedly improved my problem solving, decision making, organisation, planning and management skills. Furthermore, it has enabled me to train and mentor junior members of the team. Ultimately, all of these benefits help me to facilitate the optimum care of patients. I would certainly recommend NES as a source of postgraduate funding to anyone considering further education.

Find further information on postgraduate bursary support on [our Funding Opportunities page](#)



NES supporting Equivalence route to registration - BAA Higher Specialist Audiology Case Study

Laura Turton, Head of Audiology, NHS Tayside



For such a small profession, it is quite a challenge to understand all the roles, education and registration routes for Audiology across the UK. In our Audiology team there are: Assistant Audiology Practitioners, Associate Audiologists, Audiologists (with a range of seniorities) & Clinical Scientists. To help simplify things, recently the term Healthcare Scientist, with specialisation in Audiology, was added because of Modernising Scientific Careers. The various titles and qualifications complicate professional registration because there are different routes to qualification, as well as different registration bodies to consider.

I started in Audiology in 2000 and I was one of the last cohorts to be employed before you need to have a BSc to practice Audiology. This meant I completed a HNC in Medical Physics and Physiological Measurements and undertook professional Audiology qualifications (BAAT theory and practical exams). This meant the practical side of my training was supported by my employer (Nottingham University Hospitals of at the time), it was very hands on and I got to put into practice many pieces of the theory I was learning one day a week. After 2 years I qualified as an Audiologist.

Once I qualified I started to work with BSc students supporting their learning in their placements. I enjoyed challenging their knowledge and developing their skills further. They asked me at the time why I hadn't got a degree and I explained my previous qualifications were still valid under the NHS 'grandfather clause'. However, I was then offered the opportunity to go to De Montfort University in Leicester to undertake a Masters degree in Audiological Science part time whilst still working and I jumped at the chance. This was fully funded by my employer and although it took a huge amount of time and effort to juggle work and studying I found the skills I learnt on this have been invaluable throughout my career. Once I gained my MSc it opened doors in terms of leadership posts, but because it didn't have a corresponding set of practical exams (the Certificate of Audiological Competence / Certificate in Clinical Competency) I remained qualified as an Audiologist rather than a Clinical Scientist.



All of these experiences, alongside **leadership opportunities** and **clinical experience development** have provided me with some **excellent connections** with other professionals to help **push the boundaries of Audiology further."**

I have always been really proud to call myself an Audiologist and have been given lots of opportunities throughout my career to delve into the breadth of our profession. I have ended up specialising in severe and profound hearing loss, tinnitus and hyperacusis, and adults with learning difficulties and hearing loss. I have worked voluntarily in the profession for the British Academy of Audiology (BAA) and the British Society of Audiology (BSA) on committees which help support the development of practice guidance and provide resources for Audiology departments across the UK. I have been involved in research in clinical practice working with different research centres on national projects. I have been asked to speak at national and international conferences and provide lectures to students on BSc and MSc courses. I have been involved in managing quality assurance standards through UKAS IQIPS accreditation. For a few years I also stepped out of the profession to work for a charity that supported adults with sudden profound hearing loss and then I was employed by our learned society (the BSA) as their Operations Manager. All of these experiences, alongside leadership opportunities and clinical experience development have provided me with some excellent connections with other professionals to help push the boundaries of Audiology further. I stepped back into the profession 8 years ago and my last big move was 2 years ago where I came up to take up a post in NHS Tayside.

In the last 12 months Audiology has been under the spotlight with the Scottish Government through a full national review. This has been a huge undertaking and the recommendations from this will hopefully lead to meaningful, positive change. During this review one thing which was discussed was the need to have more Clinical Scientists who specialise in Audiology in Scotland.

We found out that NES were offering funding so in Audiology we could apply for equivalency for the Scientific Training Programme through the Academy of Healthcare Science to become Clinical Scientists. We discussed this in our management team here and felt this was a positive thing for us to undertake. Many of us applying have come to Audiology from a range of education routes and have an array of clinical, leadership, research, and professional experience and the equivalency allows all of this to be considered in making the change to a Clinical Scientist.

Our funding is now in place but we are only at the start of this journey and have 6 months to pull a portfolio together. This has to focus on the 5 key skills of good scientific practice and we have to demonstrate each of these areas fully to be considered able to progress. This will then lead to viva's and practical assessments to assess whether all of us have the right combination of knowledge, experience and skills to develop in this way but without NES this would not have been an option for us. Our Ear Nose & Throat Consultants have agreed to supervise us through this and then once we become qualified we will be able to then supervise others in the team who are interested in pursuing this.

We want to create a greater skill mix within our team and the Clinical Scientist route allows us to do this quickly. My hope is that this will put us in an excellent position for developing Audiology within NHS Tayside further and supporting future students to enable the profession to progress.

For further information visit [our Equivalence Routes and Support page](#)



NES supporting Healthcare Science Higher Specialist trainees

Sophie McHaffie, Clinical Scientist, Molecular Pathology, NHS Lothian



I completed my PhD at the IGMM under the supervision of Professor Nick Hastie in 2014 and went on to work as a Postdoctoral Research Associate for a further 2 years. During this time I gained experience in a range of assays and technologies and enjoyed working in core scientific research. This position also allowed me more independence as a scientist, opportunity to develop my theories and taught me the importance of a systematic approach to research. However I realised the work I enjoyed most had a more clinical focus.

In 2016 I was appointed a Clinical Scientist trainee position funded by NES and based in NHS Lothian Molecular Pathology Service; comprised of the Solid Tumour Service, Haematological Malignancy Diagnostic Service (HMDS), and the Myeloproliferative Neoplasms (MPN) Service. Following various rotations and on-the-job training running the service I successfully qualified as a Clinical Scientist in 2018. My responsibilities are varied, including Duty Scientist roles, completing assay validations and verifications, SOP writing and reviewing, training other staff members, and research and development work.

Between then and 2022, I have been heavily involved in the running and development of the service, as well as taking 2 years out for maternity leave along the way! It was at this point in my career that I was given the opportunity to apply for the NES funded Higher Specialist Scientific (HSS) equivalence training scheme. I was successful and have been in this scheme for 8 months having returned to work after maternity leave in Autumn 2022.

This Higher Specialist training equivalence scheme involves various components covering research, scientific and clinical development, and leadership and management in conjunction with building up a portfolio of evidence to demonstrate that you meet the Standards of Proficiency for being a Consultant Clinical Scientist.

For the research aspect I have started a project investigating the molecular phenotype of Biliary Tract Cancers and the feasibility of using cell free DNA compared to tumour tissue DNA. For the scientific and clinical component I will follow the Royal College of Pathology - Molecular Pathology curriculum with the aim of completing the FRCPath Part 1 examination later this year followed by the completion of Part 2 in the final years of my HSST programme.

I have previously completed the NES run Early Careers Leadership Development programme followed by the Train the Trainer course. To fulfil my leadership and management development further I will be undertaking a module of the DClinSci programme provided by the Alliance Manchester Business School at the University of Manchester. This training covers a broad range of relevant areas, including Leadership and Quality Improvement in the Clinical and Scientific Environment, and will result in a Postgraduate Diploma in Leadership and Management in the Healthcare Sciences.

I also feel a



**great
sense of
purpose**

and, compared to my academic experience, **feel**

**a lot closer
to clinical**

decisions which

**directly
impact a
patient's
life."**

These qualifications will be obtained alongside the on-the-job leadership and management development which occurs day to day. Such as training and mentoring of trainees, participation in MDT meetings, quality management meetings, annual management reviews, and service strategy meetings. I am currently involved in ongoing preparation of business cases and submissions to for new Molecular testing pathways, and these will continue to build my skills.

Molecular Pathology is a relatively new and rapidly developing specialty and it is exciting to be a part of. As such it is also a small community and would benefit greatly from an increase in consultant level Clinical Scientists to take the service forward. I also feel a great sense of purpose and, compared to my academic experience, feel a lot closer to clinical decisions which directly impact a patient's life. Becoming a consultant in this area would allow me to apply the most current research tools to provide what will become an increasingly personalised treatment experience for each patient.

I am excited to continue improving my scientific and clinical knowledge and to develop my leadership and management skills further with the aim of obtaining admission to the AHCS Higher Specialists register.



For further information on [our Higher Specialist Scientist Training page](#)

NES supporting newly registered and early career staff

There many offerings of continuing support from NES to further develop our NHS colleagues beyond registration to continue their journey of life long learning.

Our aim is to support a multi-profession repository for learning material information and resources to help you in your job, focusing on the relevant Healthcare Science stream and disciplines.



Preceptorship Reflection

Rachel Jackson, Clinical Scientist, WestMARC, NHS GGC

I completed my training programme and became state-registered as a Clinical Scientist in April 2022. Since then I have spent my first year post-registration working within the field of Rehabilitation Engineering at West of Scotland Rehabilitation and Mobility Centre (WestMARC).

I was very lucky to be offered a post within the department I trained in. I expect there may have been a more significant learning curve in my first year if I had been starting over in a new department with its own complexities. Despite this advantage, post-registration work has had its challenges. An area which I am continuing to strive for improvement in is managing my independent clinical workload whilst maintaining time for research, service improvement and my own professional development. As a patient-facing clinician, my instinct is to prioritise direct patient work within my schedule and admittedly less time is designated to other tasks. This situation has improved in recent months through consistently reminding myself that all my improvement work has an impact on the patient experience and will also make me a more proficient clinician.

An example of research work I have participated in involves adverse incidents (AIs) within the amputee patient population. An AI is an event that caused, or almost caused, an injury to a patient or other person. Investigating AIs is an integral part of the Clinical Scientist workload at WestMARC. Data gathered from these investigations has suggested there may be higher proportion of AIs related to the amputee population compared to the general population. Within our research group we are aiming to identify the reasons behind this finding and strive for solutions to improve this.

Following registration, due to waiting list demands from other areas of the service, I was offered the chance to work in a different specialism within the service for six months. This is not a typical route for newly qualified scientists in my department but I felt it was a valuable opportunity which would give me broader experience. I was able to further consolidate my knowledge of assessment and provision of powered wheelchairs, an area of Wheelchair and Seating that was introduced during my training. I also got access to a varied patient group that I would not typically work with which gave me a greater insight into the challenges the disabled community face e.g. accessibility and social care provision.

“ In the last year, **in-person training has resumed** which I have **benefited from greatly** as it has **enabled me** to further **meet patient’s needs.**”

The COVID-19 pandemic mainly impacted my foundation year of training, in the form of interrupted rotations. Despite this, my specialism portion of training was also impacted as in-person training opportunities were suspended due to COVID restrictions. Training from manufacturer representatives on the latest wheelchair and seating equipment available to NHS Scotland through contract frameworks is imperative to remaining well informed. In the last year, in-person training has resumed which I have benefited from greatly as it has enabled me to further meet patient's needs.

The department previously held monthly lunch clubs which consisted of an in-person meeting where a relevant topic related to Wheelchairs and Seating was presented to improve learning. Due to COVID restrictions, lunch club was discontinued. I have recently been involved in a group reinstating a monthly lunch club. We organise talks from both internal members of the team and external healthcare professionals presenting on their area of specialism. We have organised virtual and in-person talks covering topics including wheelchair stability, psychology within wheelchair services, and use of sleep systems. It has been an excellent opportunity to increase my scope of knowledge and has sparked conversation within the team about where further education is required.

Following registration I have undertaken roles and projects that have further consolidated the leadership skills I developed whilst training. I plan to complete the NES Healthcare Science Early Years programme, which covers topics including leadership, teamwork and managing meetings, in the next couple months. I feel that working through leadership training early in my career will lay the groundwork for future endeavours.

Assurance and Monitoring Of Training



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, irrespective of funding. Through our quality assurance (QA) procedures, NES has continued to provide high-quality Healthcare Science training throughout Scotland this year.

These procedures consist of:

- Monitoring Trainee Progress through the Turas Training Programme Management system (TPM)
- Training Centre Recognition;
- Trainer Recognition;
- Annual Review of Competency Progression (ARCP) requests
- Training Plan submission
- Exit Surveys
- Annual confidential trainee survey
- Annual confidential supervisor survey

Throughout Scotland, we have asked for the completion of 519 different Quality Assurance processes this reporting year 2022/23, spanning all Healthcare Science specialisms. We value the involvement of different Healthcare Science specialties in these procedures, and we've seen an increase in the number of specialties approaching NES to start a conversation about QA requirements. This is a positive improvement since it ensures that NES and specific specialties may collaborate to guarantee the calibre of Healthcare Science training and, ultimately, improve patient safety.

Total number of quality assurance requests

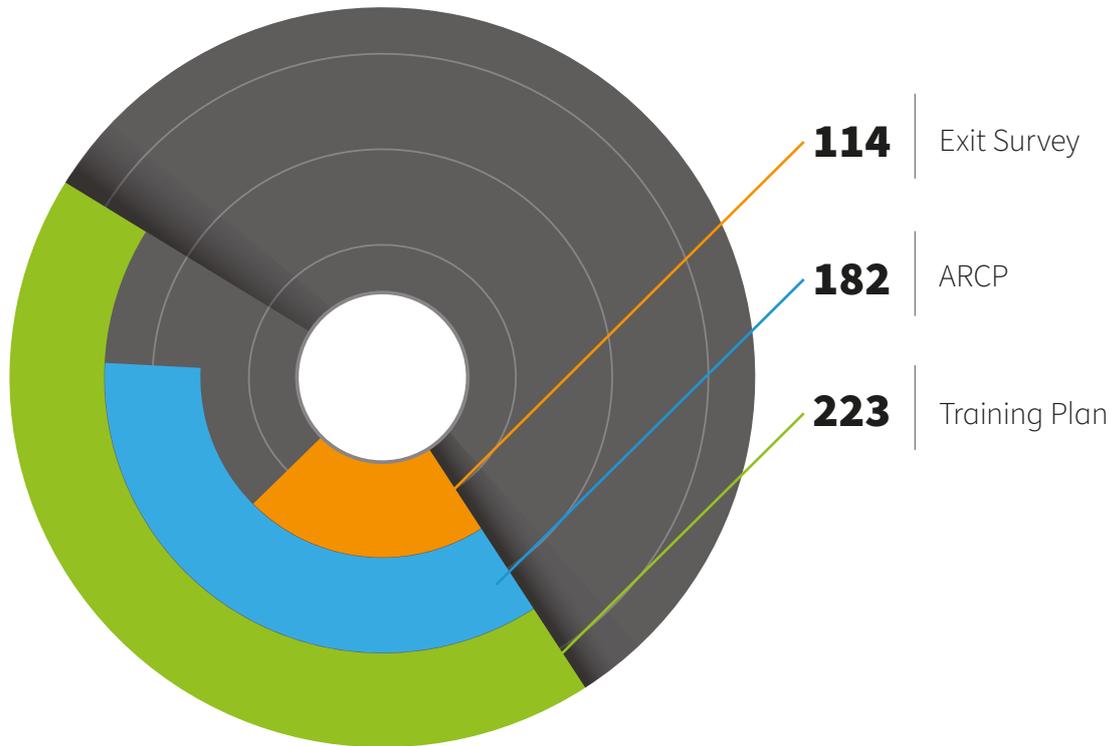


Figure 14 shows the total number of quality assurance requests in 2022/23

To ensure the continuous improvement of our QA processes, we have been collaborating closely with external departments including the Accreditation and Admissions department of the National School for Healthcare Science and various other directorates within NHS Education for Scotland. To ensure that our QA procedures are appropriate for their intended use and that our goal of high-quality training across all Healthcare Science specialisms is realised, we welcome comments and suggestions from stakeholders at any time.



we have **83%**
of eligible
trainees
 responding to our
training progression
requests

Monitoring Trainee Progress

The NES Healthcare Science team monitor the progress of Healthcare Science trainees across Scotland using our Turas Training Programme Management (TPM) system. We request completion of an online form for each trainee to enable us to assign a National Training Number (NTN). Information on the learner, training programme, training location, and supervisor(s) is requested. The information provided at this stage allows us to ensure we communicate our downstream QA requirements appropriately.

Obtaining a National Training Number

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 of any changes to your details such as completion of training, change of training location etc.



As of 31st March
2023, **we are**
monitoring
258 active
trainees

Next Steps

Please complete the online form, available on MS Forms, to send your request to the NES team. One of the Principal Leads will issue your National Training Number and this will be recorded in Turas Training Programme Management. You will receive an email letting you know your NTN and officially welcoming you to your training position.

NES Healthcare Science has a duty to ensure the quality of Healthcare Science training whether the trainee is being funded directly through NES or not. We therefore request that all training centres ensure the NTN request process is completed for all trainees within their department.

As of 31st March 2023, a total of **258** trainees were recorded on the TPM system. As you can see in Figure 15 below, these trainees are completing a variety of training programmes, from academic courses to higher specialist equivalence training programmes.

NTN holders by training category

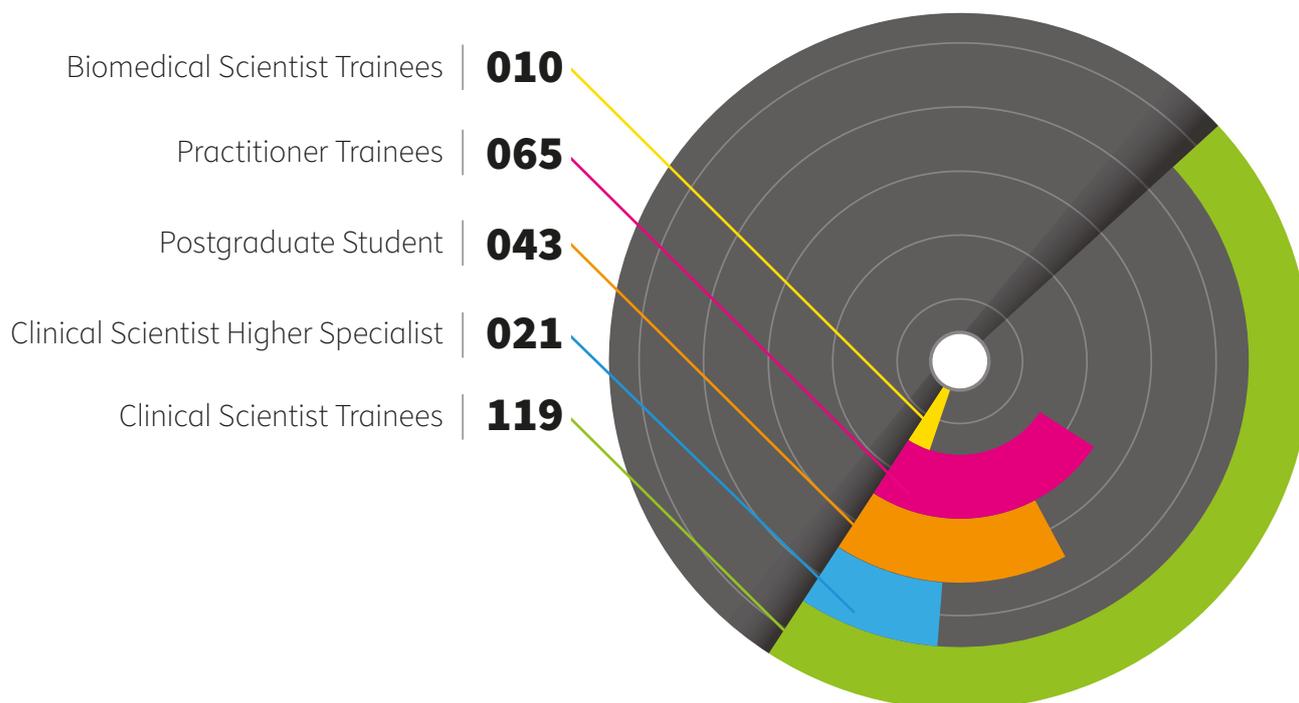


Figure 15 shows the different training categories of the NTN holders as of 2022/23.

These trainees are also pursuing training in a variety of specialties; the table on the following page shows the percentage of trainees from each specialty.

NTN holders by specialism

Audiology	16	6.20%
Biochemistry	23	8.91%
Blood Science	1	0.39%
Cardiac Physiology	50	19.38%
Clinical Measurement	1	0.39%
Clinical Pharmaceutical Science	1	0.39%
Decontamination Science	4	1.55%
Embryology	7	2.71%
Gastrointestinal Physiology	1	0.39%
Genomics, Molecular Pathology	28	10.85%
Haematology, Blood Transfusion	17	6.59%
Histocompatibility & Immunogenetics	2	0.78%
Histopathology & Cytopathology	5	1.94%
Immunology	5	1.94%
Maxillofacial Prosthetics	1	0.39%
Medical Physics/ Clinical Engineering	36	13.95%
Microbiology	35	13.57%
Neurophysiology	4	1.55%
Nuclear Medicine	4	1.55%
Radiotherapy Physics	3	1.16%
Rehabilitation Engineering	3	1.16%
Respiratory Physiology	5	1.94%
Virology	6	2.33%
Total:	258	100%

Table 4 shows percentage of trainees from each specialty

There are numerous training pathways—from practitioner to higher specialist—in use for each specialty. To allow for the compilation of workforce planning statistics and to guide future funding allocation, it is critical that NES maintain information on these pathways and the number of trainees who complete them. The percentage of trainees completing each training pathway is depicted in the next page.

We would welcome discussing the advantages of trainee monitoring and inclusion in our QA processes with any specialism who does not feel their training pathway is represented in the table on the following page.



Full details of the National Training Number process can be found on [our NTN page](#).



NTN holders by training pathway

HSST Equivalence Clinical Engineering	1
HSST Equivalence Genomics/ Molecular Pathology	4
HSST Equivalence Reproductive Science	1
HSST Equivalence Infection Science	6
HSST Equivalence Medical Physics	7
HSST Medical Physics	1
HSST Equivalence Gastrointestinal Physiology	1
STP Equivalence Audiology	4
STP Equivalence Cardiac, Vascular, Respiratory and Sleep Sciences	6
STP Cardiac, Vascular, Respiratory and Sleep Sciences	15
STP Clinical Pharmaceutical Science	1
STP Reconstructive Science	1
STP Equivalence Histopathology & Immunogenetics	2
STP Equivalence Reproductive Science	6
STP Equivalence Genomics and Molecular Pathology	24
STP Equivalence Medical Physics / Clinical Engineering	32
STP Equivalence Microbiology / Virology	16
STP Biochemistry	10
STP Cardiac, Vascular, Respiratory and Sleep Sciences	2
IBMS Specialist Diploma	10
Postgraduate Studies	43
Practitioner Trainee Clinical Technology	5
Practitioner Trainee Physiology	48
Practitioner, Recognition of Prior Learning, IBMS	8
Practitioner, IDSc Technical Certificate	4
Total:	258

Table 5 shows the different training pathway of our listed NTN trainees as of March 23.

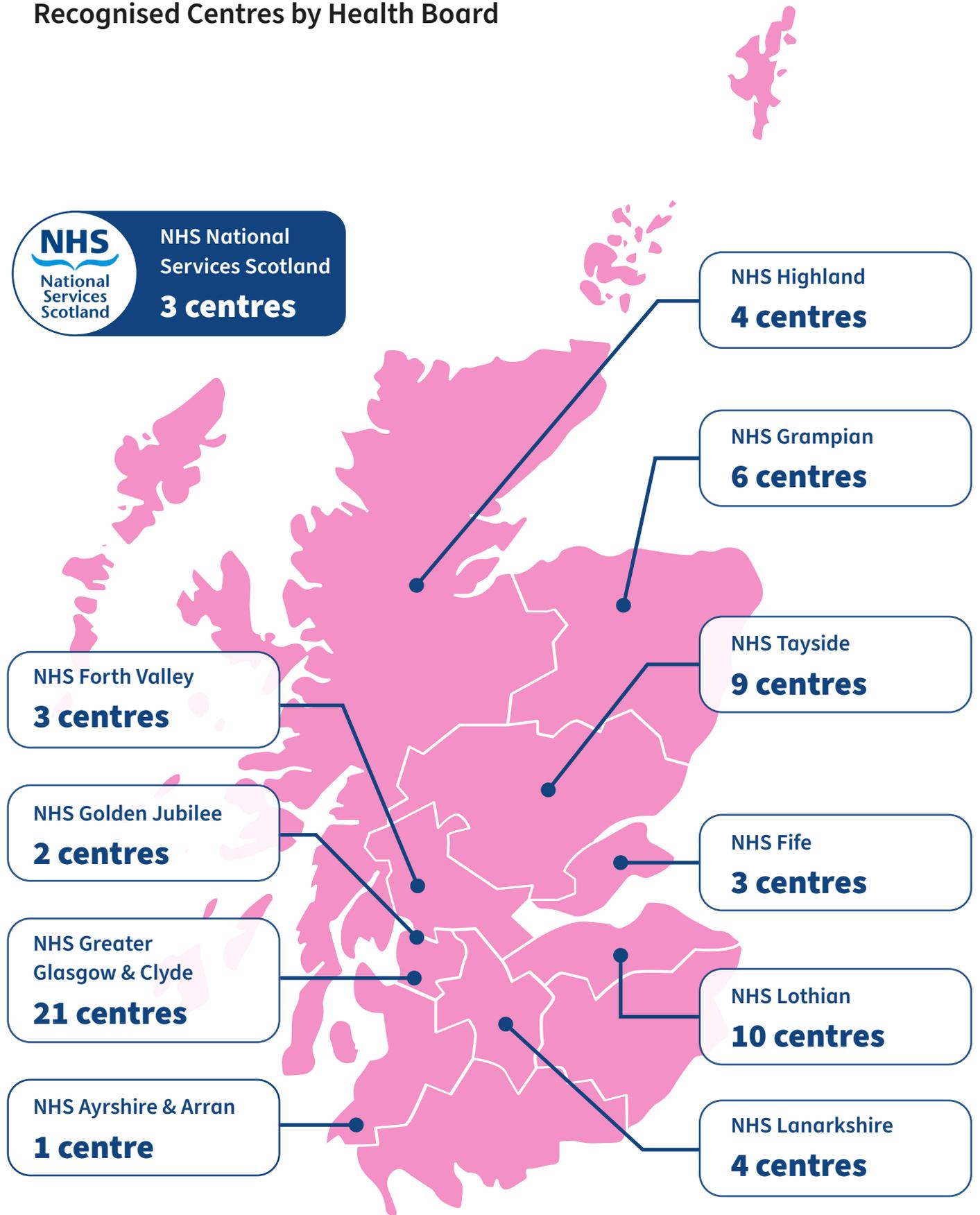
Training Centre Recognition

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.



We have a total of
**66 recognised
training
centres** over
11 health boards
across Scotland

Recognised Centres by Health Board



NES Healthcare Science request that all centres hosting Healthcare Science trainees complete our Training Centre Recognition process. This process assesses the centres against a range of standards which are designed to reflect the requirements of the HCPC Standards of Education and Training. Although various specialisms are accredited through other means, such as the United Kingdom Accreditation Service (UKAS), Institute of Biomedical Science (IBMS), or other regulatory bodies it is important to engage with the Training Centre Recognition process through NES. NES have a duty to assure training quality across Healthcare Science and can ensure consistency of training standards across all disciplines.

To guarantee that trainees receive the finest training possible for the benefit of the patients, NES Healthcare Science would like to collaborate with each training centre. We are grateful for the amount of participation in this process, which has allowed us to greatly increase the number of training centres recognised by us to offer training this year.



Recognised training centres are situated within **a total of thirty distinct hospital sites**

There were 66 training centres and training consortiums that had received recognition from NES Healthcare Science as of 31st March 2023. As shown in the graphs below, these training facilities are indicative of a variety of specialties.

Recognised centres by theme

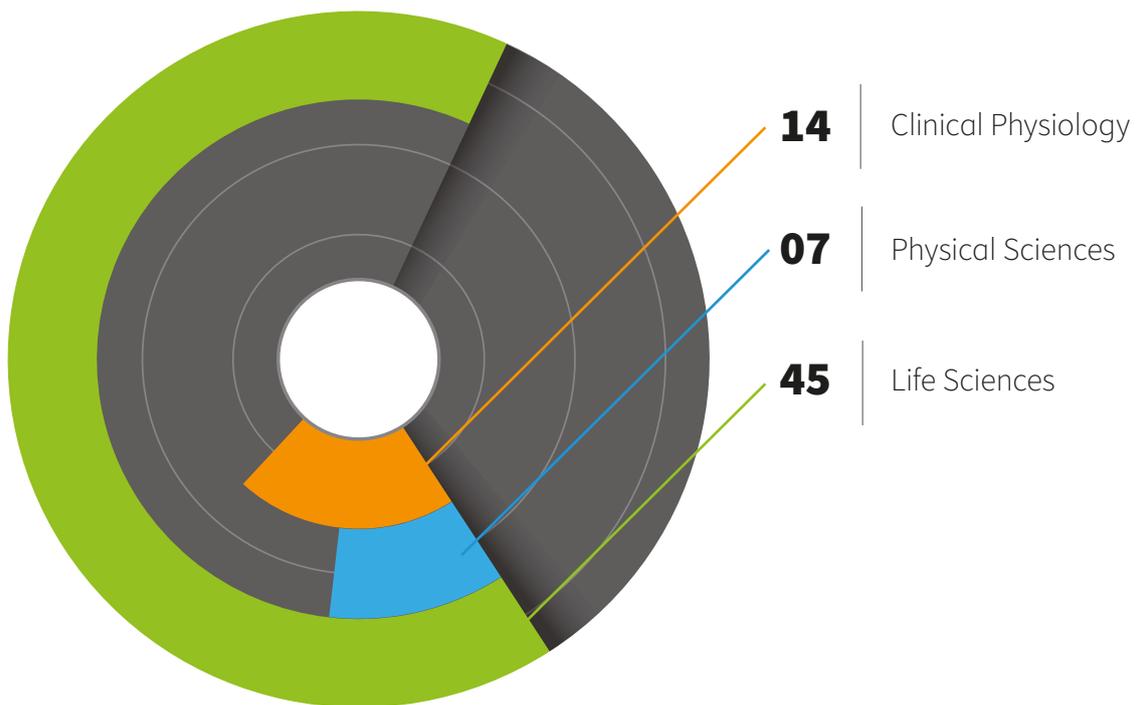


Figure 16 shows the number of recognised centres by their Healthcare Science themes

Recognised centres by specialism

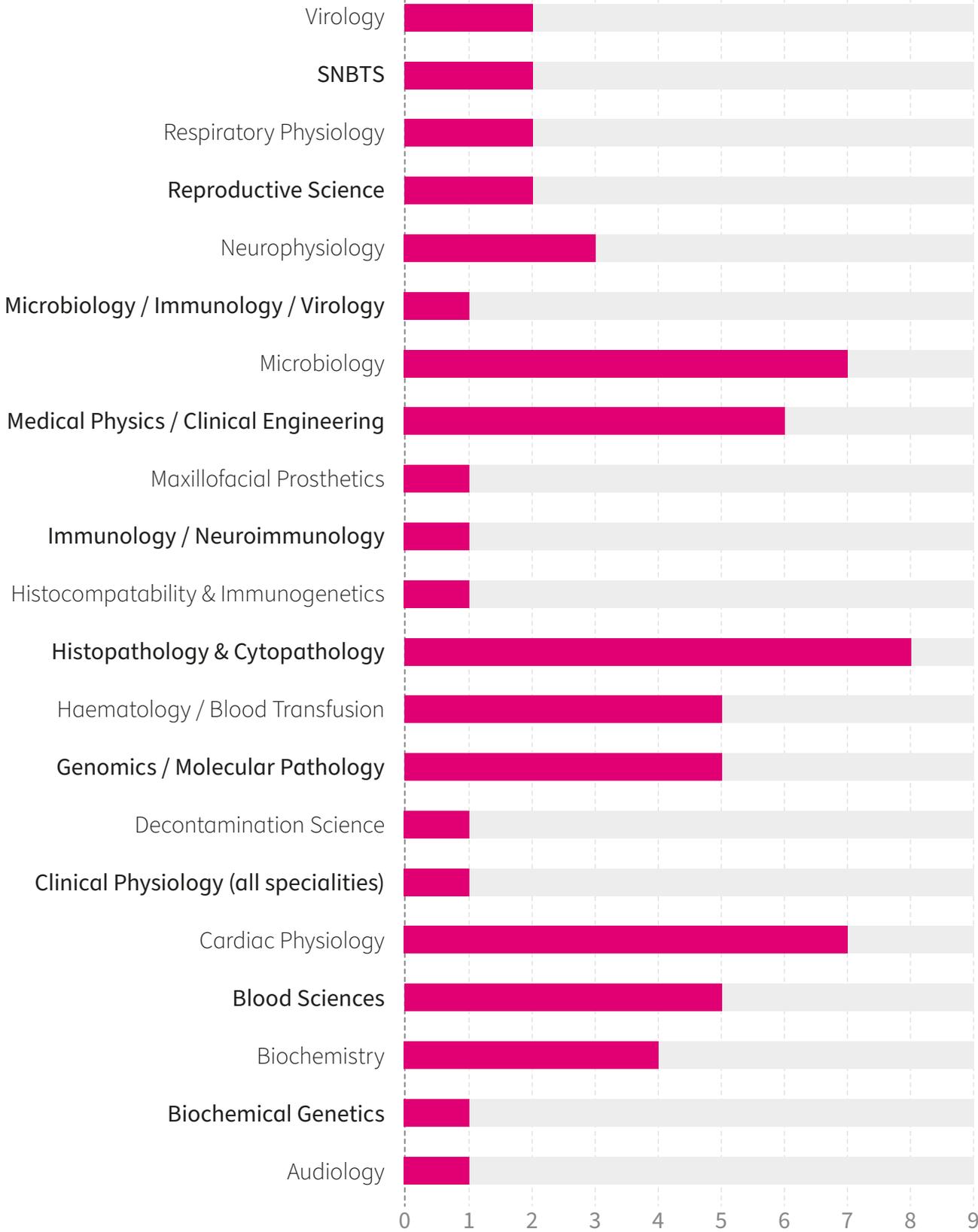


Figure 17



These centres are located at various hospital locations throughout Scotland, as seen below.

Recognised centres by hospital

Aberdeen Royal Infirmary	5
Aberdeen Maternity Hospital	1
Ninewells Hospital	8
Kings Cross Hospital	1
Royal Infirmary of Edinburgh	12
Royal Hospital for Children & Young People	1
Lauriston Building	1
Western General Hospital	5
St. John's Hospital	4
Astley Ainslie Hospital	1
Forth Valley Royal Hospital	3
Gartnavel General Hospital	3
Beatson West Of Scotland Cancer Centre	1
Stobhill Hospital	3
Cowlairs Industrial Estate	1
West Glasgow ACH	1
Glasgow Royal Infirmary	6
Queen Elizabeth University Hospital	10
Royal Hospital for Children	3
University Hospital Hairmyres	2
Golden Jubilee	3
Vale of Leven District General Hospital	3
Raigmore Hospital	4
University Hospital Crosshouse	1
University Hospital Ayr	1
Victoria Hospital	3
Wishaw General Hospital	2
Monklands District General Hospital	4
Inverclyde Royal Hospital	3
Royal Alexandra Hospital	3

Table 6

Although the centre recognition is valid for four years and centres are not required to complete the process within the four-year cycle, we would appreciate ongoing communication with the NES team to keep them informed of any major or minor changes which may have an impact on centre recognition. During this time, the team will also be available to answer any questions on training quality and to provide any necessary advice or assistance in enhancing the standard of training provided.

This year, in accordance with updates to the HCPC standards and following conversations with trainees and supervisors at the NES event, the standards included in this procedure have been reviewed. Once agreed, all stakeholders will be informed of any upcoming standard revisions. We want to thank everyone who took part in these talks, and we'd appreciate any future comments on possible improvements to the process.

More information can be found on [our Training Centre Recognition process page](#).



Progression of Training (ARCP)

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

NES Healthcare Science team request a progression report for all trainees being monitored via our Turas TPM system on an annual basis. This progression report is an opportunity to highlight any issues faced and provides an early warning of any reason the trainees may not complete their training at the proposed end-point. The NES Healthcare Science team can then offer support to the trainee, supervisor, or training centre as appropriate in line with our Special Measures policy.

All National Training Number holders who had been in their positions for at least a year were approached in September 2022 with a request to complete the ARCP process in collaboration with their supervisor. The ARCP process was requested of 182 trainees in total, with an 85% response rate as seen [Figure 18 on page 73](#).

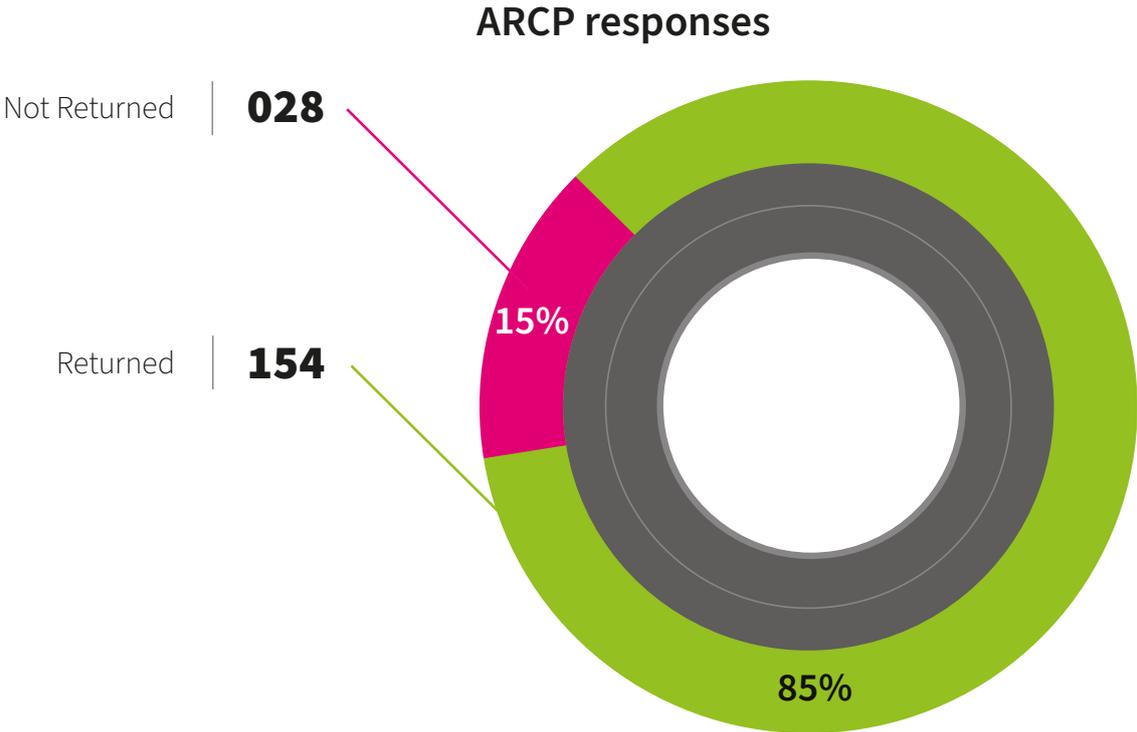


Figure 18 shows the response rate after request for ARCP completion

Nine supervisors of the 28 trainees for whom an ARCP was not submitted, communicated with us to explain the reasoning for non-submission and request an extension of the timelines. These reasons include trainee moves between Health Boards, and trainee and supervisor absences. No communication was received from 19 trainees or supervisors, and we will continue to engage with them to ensure the training is proceeding as planned, and there are no issues which may require our assistance.

To determine whether there may be problems with progression across different specialties or training programme types, a review of the non-responders was conducted. As can be seen in the graphs below there are a range of specialties represented but most non-responses appear to be from trainees on a practitioner training scheme or academic course. The NES Healthcare Science team will continue to liaise with these groups to increase participation and offer our continued support.



ARCP non-completion by specialty

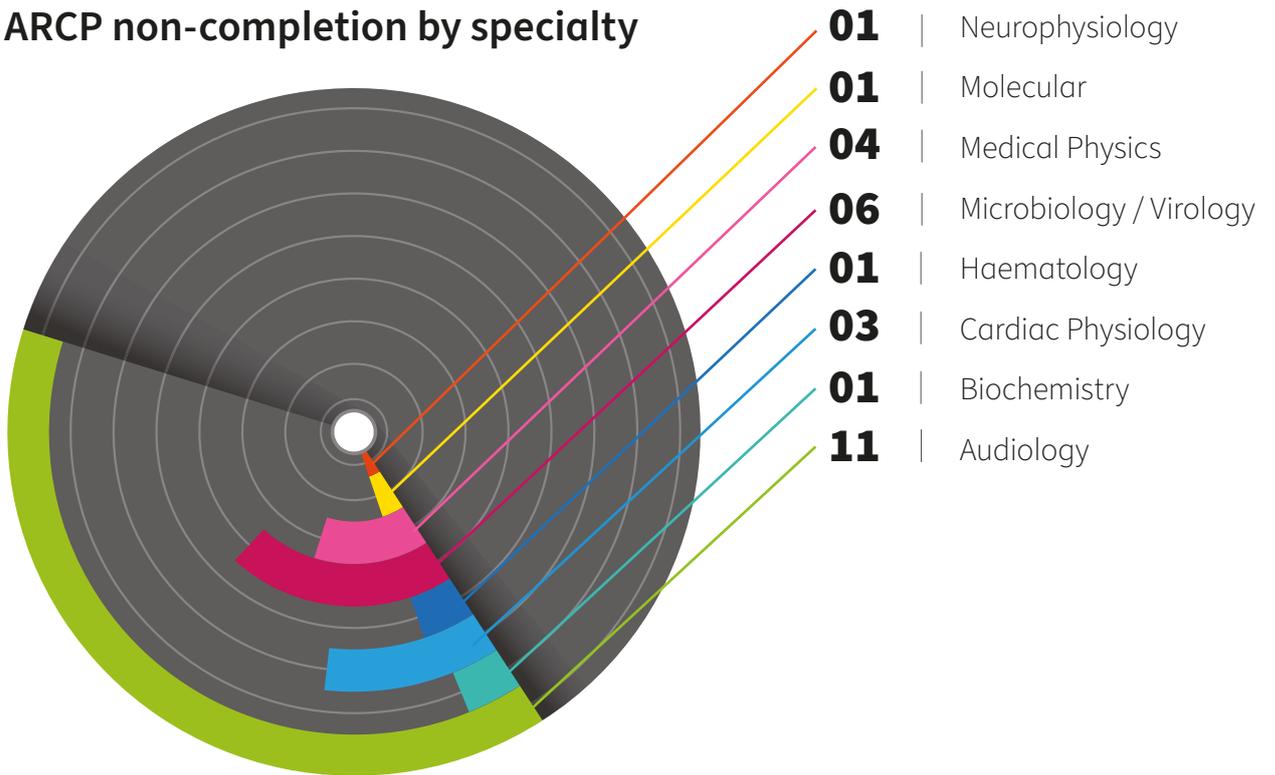


Figure 19 shows the number of trainees for whom an ARCP was not submitted by specialism

ARCP non-completion by trainee type

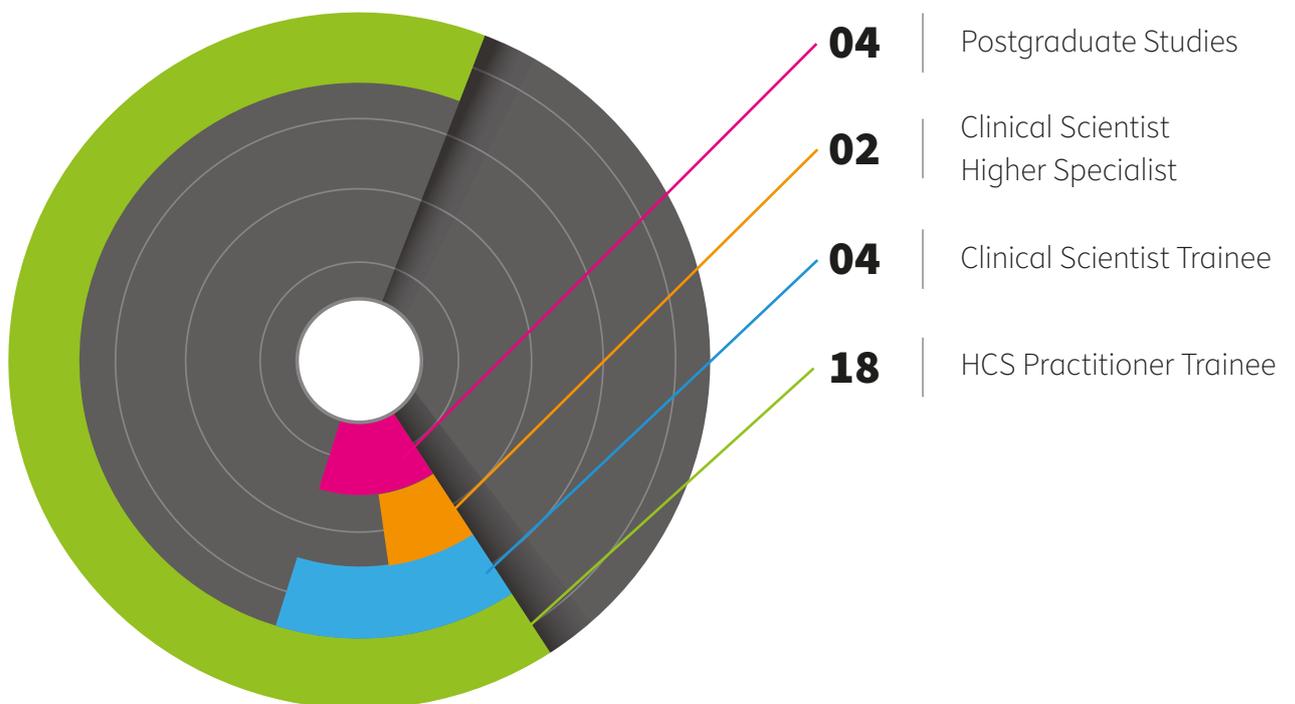


Figure 20 shows the number of trainees for whom an ARCP was not submitted by trainee type

The ARCP responses received showed positive progression report for 90% of the respondents who were reportedly developing their abilities at the anticipated rate. A further 8% of trainees were reported to be making acceptable progress towards competency with only minor difficulties being reported. Concerns were expressed regarding two trainees, and an additional one trainee was reported to have made insufficient progress. The NES Healthcare Science team is interacting with the training departments to enable the establishment of the necessary support for these trainees.

Responses to ARCP - Trainees progress

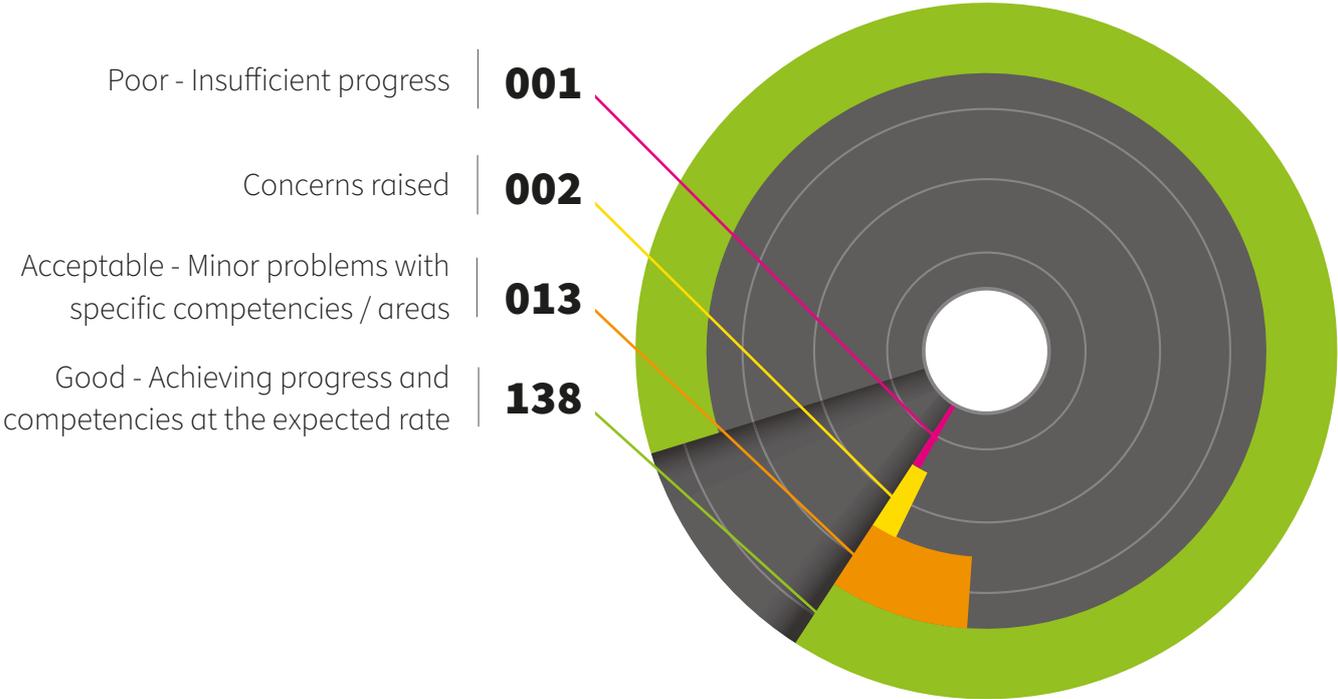


Figure 21 shows the ARCP outcome for all responders

More information can be found on [our Annual Review of Competency Progression \(ARCP\) page.](#)



Training Plans

Training plans for all registered NTN trainees

Within three months of the trainee beginning their position, the NES Healthcare Science team requests that a trainee complete and submit a training plan. This training plan ensures that trainees', supervisors', and departments' expectations are being communicated. It also provides a training schedule against which problems and delays may be evaluated.

In September 2022 there were 223 trainees with National Training Numbers for whom a Training Plan had been requested. Of these requests 196 (88%) of trainees and their supervisors submitted a Training Plan. Ten supervisors communicated with us to provide us their justifications for not submitting and to ask for a deadline extension.

Training plan response

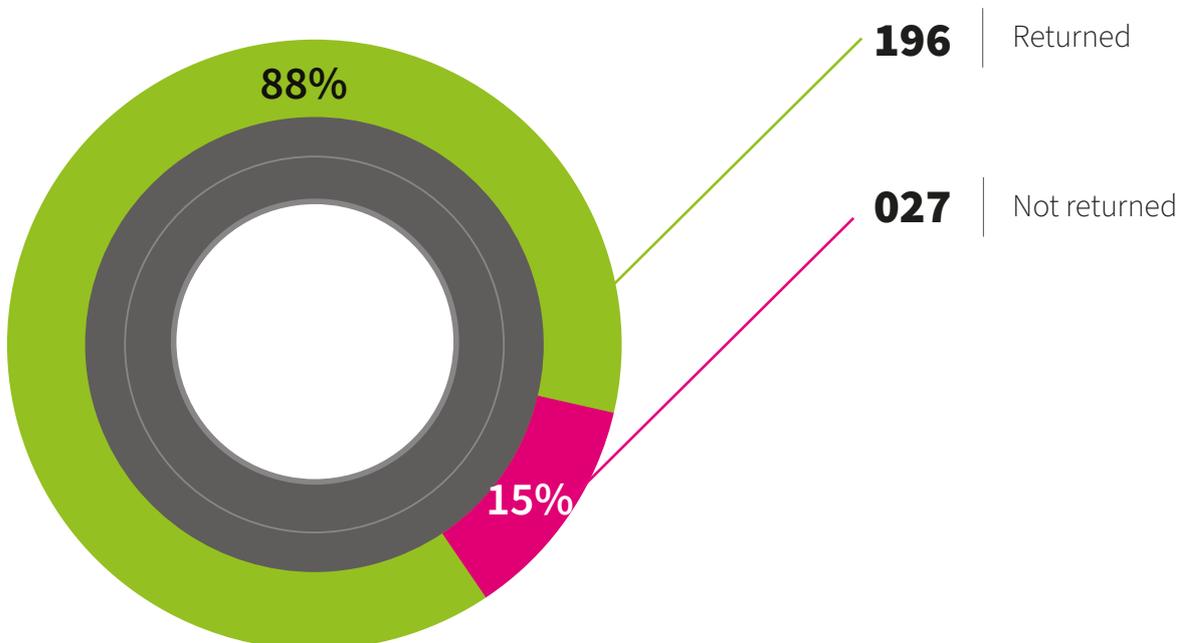


Figure 22 shows the response rate after request for Training Plan submission

As with the ARCP process the 27 trainees and supervisors who have not submitted a Training Plan were analysed to assess any patterns which might indicate issues with trainee support within certain specialities or training programme types, the results of which can be seen below.

Training plan non-completion by speciality

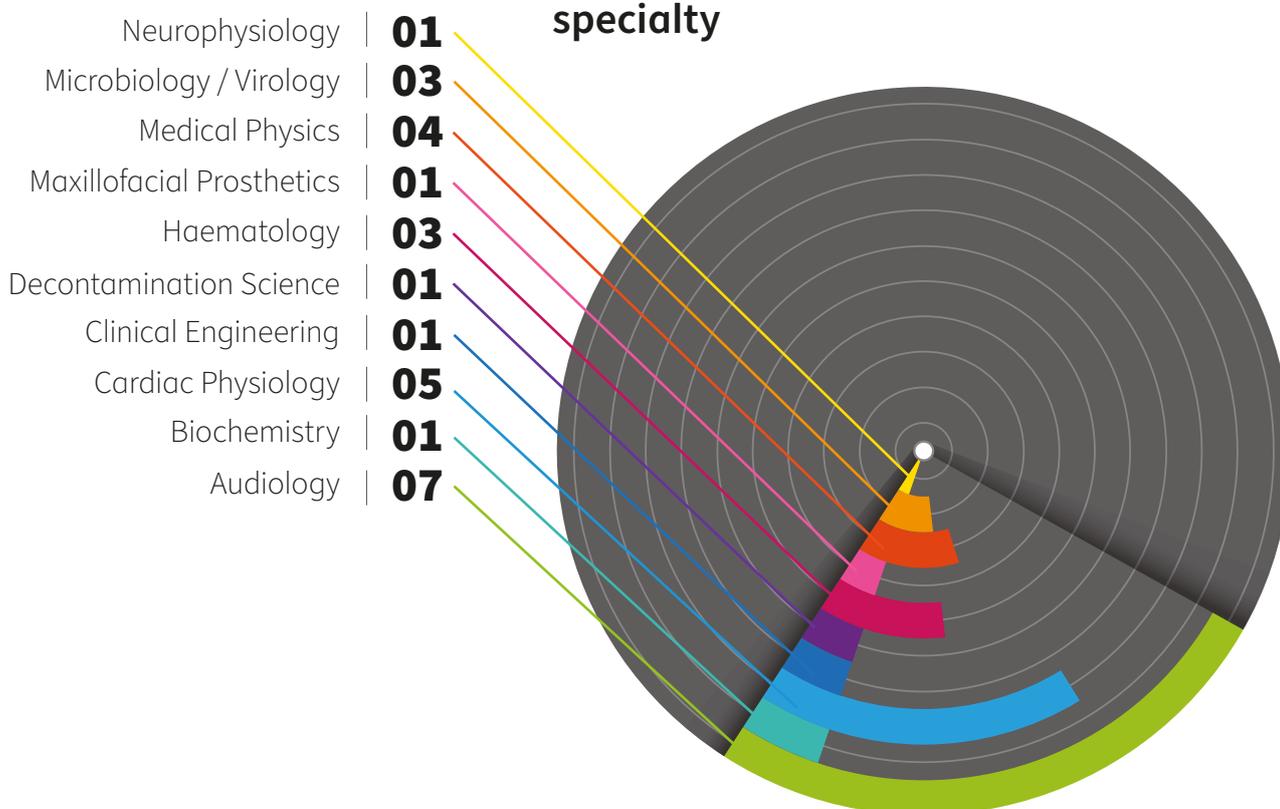


Figure 23 shows the number of trainees for whom a Training Plan was not submitted by specialism

Training plan non-completion by trainee type

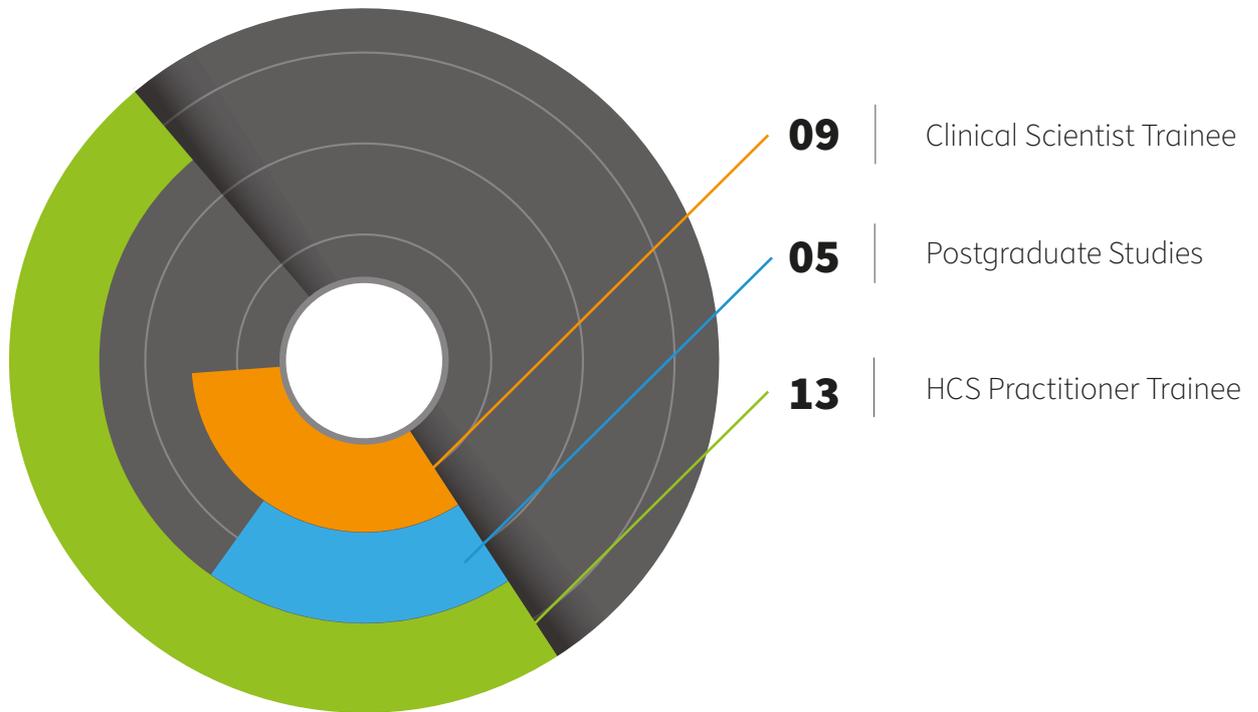


Figure 24 shows the number of trainees for whom a Training Plan was not submitted by trainee type

Similar to the ARCP process, the majority of non-submissions appear to be from trainees on a practitioner training scheme or academic course. The NES Healthcare Science team will increase engagement with these groups to communicate our support in both completing these processes and supporting the trainees and supervisors in ensuring the calibre of the training delivered.

More information can be found on [our Training Plans page](#).



Exit Survey

NES Healthcare Science team monitor all trainees until completion of their programme using the Turas Training Programme Management (TPM) System. On completion of training, we request information on employment status of all trainees. This request has two functions, the first is to ensure completion of the training programme and request feedback, and the second is to review continued employment of trainees post completion of their training programme. This allows NES Healthcare Science to assess any issues with the training programmes and assess appropriate allocation of funding for future trainees.

A request to complete the exit survey was sent to 114 trainees who had completed their training programme or were close to completing their training programme. Of these trainees, 95 (83%) completed the online Microsoft Form.

Exit survey responses

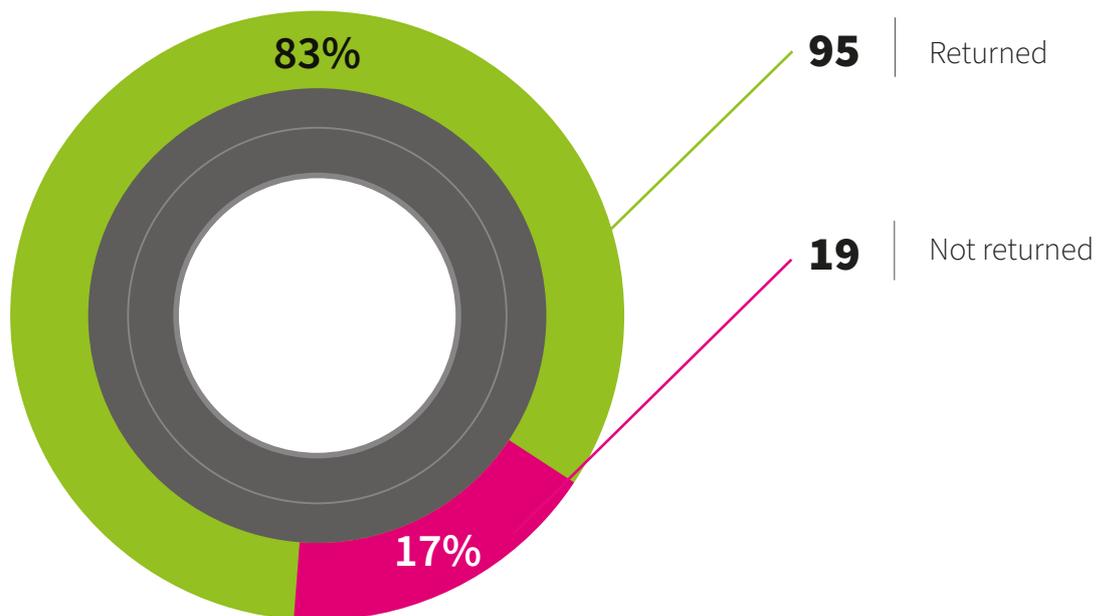


Figure 25 shows the response rate after request for Exit Survey completion

Of the trainees who responded 81% had completed their training on time, with a further 3% having completed it out-with the predicted end point. Four trainees indicated that they had left the training programme prior to completion, of which two had moved to a different department out-with NHS Scotland but were continuing their training programme within their new department. Two trainees had left their training programme for personal reasons and will not be completing their training.

Eight trainees were delayed in completing their programme but were scheduled to complete it soon, and a further three were delayed by a considerable amount of time. Reasons for the delays to training completion included suspension of training due to COVID-19, service pressures and personal circumstances.

Trainee status from exit survey

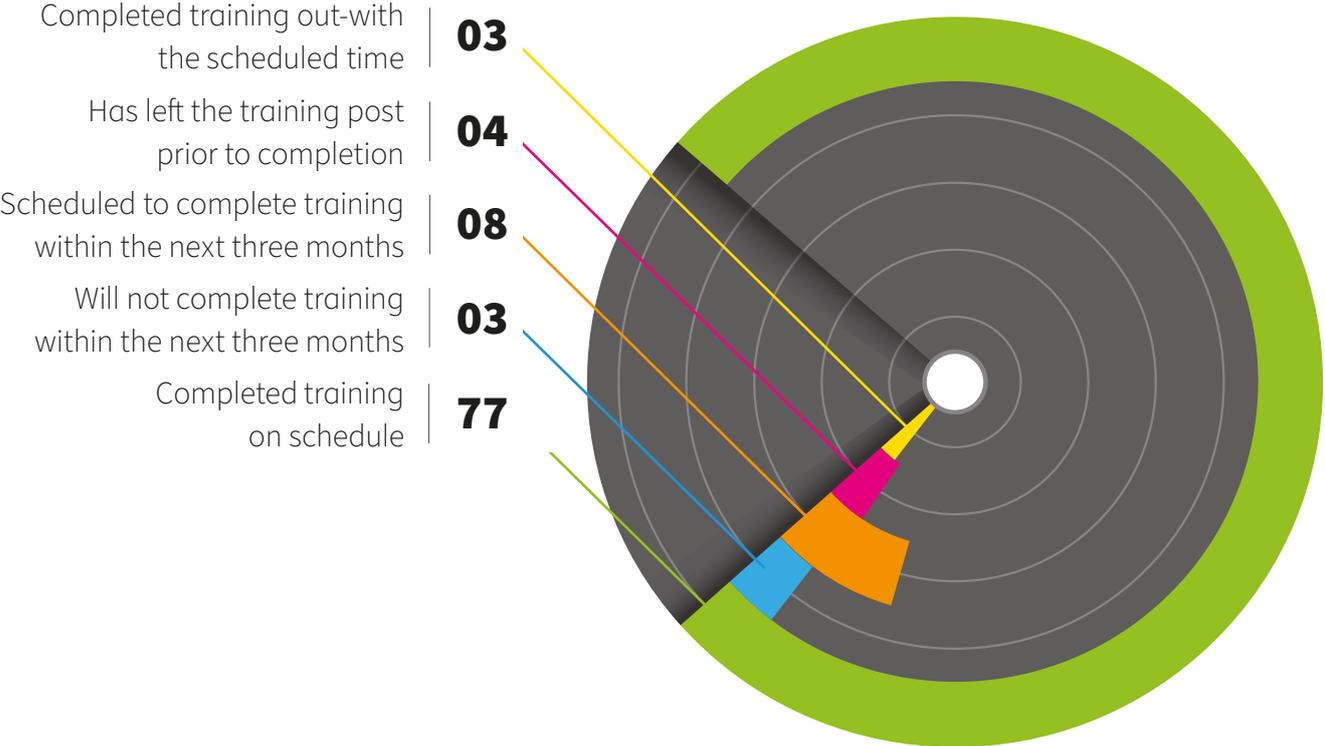


Figure 26 shows the training completion status of all respondents at the end of March 2023



On completion of their training 55 trainees (69%) were still working within their training centre, but 9 trainees had moved from their training centre due to no available positions within their centre, or preferable positions being available elsewhere. One trainee is taking a career break due to personal circumstances.

Trainee position following training completion

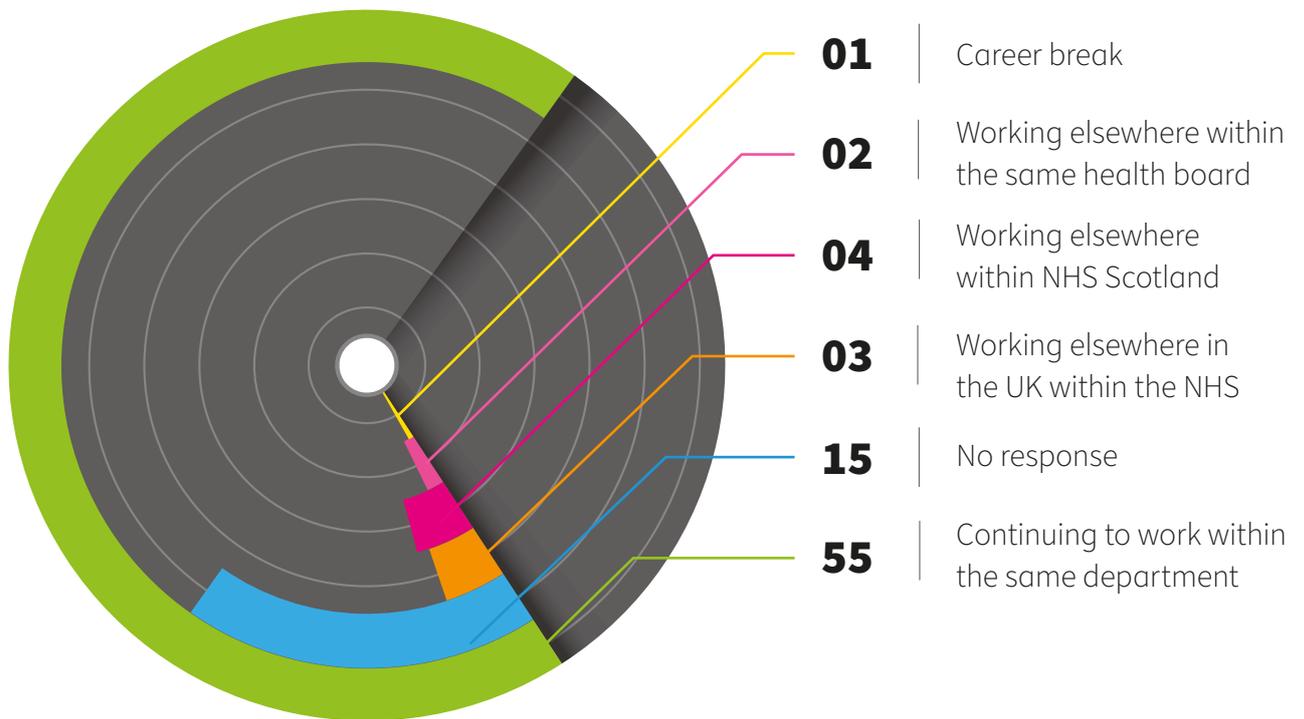


Figure 27 shows the location of trainees on completion of their training programme

NES Healthcare Science are pleased to see that of the 65 who responded to inform us of their employment position, 64 (98%) were continuing to work in the NHS, and 61 (94%) are continuing to work within NHS Scotland.

Feedback was received on the training programmes and this feedback is being used to ensure training quality across Healthcare Science training, in line with our other QA processes.



Feedback and 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 relate to the quality and progression of training, attempting to provide 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 2022 trainee survey was distributed to all Healthcare Science trainees in receipt of a NES National Training Number (NTN) and was completed by **53** out of **203** (**26.1%**) trainees invited. The response rate reflects the nature of a voluntary survey (unlike mandatory training plans and ARCPs). The breakdown of trainees by theme and length of training are shown in the figures on this and the following page.

What theme of Healthcare Science is your training centre within?

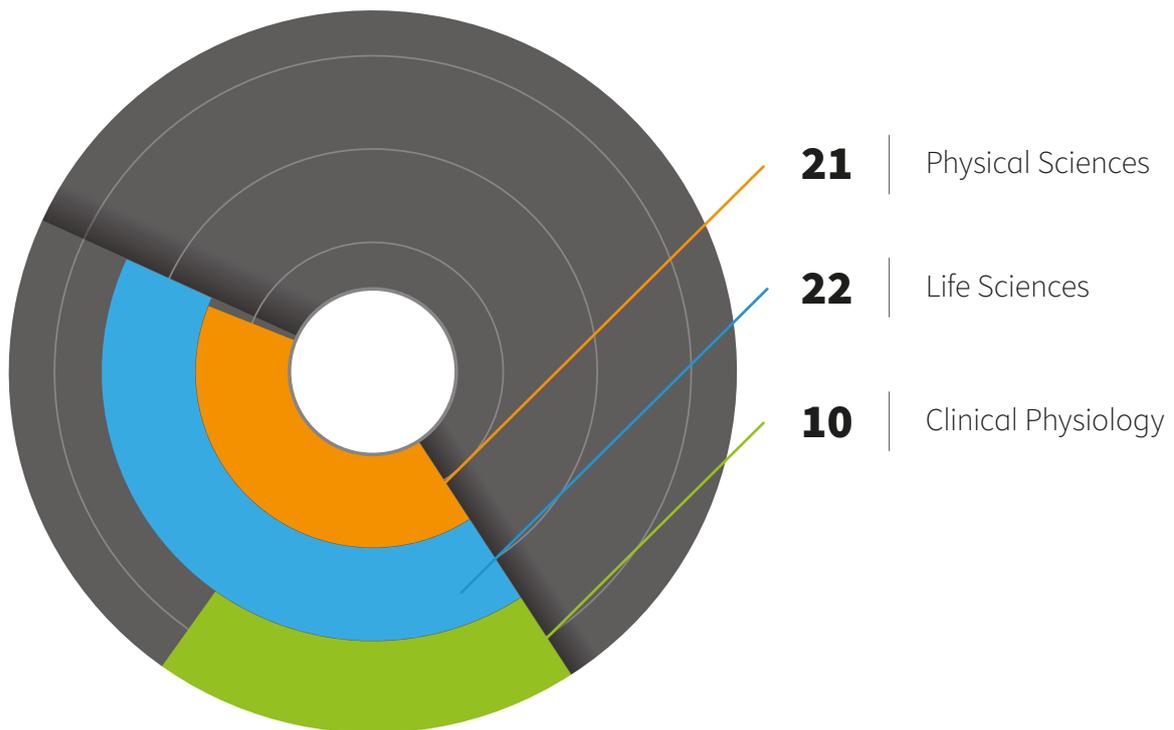


Figure 28

How long have you been on this training programme?

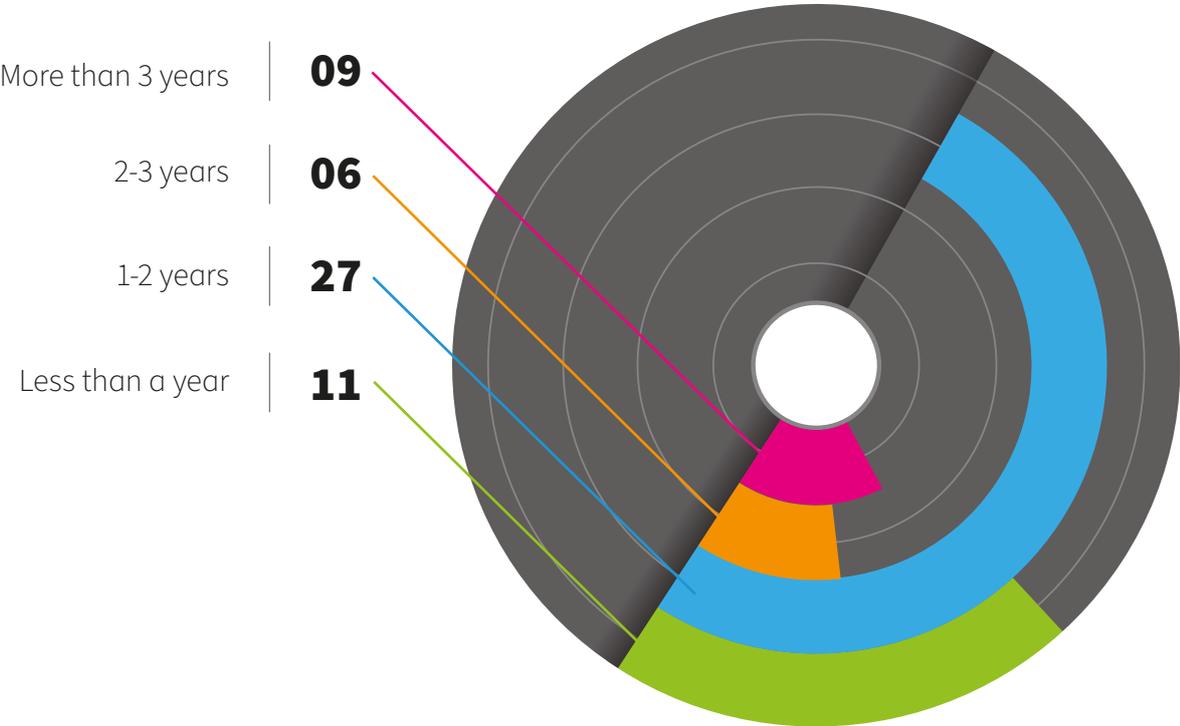


Figure 29

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, and only **9.4%** of respondents reported they were not aware of having a clear and agreed training plan at the time of survey (Nov-Dec 2022). The same percentage reported they were not aware of their progress being documented and signed off (see figures 30 and 31 below).

Are you aware of having a clear and agreed training plan?

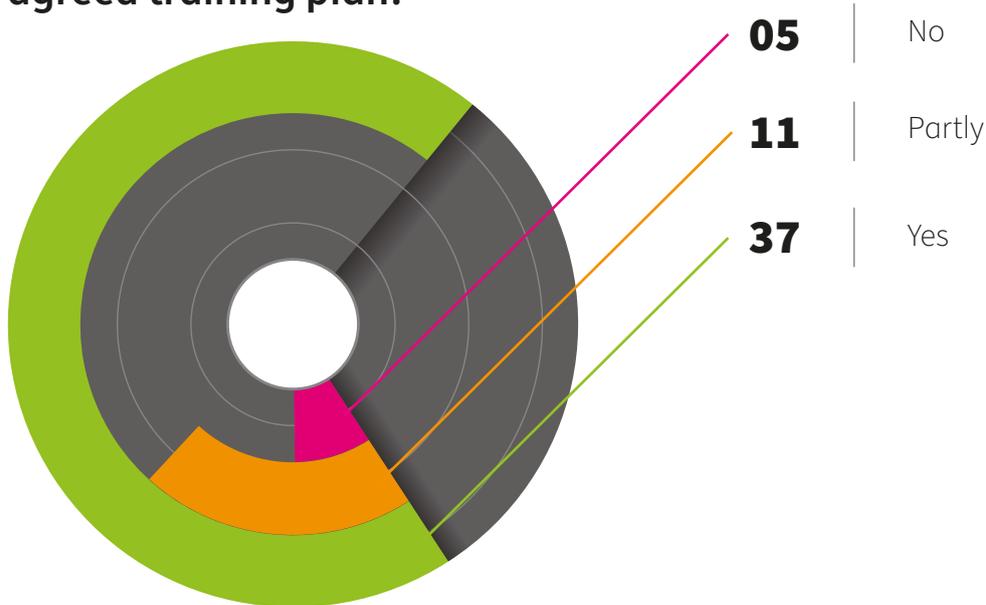


Figure 30

Are you aware of your progress being documented and signed off?

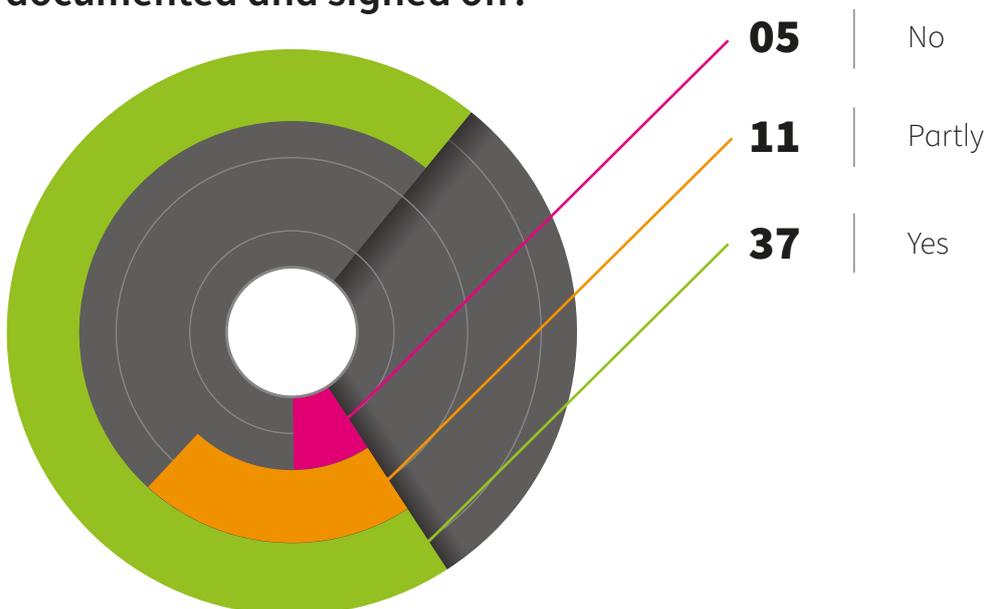


Figure 31

The number of respondents who reported they did not have an ARCP or formal review has decreased, from 29.5% in 2021 to **17%** in 2022. We had attributed previous higher percentages in 2020 and 2021 to the COVID-19 pandemic and the impact it had on both trainees and supervisors. It is encouraging that this has since reduced and we will endeavour to do everything we can to reduce the level further next year.

On a scale of 1-5 we asked trainees how they would rate the level of feedback and supervision they have received and the average rating was **3.75**. Likewise, we asked them how valued they had been made to feel as part of the team within their training department and the average rating was **4.13**. Both ratings are a reasonably positive indication that trainees are being well supervised and supported during their training. However, it is worth noting that **25 (47.2%)** of those who responded indicated they had encountered some form of barrier during their training experience. The explanations of what the barriers were/are included variable teaching methods, communication issues, lack of dedicated time for learning, staffing issues and the impact of the COVID-19 pandemic.

Most of the surveyed trainees (**96.2%**) reported having access to necessary equipment, and sufficient space and time to engage with e-learning at work. However, only **52.8%** of the surveyed trainees had engaged with our e-learning and CPD resources which are available on Turas Learn (please see the [CPD and e-Learning section on page 100](#) for further details) so clearly this is a priority for us to advertise them more widely to our Healthcare Science community.

The Trainees' Last Words



Different teaching approaches and priorities by individual training supervisors - some excellent, some unaware of what is required. Over worked, very little time for write-up/reflection.”

“My training supervisor has been very supportive and helpful in guiding me through my studies.”

“I feel part of the team, though as an unqualified scientist my impact is limited as most things I do have to be checked before they are implemented. This can slow things down a lot. I sometimes feel things aren't always given to me as it is easier to just do it themselves.



Feedback and Annual Surveys – Supervisor Feedback

Our 2022 supervisor survey received a **19.1%** response rate (44 out of 230 invited), comprised of 21 (47.8%) from Life Sciences, 13 (29.5%) from Clinical Physiology and 10 (22.7%) from Physical Sciences.

What theme of Healthcare Science is your training centre within?

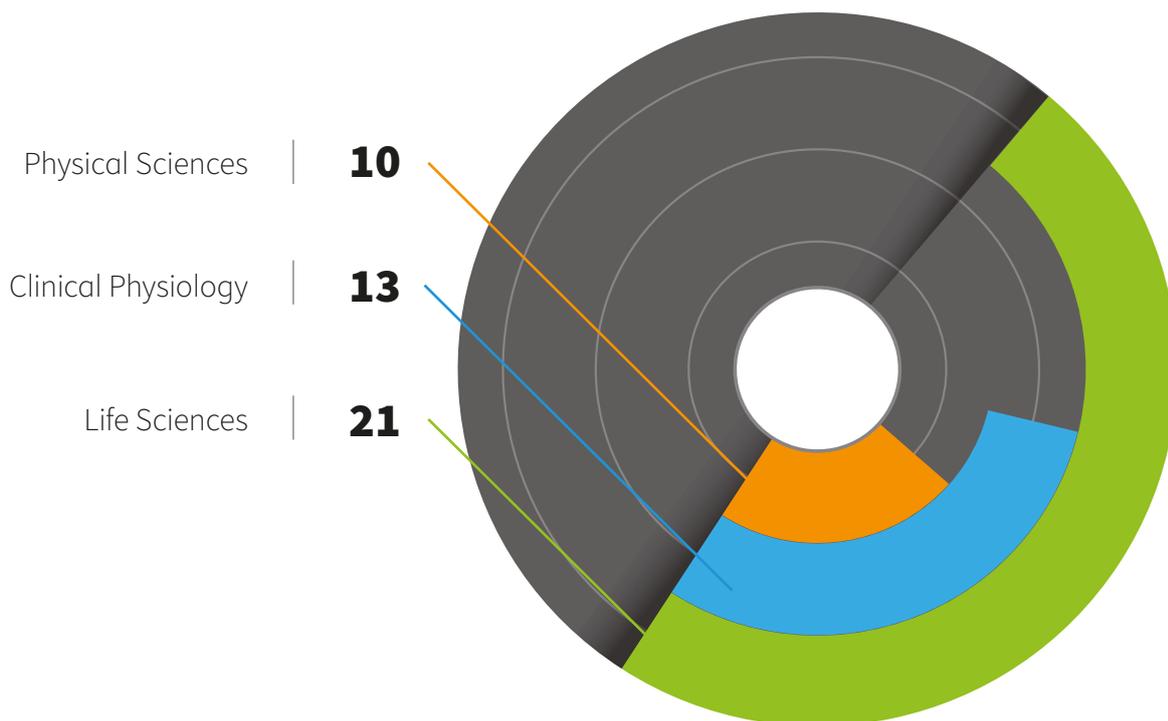


Figure 32

A further breakdown of both the quantity and the level/ career stage of trainees that these supervisors support are provided in Figures 33 and 34 below.

How many trainees and what level of trainee(s) do you currently support?

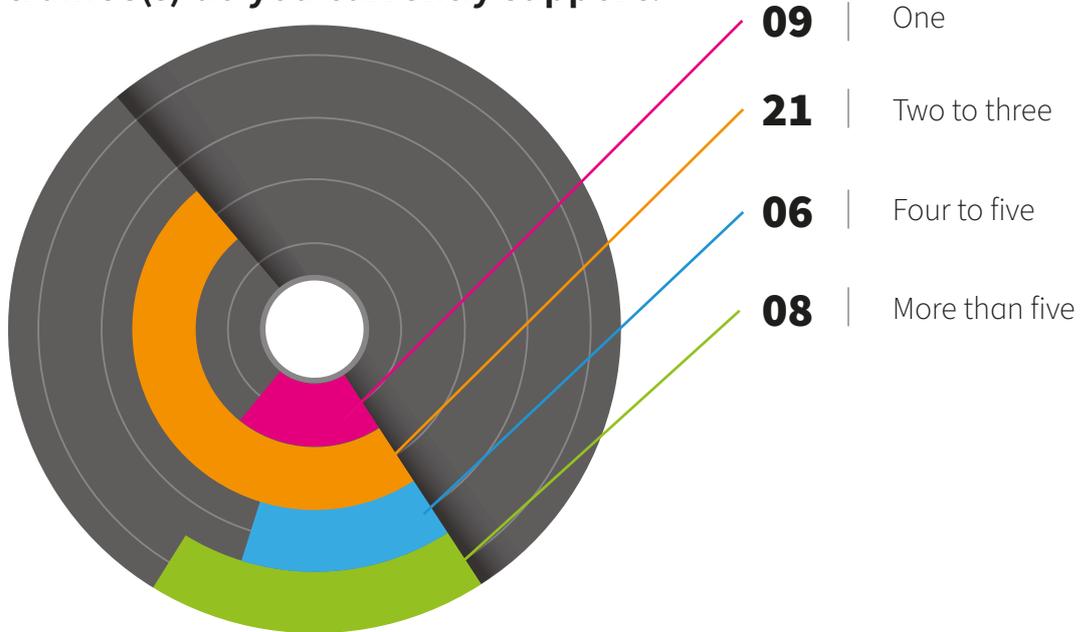


Figure 33

How many trainees and what career stage of trainee(s) do you currently support?

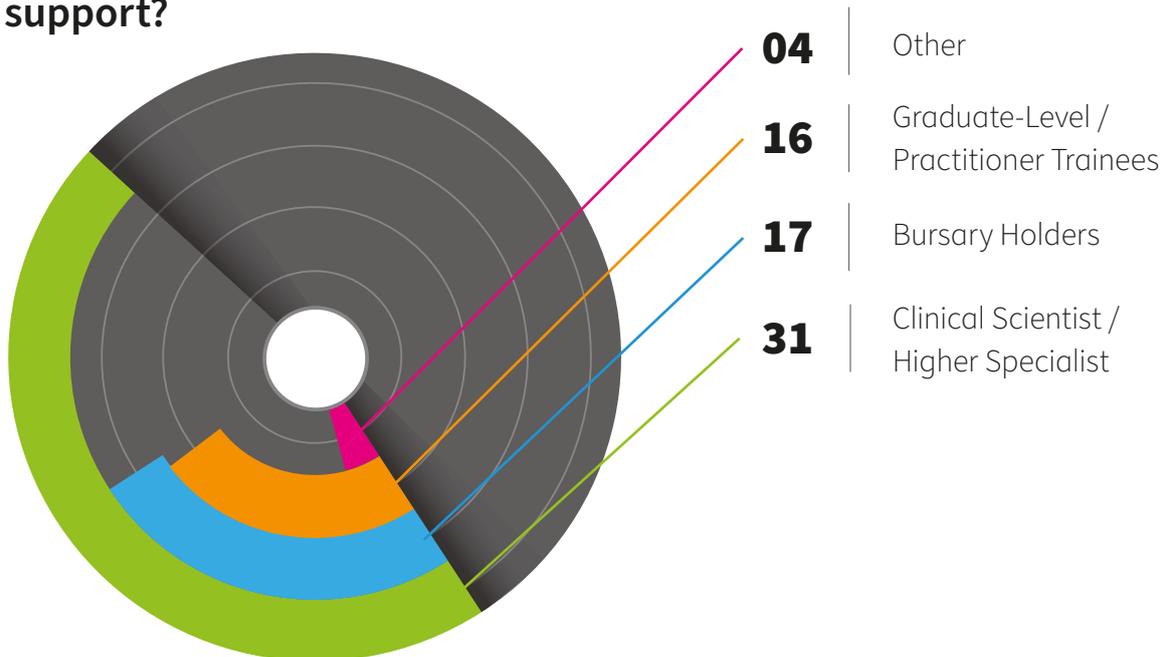


Figure 34

Training Plans and Annual Progression

Like the results of last year’s survey, all respondents indicated they had at least a partially clear and agreed training plan in place with their trainee(s). Similarly they all felt putting a training plan in place was straightforward with the majority (84.1%) acknowledging they know what is required of the training and where to get reliable support for it. 39 (88.6%) of the responding supervisors had carried out an Annual Review of Competency Progression (ARCP) or formal review with their trainee(s) in the last year. A further 2 indicated this was not applicable because they had trainees who had been in training for less than a year. The annual progression reviews were carried out in a variety of different ways as illustrated in Figure 35 below:

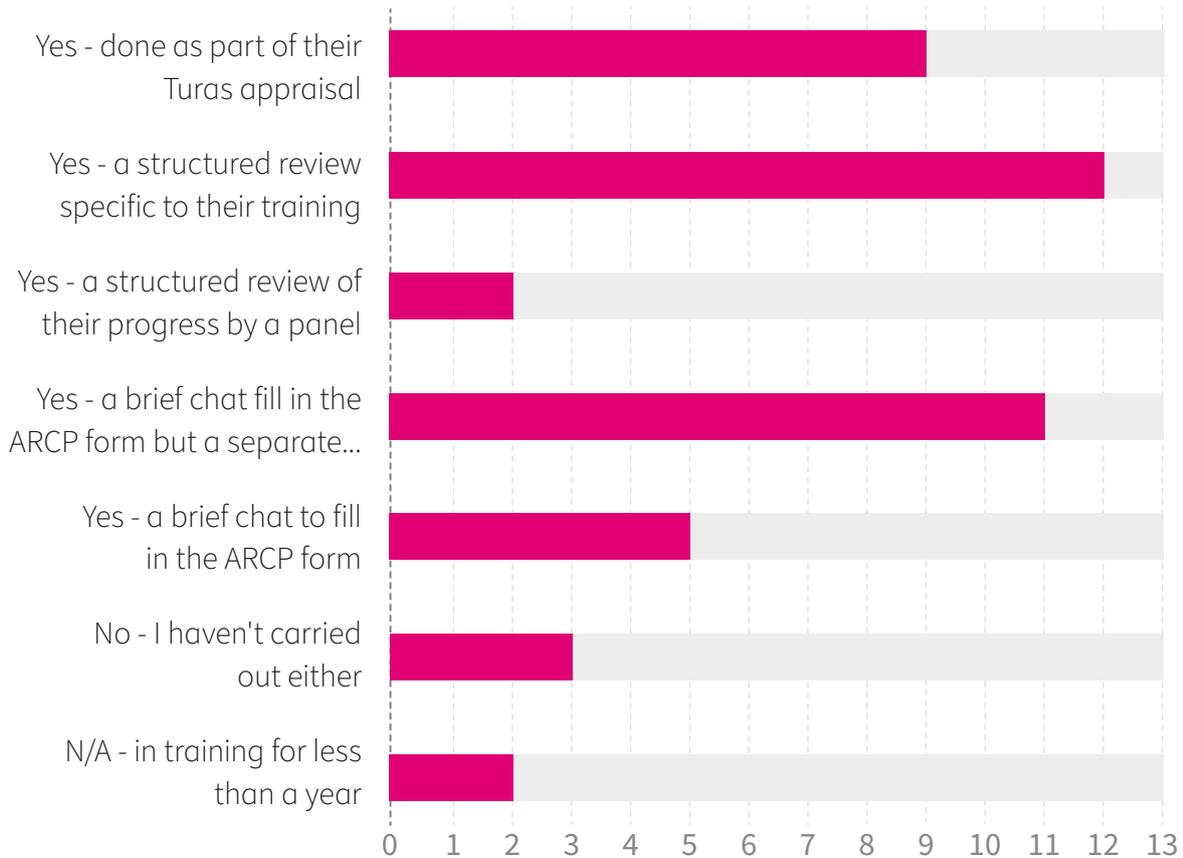


Figure 35: Have you carried out an Annual Review of Competency Progression (ARCP) or formal review with your trainee(s) in the last year?

Training Difficulties

18 of the 44 (40.9%) respondents indicated they had experienced barriers during the training experience. Through the further comments they provided, common themes were staffing issues, service pressures and lack of sufficient time to commit to training. Despite a much larger number reporting barriers, only 4 (9.1%) indicated they currently had a trainee in some form of difficulty.

Do you feel supported in your role as a trainer?

5 respondents (11.4%) reported that they did not feel supported in their role as a trainer. The reasons for this had overlap with the barriers reported earlier, including staff shortages and lack of time dedicated to training. However, one person advised they felt it would be beneficial to have a national network of supervisors across Scotland.

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 our [Information for Supervisors page](#) on NES HCS website.



The Supervisors' Last Words on their training experience

“ Taking part in the training, tutoring and mentoring of trainees is an important part of a Clinical Scientist's job which we all find rewarding. However as staffing is 'squeezed' there is increasing reliance on the larger departments to pick up the lion's share of pre-registration CS training”

“Staff shortages are having a significant impact on training experiences for both supervisors and their trainees.”

Summary of combined Equality, Diversity and Inclusion (EDI) responses

Every individual working within Healthcare Science has a responsibility to help ensure equality, diversity and inclusion (EDI).

We at NES Healthcare Science are guided by the following principles:

- We will examine challenges and barriers in training and education equality to eliminate discrimination, creating an environment where differences are valued
- We will continue to promote a culture of inclusion, recognising and celebrating differences, acknowledging the benefits of a diverse training workforce
- We will create a non-judgmental safe space, allowing open discussions around issues relating to equality, diversity and inclusion
- We will promote equality, diversity and inclusion across all levels of the Healthcare Science community

In our 2022 annual surveys, sent to all trainees and their supervisors, we asked respondents if they would be willing to answer some EDI monitoring questions to help us better understand the diversity of our Healthcare Science training workforce. 82 of the 97 respondents to our surveys indicated they would be willing and provided us with the responses summarised in the following paragraphs. Our aim is to use the information gathered to assist us in the application of our principles in future.

Age of respondents

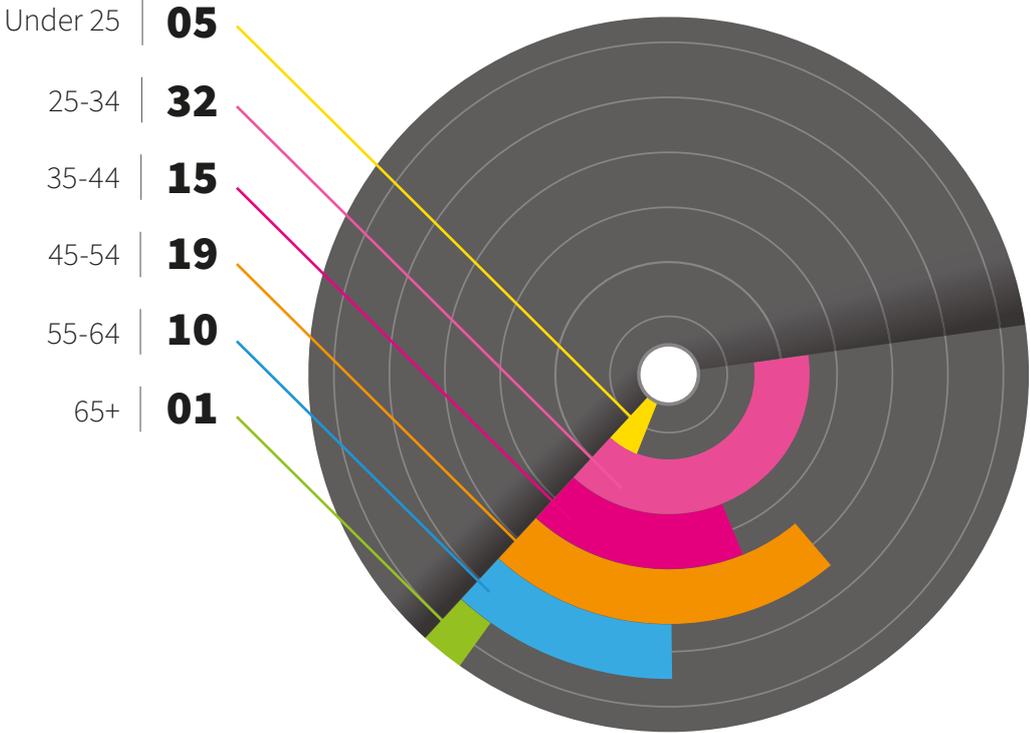


Figure 36

Respondents had a wide range of ages, as illustrated in the Figure 37 below. 61 (74%) were female, 19 (23%) were male and 2 preferred not to disclose their sex. In a subsequent question only 1 person reported considering themselves to be trans, or having a trans history. In terms of what they felt best described their sexual orientation, 71 (86.6%) indicated straight/heterosexual, 4 (4.9%) indicated gay or lesbian, 4 (4.9%) indicated bisexual, 2 preferred not to say and 1 did not answer.

Sexual orientation of respondents

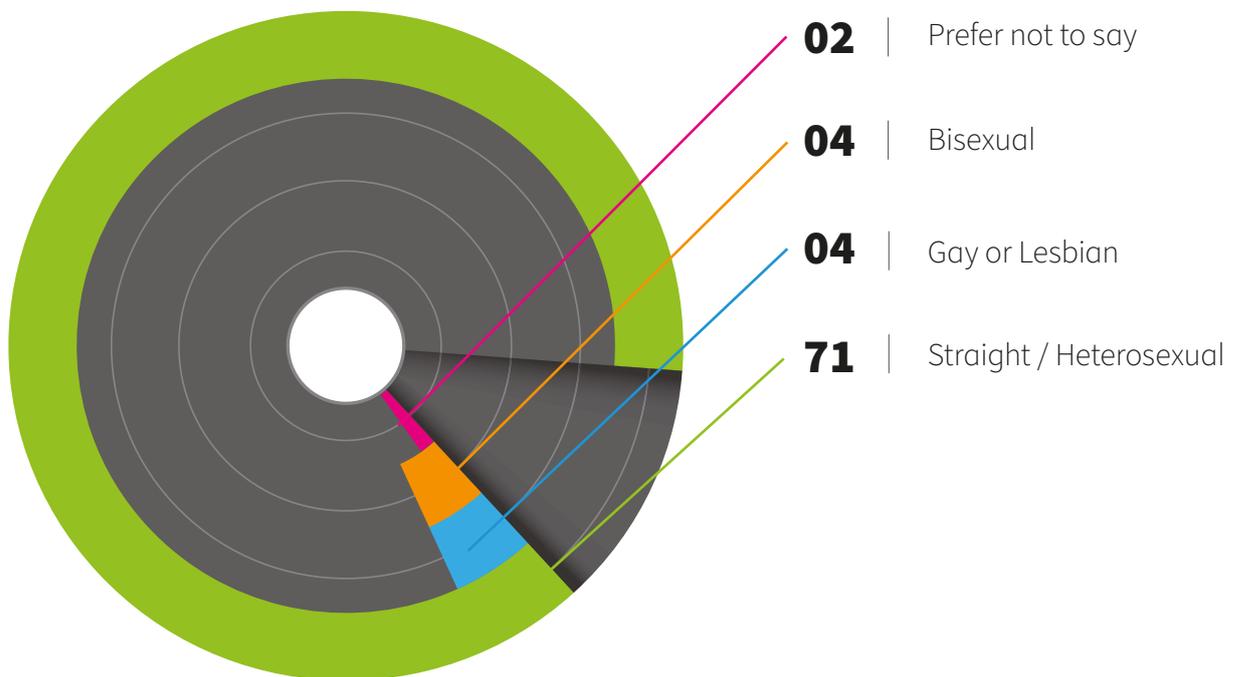


Figure 37

Sex of respondents

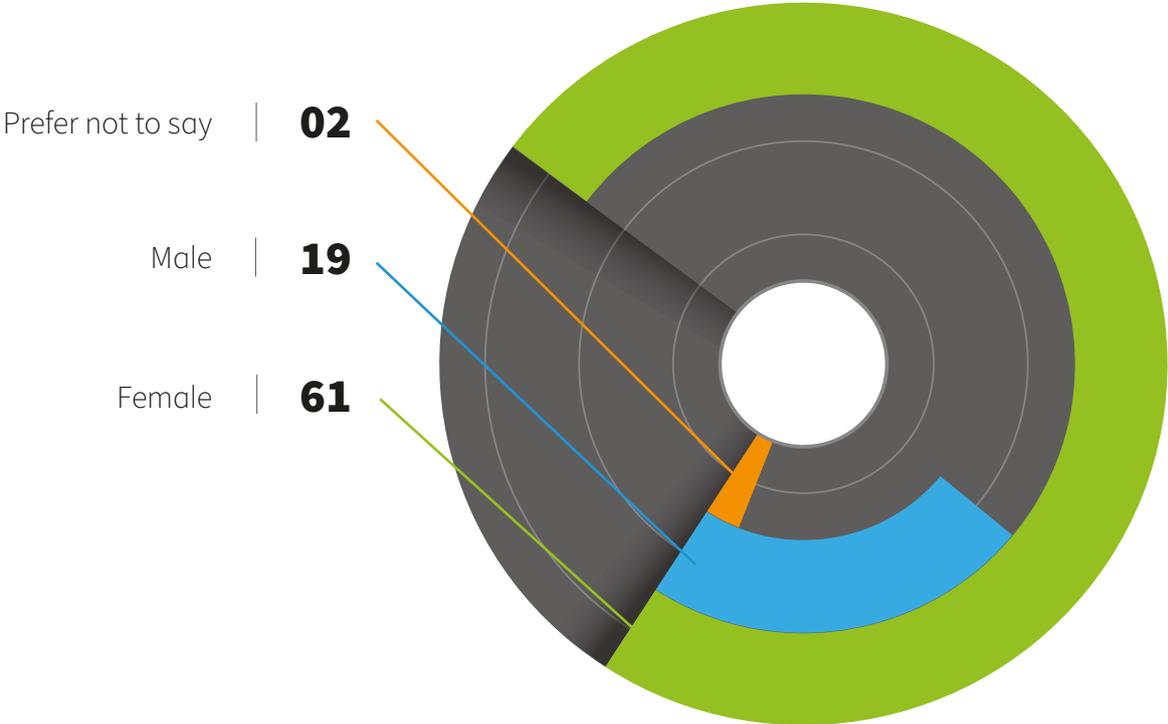


Figure 38

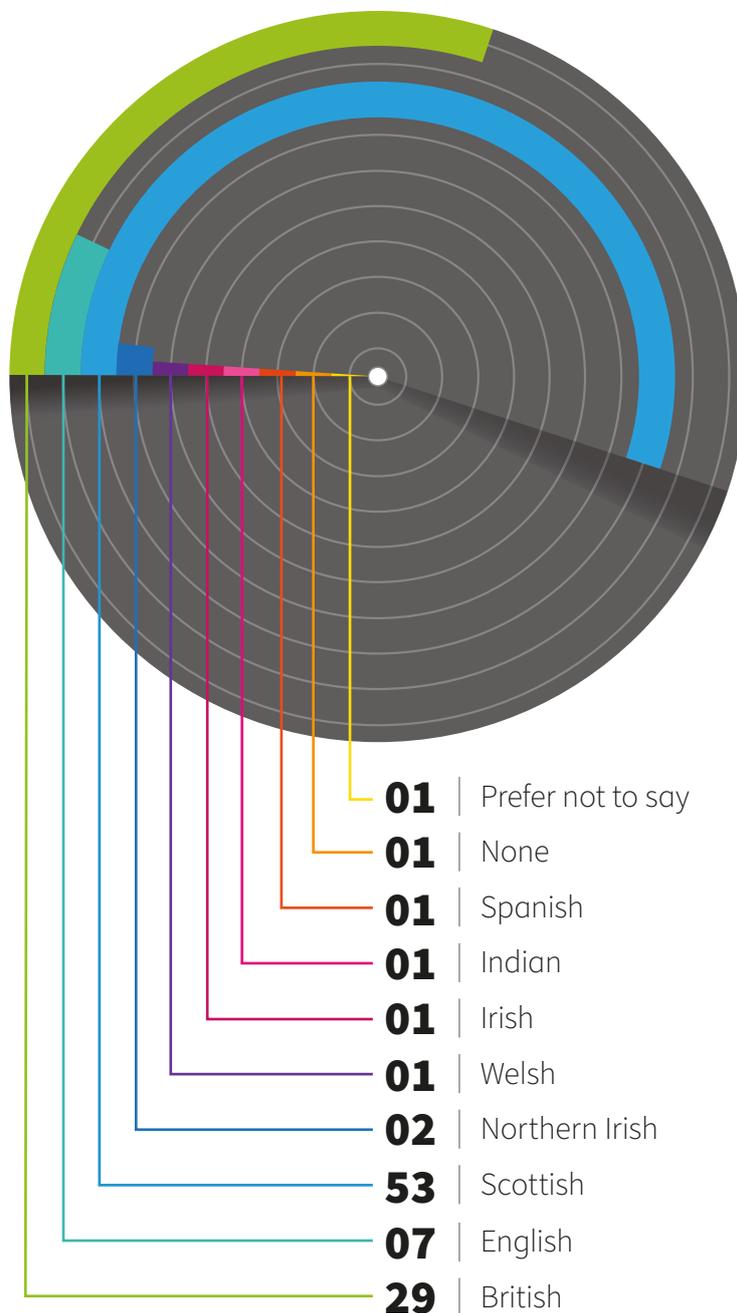


our aim is to use the **information gathered** to **assist us in the application of our principles in future.**

In terms of what religion/religious denomination or body respondents belonged to, a total of 27 (33%) indicated Christian, 1 (1.2%) indicated Hindu, 50 (61%) indicated None, 3 preferred not to say and 1 didn't answer. The majority of respondents indicated they felt their national identity was either Scottish (54.6%) or British (29.9%), with many selecting more than one available option. 78 respondents (95.1%) reported their ethnic group was White, 1 was Asian, Scottish Asian or British Asian, 1 was Caribbean or Black, 1 was Mixed or multiple ethnic groups and 1 didn't answer.

National identity of respondents

Figure 39



15 respondents (20.7%) indicated they had one or more conditions which had lasted or were expected to last at least 12 months. These conditions included physical disabilities, long-term illnesses, mental health conditions, Asperger’s syndrome, deafness or partial hearing loss, learning difficulties and dyslexia. 17 respondents (20.7%) indicated they look after or give help to support others because of ill health, disability or old age. 15 of those people reported doing so for 1-19 hours/week, 1 for 20-34 hours/week and 1 for 35-49 hours/week.

3 out of the 82 respondents (3.7%) indicated they were an Armed Forces Service Leaver, Veteran or Forces Family member. None indicated they had ever been in care. Finally, 71 respondents (86.6%) indicated their current working pattern could be best described as full-time, 5 (6.1%) indicated part-time and 6 (7.3%) indicated flexible (which includes compressed hours).

Current working pattern of respondents

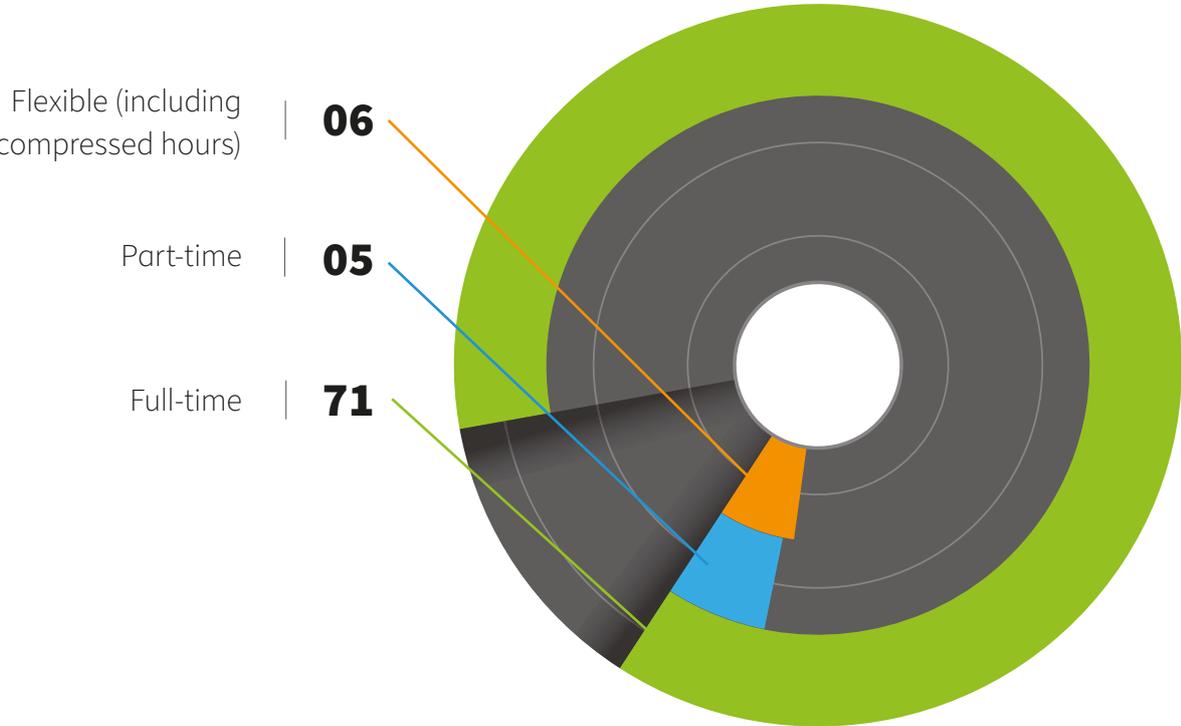
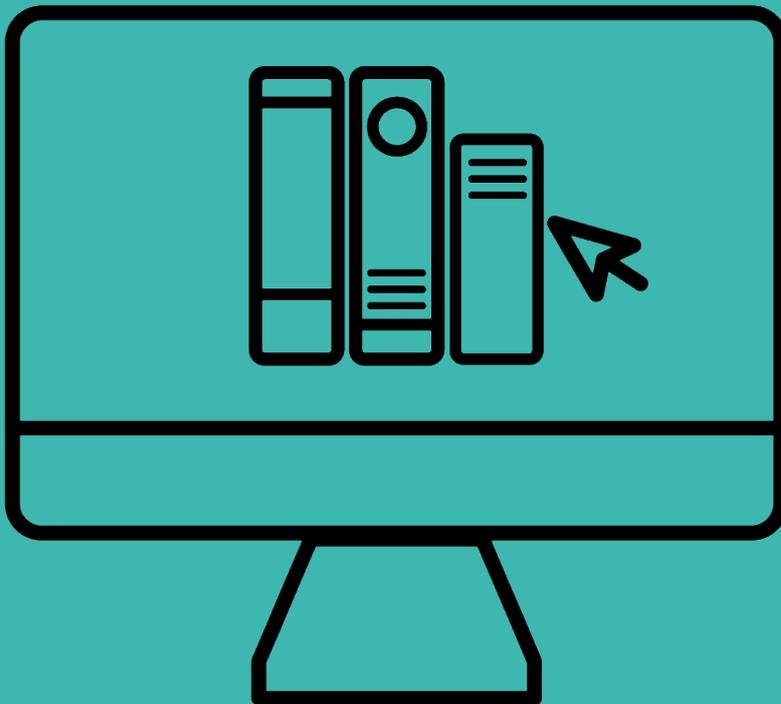


Figure 40



CPD and e-Learning



New Healthcare Science education and training website

We have recently launched [our new website](#) which provides all information relating to Healthcare Science education and training in Scotland. You will find information previously hosted on our Healthcare Science area of Turas Learn, including the following:

- [About NES Healthcare Science](#)
- [Rough Guide to Healthcare Science](#)
- [Careers in Healthcare Science](#)
- [News](#)
- [Events](#)
- [Information for Trainees](#)
- [Information for Supervisors](#)
- [Quality Assurance](#)
- [Funding Opportunities](#)

[Our Healthcare Science area of Turas Learn](#) remains the home of our wealth of CPD resources.

Leadership and Trainer programmes

[Our HCS Turas learn pages](#) are dedicated to free learning material available to all NHS Scotland staff. We aim to support a multi-profession repository for learning material and resources to help you in your role. From NES trainer learning information on quality assurance, generic leadership skills to service specific content to share with the wider HCS community.

The learning outcomes of each learning opportunity are outlined with supporting content material and consolidation quizzes to check your understanding. We offer standalone e-learning modules and learning programmes consisting of self-directed e-learning with consolidation workshops delivered on MS teams. Please note you need to be logged into Turas to access the full features of the learning offered.

More information can be found on our [Healthcare Science area of Turas Learn](#)



Popular new learning opportunities for this year include:

- [High impact leadership](#) highlighting leadership can be demonstrated by anyone at any career stage and align with high impact behaviours. “Performance management
- [Risk management](#) a brief overview of how risk is managed, determined, tracked and mitigated.,
- [Performance management](#) scrutinising the concept of key performance indicators and accountability of performance.
- [Early years programme](#) focusing on four topic, leadership, teamwork, managing meetings and time management.
- [Refreshing leadership](#) covering five modules, Decision making, negotiation, persuasion skills, problem solving and recruitment & selection.

[Train-the-Trainer](#) and [Trainees-in-Difficulty](#) are utilised by those both early in their training career and those wishing to refresher their training skills. The consolidation workshops allow collaborative peer learning with insights and practical adaptations to service training needs. A new additional resource is [Promoting CPD and reflective practise](#). This covers the importance of CPD, what can be used for it with examples of activities and reflections, along with a CPD reflection template.

CPD and e-learning resources 2022/23

Analysis of Turas Learn engagement between 01/04/2022 and 31/03/2023

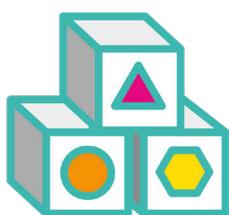
During the 2022/23 financial year 2,659 learners engaged with the wide range of CPD and e-learning resources developed by our NES Healthcare Science core team and hosted on [our Turas Learn platform](#). Our resources include e-learning modules, comprehensive learning programmes and workshops with 2,080 learners completing at least one of these. The benefits of e-learning in terms of offering flexibility, being inclusive and available to those in remote and rural locations is clearly demonstrated in Table 7 on the next page.



**2,659
learners**
have interacted with
our HCS CPD with
**2,959 CPD
modules
completed**

Golden Jubilee National Hospital	1.0%
NHS Ayrshire and Arran	9.3%
NHS Borders	0.9%
NHS Dumfries and Galloway	0.8%
NHS Education for Scotland	0.6%
NHS Fife	18.8%
NHS Forth Valley	5.0%
NHS Grampian	6.3%
NHS Greater Glasgow and Clyde	18.8%
NHS Highland	5.0%
NHS Lanarkshire	1.3%
NHS Lothian	17.4%
NHS National Services Scotland	2.4%
NHS Orkney	0.3%
NHS Shetland	0.4%
NHS Tayside	5.5%
NHS Western Isles	0.1%
Health and Social Care Partnerships	0.7%
Higher Education Institutions	4.0%
Other Organisations	1.5%

Table 7: Breakdown of learners by organisation



we supported

15 e-learning modules

& have a further

6 dedicated

Healthcare Science tailored resources

authored in partnership with service.

This table provides a breakdown of learners by their organisation which clearly shows engagement with learners from every NHS health board across Scotland. Likewise Table 8 provides a breakdown by their professional group. This demonstrates Healthcare Science heavily impacts the work carried out by other professionals, in this case essential safety information provided within our Radiation Protection and MRI e-learning modules. Admittedly the Healthcare Science percentage appears to be low at an initial glance but please note this information is taken from what learners have listed in their Turas record. Almost half have an unknown professional group and we would expect the majority of these to be Healthcare Scientists, judging by our own empirical evidence and anecdotes.

Allied Health Professions	12.6%
Business and Administration	1.7%
Community and Social Care	1.9%
Dentistry	1.4%
Education	0.4%
Healthcare Science	5.8%
Healthcare Support Worker	2.6%
Medicine	8.6%
Midwifery	1.1%
Nursing	14.0%
Other	0.3%
Pharmacy	0.7%
Psychology	0.2%
Unknown	48.7%

Table 8: Breakdown of learners by professional group

e-Learning modules developed by the NES Healthcare Science core team

2,659 unique learners engaged with our e-learning modules, over 2,000 of them completed at least one and they completed a total of 2,959 modules between them. A breakdown of the e-learning modules completed (in terms of percentage by broad theme) is shown below in Figure 41.

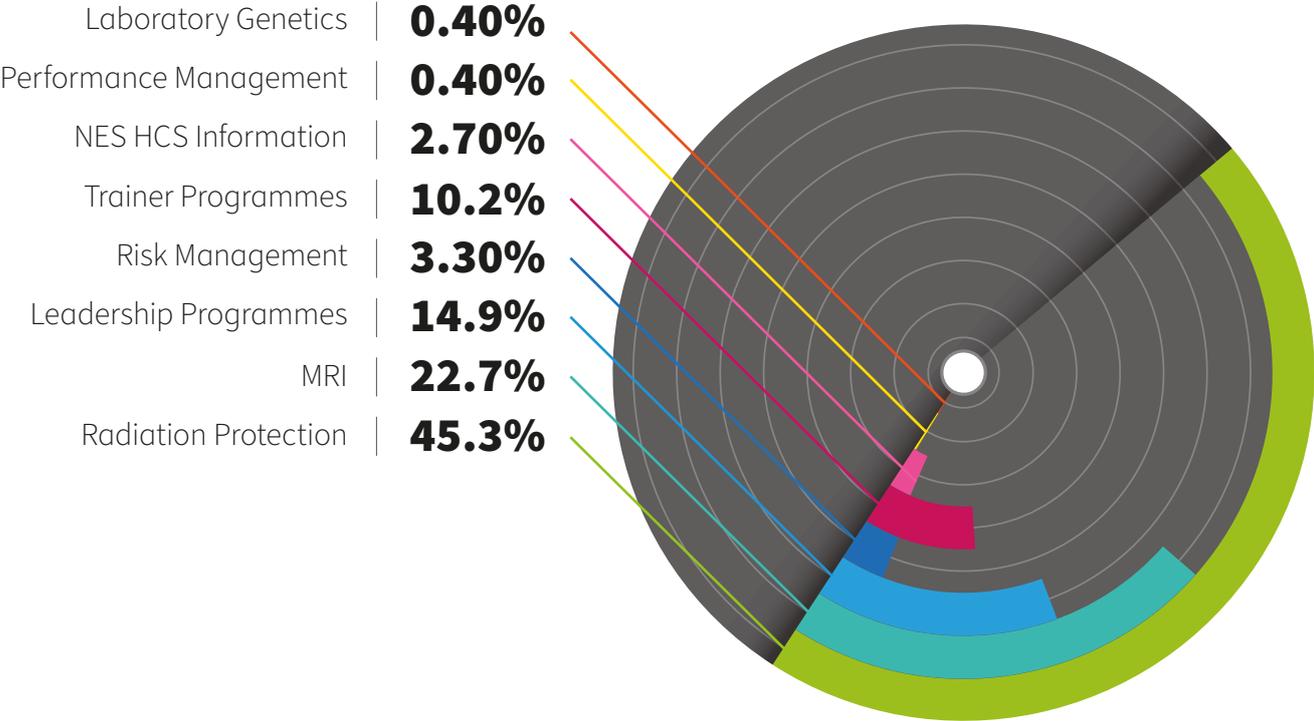


Figure 41: e-learning module completions by broad theme

Learning programmes / workshops delivered by the NES Healthcare Science core team

340 unique learners engaged with our four comprehensive learning programmes and their workshops. They achieved 162 completions, broken down as follows:

- Early Years - 31
- Refreshing Leadership - 15
- Train-the-Trainer - 77
- Trainees-in-Difficulty - 39

Likewise, we had 162 participants attending our 16 workshops throughout the year with the total for each of them as follows:

- Early Years - 31
- Train-the-Trainer - 80
- Trainees-in-Difficulty - 51



From April '22 to March '23 we delivered
15 interactive
 mainly **online**
 workshops to **136**
delegates

NES Healthcare Science Events 2022/23

The NES HCS team have supported webinars across a variety of HCS topics. The previous and upcoming events are signposted on our [Upcoming Events / What's On page](#).

The CPD event activity from 2022/23 is documented below.

Healthcare Science Trainee and Supervisors Event

NHS Education for Scotland's 11th national Healthcare Science conference for our trainees and supervisors was hosted as a hybrid event over 3 days from the 8th-10th February 2023. This offered a series of online webinar sessions in combination with in-person day at COSLA, Edinburgh. Notably, this was the first in-person event our team had hosted since February 2020, before the beginning of the COVID-19 pandemic.

The programme offered five themed sessions which covered the following topics:

- Do Relationships Trump Competency?
- From Novice to Expert - Is There a Right Path to Advanced Practice?
- What Forms of HCS Leadership Really Matter Today?
- HCS Training in Action - What Influences the New Landscape
- Dealing with Uncertainty or How to Plan a Career in the Teeth of a Gale

Our four workshop sessions covered career promotions, new approaches to raise the standard of quality assurance, safer staffing metrics and STEM/external engagement.



11th Healthcare
Science national hybrid
training event had
**80 plus in person
delegates**
with an additional
**50 to 100 virtual
attendees.**

Poster competition-HCS trainee career posters to 12 year old selves

This year we challenged our Healthcare Science trainees to design engaging posters which communicated what they would tell their 12-year-old selves about their career. We received 15 entries with a high standard of entry. The runners up are listed below with congratulations to our winners **Gemma Thomson** and **Kerry Liney**:

1st Prize: “H&I Histocompatibility and Immunogenetics” – Gemma Thomson / Kerry Liney

H&I HISTOCOMPATIBILITY & IMMUNOGENETICS
 Gemma Thomson, Trainee Clinical Scientist, H&I Laboratory, SNETS, Edinburgh
 Kerry Liney, Trainee Clinical Scientist, H&I Laboratory, SNETS, Edinburgh/H&I Laboratory, Gartnavel General Hospital, Glasgow.

Histo → The latin word for tissue i.e. organs, skin, blood
Compatibility → Finding the best donor for a transplant or blood transfusion
Immunogenetics → Investigating how different people's genes affect their immune responses

What does an H&I Scientist do?
 H&I scientists match patients whose organs stop working properly due to illness or injury with a kind and generous individual who wishes to donate their organ to save or prolong their life.
 We provide specially-selected blood products to patients with a variety of cancers and blood disorders.
 We perform genetic testing on DNA to help diagnose a number of diseases which are linked to our genes, such as Coeliac Disease and Haemochromatosis.

Opportunities
 ★ Contributing to globally recognised research projects
 ★ Using state of the art technology within healthcare
 ★ Attending conferences and events all around the world!

Why H&I?
 Do you love science?
 Do you think organ transplants are fascinating?
 Do you want to save lives, but don't fancy being a doctor or nurse?
 Do you think you can handle human blood and tissue on a daily basis?
 Do you want to contribute to a rapidly evolving field?

Organ Transplantation
 In order to match donors to patients, H&I scientists receive blood and tissue samples and perform a range of tests in a hospital laboratory to determine whether or not a transplant is likely to be successful.
 An organ donor may be living; in the case of kidney transplants and partial liver transplants, or deceased; if a person has made their wishes to donate after death known.

Stem cells
 As well as donating organs, you can also volunteer to donate your stem cells. An H&I scientist will test your DNA and you may be called up to donate if you are a suitable match for a patient in need. Patients may be suffering from cancers, blood disorders and immune disorders, and a stem cell transplant could save their life!

Relationships
 As an H&I scientist you will work with a large range of professionals within and outside the NHS. This includes:
 • Biomedical Scientists
 • Clinical Scientists
 • Consultant Clinical Scientists
 • Healthcare Support Workers
 • Transplant Co-ordinators
 • Doctors
 • Nurses
 • Surgeons
 • Research Scientists

A day in the life...
 09:00am • Following a successful kidney transplant overnight from a deceased donor, we need to perform further testing to help the transplant team decide which medication to give the patient going forward, and to give a clearer idea of the likelihood of transplant success.
 11:00am • We receive spleen and lymph node samples from the organ donor and have to extract blood cells with a needle and syringe. We then combine the donor's cells with our patient's serum (the part of our blood that contains antibodies).
 01:00pm • After lunch...
 • Assess the compatibility of the transplant based on the reactions observed between the donor and recipient.
 • Report results to a consultant clinical scientist.
 05:00pm • Spend the afternoon in our molecular lab, performing DNA extractions in preparation for tomorrow's testing to assist diagnosis of autoimmune diseases.
 Home time!

Thanks to H&I...
 Thanks to the dedicated work of H&I scientists, alongside all of the other medical professionals involved in providing the UK with blood transfusions and organ transplants, there have been:
 Over 4.3 thousand organ transplants in 2021/2022!
 2.5 million units of blood transfused per year in the UK alone!
 THANK YOU NHS

H&I might be for you!

2nd Prize: “Things I do as a: Clinical Engineer” –
Abigail Attwell

Things I do as a: Clinical Engineer

NHS Lothian

I watched the inside of someone's intestines with a tiny Wifi camera!

- It's a little bit bigger than a paracetamol capsule and has to be swallowed by a patient!
- It helps others in the NHS find out what is wrong with someone's digestive system.
- Medical Engineers would have been a big part of designing this.

I designed and 3D printed a device to check x-ray machines are working!

- Special machines at cancer centres use x-rays to treat cancer.
- X-rays can help kill cancer in someone's body, but can harm their healthy body parts too!
- This means that we have lots of test devices for x-ray machines, to check they are:
 - sending the right amount of x-rays,
 - to the right body part and
 - showing us the right images of patients.
- My device pretends to be the chest and a lung, so I had to also code motors to move like breathing.

I fixed someone's eye tracking communication aid so he can talk to me about Formula 1!

- If someone cannot speak there are lots of devices to help them.
- They are part of a group called assistive technology which helps people do activities they can't do otherwise.
- Infrared cameras can see where your eye is looking on a computer so you can select the words you want to say!

I wrote some code to help check the lab that measures how people walk!

- This lab is called a gait lab.
- It has lots of cameras looking at silver balls stuck on someone's skin.
- They tell the computer how someone is moving.
- This information helps decide if surgery or orthotics can help them walk better!
- It's an important decision, so we must check that the equipment is calibrated every day!

I measured the power of all the devices in an operating theatre so that the surgery robot can work!

- Robots that are controlled by surgeons help with very detailed surgery.
- But they are big, powerful machines!
- Operating theatres have lots of other machines too that help with operations, like to check heart rate, or give pain medicine.
- Lots of operating theatres were built before the surgery robot was invented.
- We need to check it has the right electricity supply to keep everything working during operations!

Abigail Attwell
Trainee Clinical Scientist
(Clinical Engineering)

Healthcare Science

3rd Prize: “IVF Baby Recipe” – Lambrini Kourouniadou / Delia Androni

Directions

1. Wash your collected sperm and eggs with pre-warmed culture media at 37°C.
2. Mix the sperm and oocytes together in a tiny dish.

Ingredients

- Millions of sperm
- Several fluffy eggs
- Lots of culture media!

Suitable for

Reviews

Directions (continued)

3. Incubate the mixture at 37°C for 5–6 days in a warming oven until it turns into embryos.
4. After 5–6 days, check your embryos using the camera roll to see what they have been up to. Grade their morphology and select the best-looking one.
5. Take the embryos out of the oven, but do not leave to cool down! Transfer one immediately to the womb of the mother-to-be.
6. You can store any remaining embryos in the freezer.

Tip! If the number of sperm collected is very low or the sperm are not the greatest of swimmers, use an ICSI rig, a specialised microscope system, to inject a single sperm of your choice into an egg.

Fun fact! Our warming oven is not what you think it is! Embryologists use really cool ovens that take pictures in real time without them having to open the door. This makes sure that the embryos stay warm and keep growing uninterrupted!

Let's play a game. Can you guess which embryo can become a “dream” baby? Even though Embryo A looks “prettier” than Embryo B to an embryologist, both can grow into healthy babies! So remember, looks can be deceiving...

Time to say goodbye! Pick your embryo with great care and move it into the womb of its mother. If your embryo is feeling a bit too lonely, send it off with some company. But remember, no more than two embryos can go in at the same time or it will get too crowded.

The world's oldest frozen embryo twins! Meet Timothy and Lydia Ridgeway, a pair of twins born in October 2022 from embryos frozen in 1992!

Your work here is done. Even though it took you almost 6 days and a lot of hard work, this recipe can serve a lifetime of happiness!

You can find further information resources, including the programme, speaker biographies, presentations and poster entries.

These are available on the [our Healthcare Science Trainees and Supervisors Event 8-10 Feb 2023 page](#)



Conferences

NES Annual Virtual Conference 2022

In collaboration with colleagues from the Medical directorate, we hosted a seminar titled “Sharing experience to better support training through cross-directorate collaboration” at the NES Annual Virtual Conference on the 28th April 2022. This collaborative venture aimed to build upon the combined wealth of training knowledge and experience within the Healthcare Science and Medical directorates in NHS Education for Scotland. The session explored reflections from the current perspectives of both deaneries, pulling together their experience and exploring common themes of training in difficulty. Case vignettes were presented to smaller multi-professional groups in breakout rooms and through discussion we examined similarities between training support structures and identified how to better support training (see figure below showing the Google jamboard completed by participating attendees). The session concluded by signposting resources that could be shared.

NHS Education for Scotland Q1

Q1. How do you foster open communication?

Duncan is a trainee. He comes to see you looking tired and emotional and tells you that he has been diagnosed with a medical condition, that he thinks will impact on his ability to work nights, and also will mean that he will need regular breaks during the day. He is upset at all of the changes required and wondering if this is the right career for him. How do you respond?

open safe space to discuss

Reassure that other trainees and colleagues have health conditions too

Ask about impact on his family and friends and his immediate support needs

do you want to talk about it?

And to support with looking at alternative ways of working

Once he's ready we can discuss rota adaptations etc. involve other teams such as OHSAS to support him, suggest he should make decisions about the future once he's had some time to adjust

Do you know where to go for help?

What support do you have in terms of family friends

is there anything I can do for you

Ask him to share whatever he is comfortable to tell us about in order to develop a better understanding of his worries and concerns and his needs

Provide safe space

Find out more, give him time to talk, if adaptations are needed will need OHS input. Is he fit to work now? Does he need sick leave? Is this a short term or long term condition?

What can I do to help you?

Be empathetic and supportive to start with

Ask if we should speak with occupational health

Is it ok to have a talk?

Offer referral to Occy Health

What is the most important thing for Duncan right now?

Find out more about condition

Open questions

What things do we need to do to help?

Creating a safe space to talk

Provide a safe space

Honesty

What adaptations can we make?

Give reassurance that his concerns will be listened to and that reasonable adjustments will be made

Need to also help him to get through so that it might be that he can do this in future - he might be upset that he will miss out.

listen to the concern

Talk to trainee is happy for referral to NES support services and Occ Health

Explore concerns and expectations

Go to a non clinical, neutral environment so that you can explore his concerns

Discuss his major concerns - what's most important to him

Address immediate concerns - is he well enough just now to be at work?

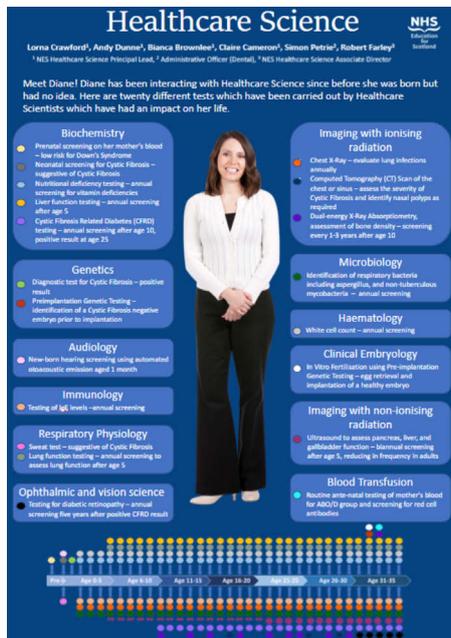
Do you have support from family, friends?

show empathy, listen!!!

See if they wish to discuss with you or someone else

NES Hybrid Staff Conference 2022

Our Healthcare Science team also attended the NES Hybrid Staff Conference 2022 on the 6th September 2022. Although we attended in-person at Perth Concert Hall, it was offered as a hybrid conference to support staff while developing the culture and working environment to enable NES to continue delivering a skilled and sustainable workforce for a healthier Scotland. This successful event enabled us to reconnect with colleagues from across NES, share approaches to wellbeing and resilience, and reflect on the work practices that have arisen since the COVID-19 pandemic. Importantly the organisers asked everyone to celebrate NES’s achievements over the past 20 years, to consider how this informs our future and how we continue to meet the needs of our service users in the future. We created a poster which illustrated a person who has had twenty different interventions which have had an impact on their life, all involving our Healthcare Science workforce. You can see the poster below, in addition to a photograph of us in attendance at the conference.



Webinars

Owing to previous engagement and demand two "Human Factors in HCS" and "How to fail safely" webinars have been offered. Limited presentations can be found on the [Past Webinars page on Turas Learn](#).

"Human Factors in Healthcare Science"

Friday 13th May 2022 (12-1pm) / Friday 19th August (12-1pm) on MS Teams

These two webinars explored the discipline of Human Factors and how it relates to our work within Healthcare Science.

Speakers:

- **“Human Factors and everyday work”** – Dr Helen Vosper (Scientific Advisor in Human Factors to NHS Education for Scotland)
- **“A Human Factors experience & application in the real world”** – Jude Savage (Deputy Registrar and Systems Analyst, Academy for Healthcare Science)
- **“NHS Lothian Laboratories and Human Factors”** – Nadine Wilkinson (Laboratory Quality Manager, NHS Lothian)

A total of **167** people attended across the two sessions.



Overall **very positive** with **over 80% respondents**

noted the webinars as **very useful**

"How to Fail Safely"

Friday 24th June 2022 (9-10am) on MS Teams

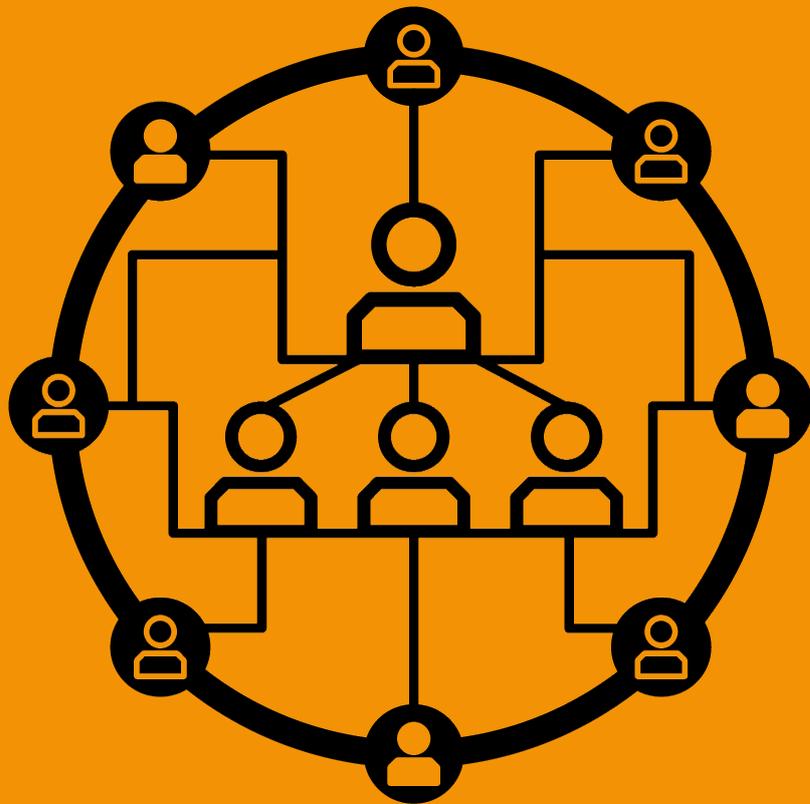
This webinar explored the ways that we can create safe learning environments and ensure psychological safety. Healthcare Scientists should have the opportunity to make mistakes and learn from them, without fear of failure or concerns about compromising patient safety.

Speakers:

- **"Psychological Safety - Helping Trainees to Fail Safely"** – Michael Money Penny (Associate Postgraduate Dean for Clinical Skills and Simulation, NHS Education for Scotland)
- **"Failing Safely"** – Mark Johnston (Specialist Lead in Human Factors, NHS Education for Scotland)

A total of **42** people attended the session.

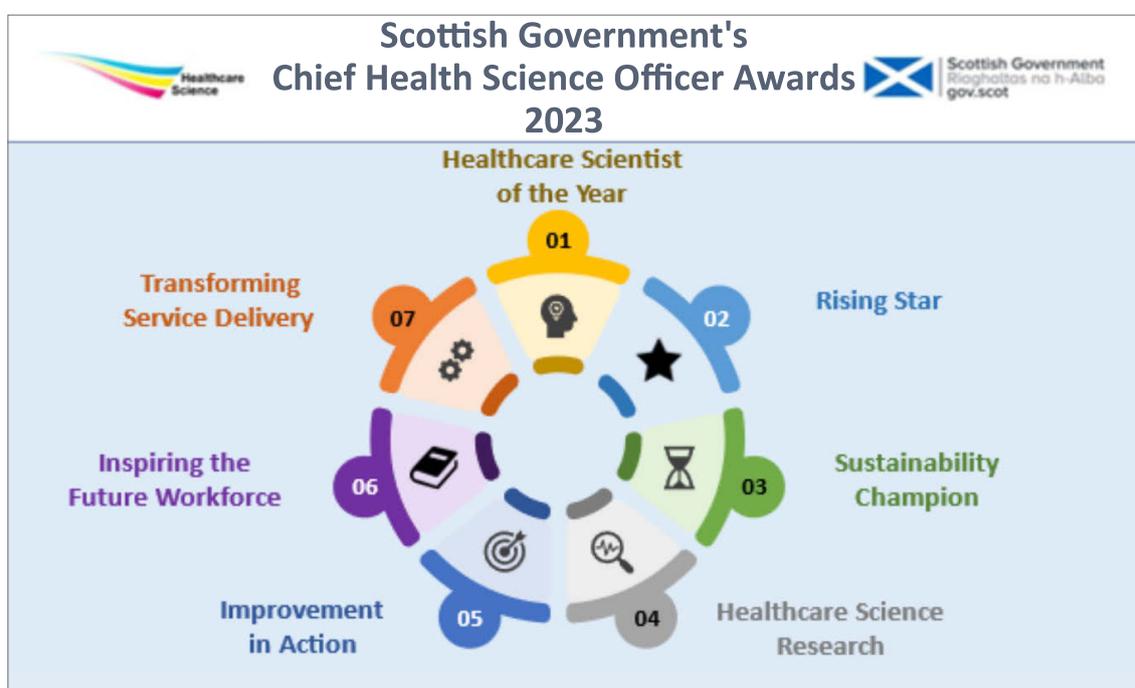
The Wider HCS Community



Celebrating the success of our Healthcare Science colleagues

Recognition of our Healthcare Scientist colleagues

After the success of last year's first awards ceremony of The Scottish Governments' Chief Health Science Officer Awards, this year the virtual event was hosted on the 16th March during Healthcare Science week. It provided a welcome opportunity to recognise and celebrate the skills, expertise, and innovation within our Healthcare Science workforce. It also provided a platform to share best practice throughout our profession.



**Congratulations to the following winners for the 2023
Chief Health Science Officer Awards categories;**

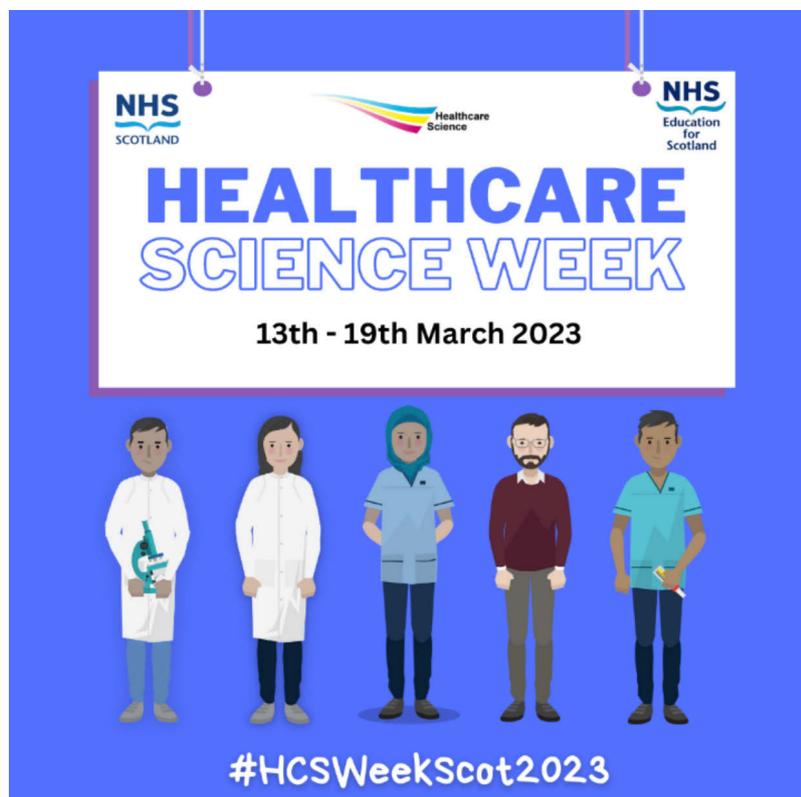
- Lifetime Achievement Award - Diane Anderson
- Healthcare Scientist of the Year – Shona Cairns, National Services Scotland
- Rising Star – Kellie Moffat
- Sustainability Champion – Janet McIntyre, NHS Lothian
- Improvement in Action – NHS Greater Glasgow & Clyde Biomedical Science Team
- Inspiring the Future Workforce – Samantha Stredwick, NHS Lothian (Winner) / Dr Mairiead MacLeannan, NHS Fife (Runner Up)
- Transforming Service Delivery – NHS Lothian, Blood Science Laboratories

For full details about the Healthcare Science CHSO award winners view [the Healthcare Science Awards Special Bulletin](#)



Promoting Healthcare Science / Healthcare Science week 2023

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.





Healthcare Science Week is a yearly celebration
in March **to raise awareness around the vital work** that is undertaken **by Healthcare Scientists.**

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.

This year Healthcare Science week was held from Monday 13th March to Sunday 19th March with a host of activities and participation from the NES HCS team, the Scottish Government CHSO team, the NHS Careers team as well as our in-service colleagues.

Our updated NES HCS website was populated with resources and guidance for participation for how to get involved during Healthcare Science week including the programme of organised events, virtual and social media engagement. The key objective was to raise awareness of the many career opportunities in Healthcare Science and the Healthcare Science public profile.

DYW Live Healthcare Science Week engagement and activity

In partnership with Developing the Young Workforce, the NES HCS team and NHS Scotland Careers delivered 2 interactive online sessions to school pupils across Scotland during Healthcare Science week. These 'live' interactive sessions gave our learners the opportunity to meet and engage with Biomedical Scientists and a Sleep Physiologist. The sessions focused on career opportunities in the NHS for the various roles in Healthcare Science. With thanks to our colleagues who talked about their job roles and their career pathways into the profession; NSS SNBTS Biomedical Scientists; Tiffany Pietrek, Jordan Moir and Tania Milne as well as our Sleep Physiologist Lynne Anderson-Scott, at NHS Lothian. Lots of positive feedback was received from the school with attendance at the Biomedical Scientist session had 48 pupils from 5 different classes and our Sleep Physiology session reached out to 71 pupils over 6 different classes.



Who are Healthcare Scientists?

NHS SCOTLAND

National e-Learning Offer

Healthcare Science

Healthcare Scientists are at the heart of healthcare diagnosing 80% of clinical decisions. This course will provide an overview of the Healthcare Science and focus on two specific areas: Biomedical Science and Sleep Physiology.

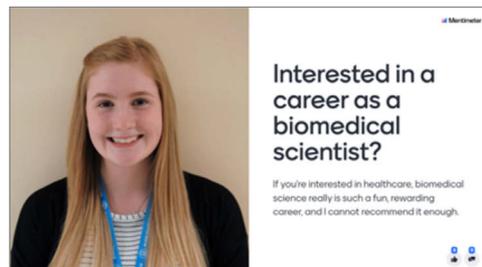
SUITABLE AUDIENCE: P6 - S6

WHEN: Tuesday 14th March

LINKS: Computing, Technology and Engineering, Science, Maths, Numeracy and Finance, English and Literacy

Visit e-sgoil.com/dyw for more information

DYW Live
Skills | Employability | Pathways



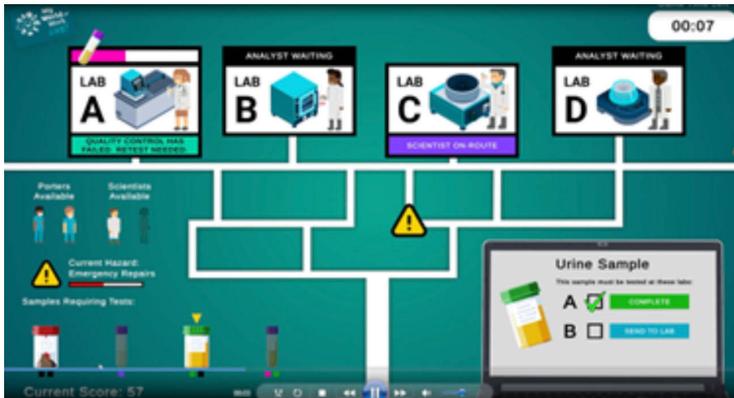
Interested in a career as a biomedical scientist?

If you're interested in healthcare, biomedical science really is such a fun, rewarding career, and I cannot recommend it enough.



How did I become a sleep physiologist?

...and what kind of career I would have.



Launch of 'Super Samples'

A new interactive game which teaches school pupils about careers within the NHS was launched as part of Healthcare Science Week. The game has been developed in partnership with NHS Education Scotland, Healthcare Science team and My World of Work Live for a national experiential learning programme by Skills Development Scotland. Pupils from Primary 5 to Secondary Year 3 can play this new game which tasks players to get as many medical samples as possible to the laboratory to be analysed and give a diagnosis for their patients. Sarah Smith, Healthcare Science Professional Advisor for Scottish Government also worked on the project with Skills Development Scotland.



My World of Work Live

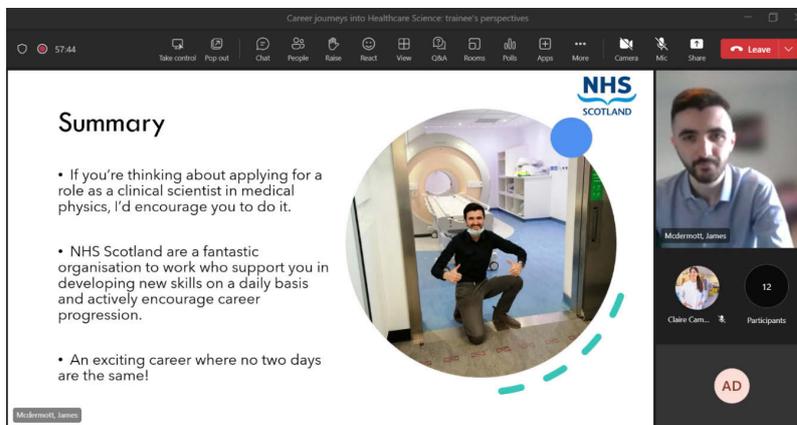
is a programme of fun, **interactive activities** that help **young people understand possible future careers.**

Celebrating Healthcare Science Careers – webinar

Thursday 16th March - audience - Scottish
University students

A webinar delivered as part of the Healthcare Science Week promotions to raise awareness to student's interested in Careers in Healthcare Science was delivered to students from Dundee University, Stirling University, Edinburgh University, Strathclyde University, Glasgow University, and Napier University. Participation from Claire Cameron and Joanne Haddrick at NES delivering overview of careers and recruitment process in the NHS. Thanks to our service colleagues talking about their career into Healthcare Science with Andrew Davies, Healthcare Science Lead, Medical Physics at NHS Lothian. Kirsty Meikle, Cardiac Physiology at NHS Lothian and Jenna Jenkinson, Genetics at NHS Lothian. A successful webinar delivered to 117 students in attendance from a variety of degree programmes as promotion of 'no wrong path to Healthcare Science'.





Webinar open to the public – "Career Journeys into Healthcare Science: Trainees perspectives"

Friday 17th March 2023 (12-1pm) on MS Teams

To celebrate the diverse career journeys into Healthcare Science during the HCS Week promotions, we hosted a public webinar with the stories from our NHS trainee Clinical Scientists talking about how they got into these roles, and what inspired them to work for the NHS. With thanks to the contributions of our trainee's who presented and took part in the webinar talking about their personal career path for inspiring our audience and our future Healthcare Scientists. Eleanor Minshall, Genetics at NHS Lothian; Herimela Degefa from Molecular Pathology at NHS Lothian; Ross Collins from Medical Physics at NHS Lothian; James Mcdermott from Medical Physics at NHS GGC, Imogen Menzies Johnston; West of Scotland Specialist Virology Centre, at NHS GGC; Yaiza Jung from Molecular Pathology and HMDS at NHS Lothian.

Social media engagement from NES HCS and our NHS Scotland colleagues

Top media tweet



Tweet text:

Happy HCS Week Celebrations! A great opportunity to raise awareness of the amazing work of our colleagues & the great career opportunities in Healthcare Science A message from Rob Farley, Associate Director of NES HCS [#HCSWeekScot2023](#) [#HCSWeek2023](#) [@ScottishHCS](#) [@NHS_Education](#)

[Link to full tweet](#)

Earned:



3,990
impressions

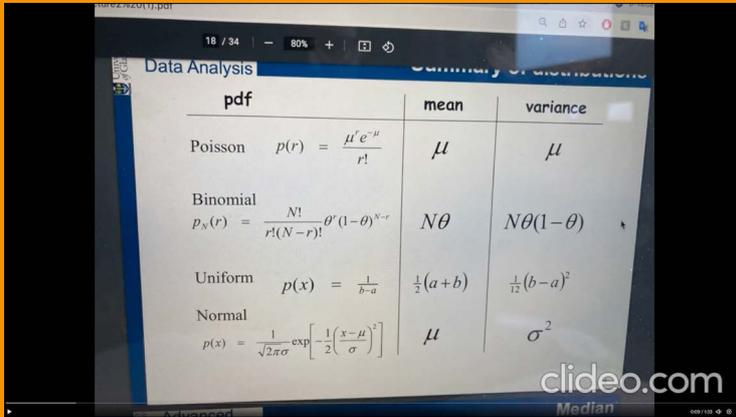


15
retweets



25
likes

Top tweet



Creative video from NHS Lothian

Tweet text:

Our NHS Scotland Medical Physics and Clinical Engineering trainees have put together a brilliant video as an insight into the work they do in their training roles. Well done, what a great addition for [#HCSWeek2023](#) [@ipemnews](#) [@ScottishHCS](#) [@LothianHCS](#) [@NHSScotCareers](#)

[Link to full tweet](#)

Earned:



4,732
impressions



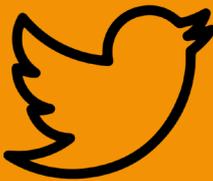
20
retweets



26
likes

March 2023 summary

Our twitter analytics for social media activity during HCS Week were a success with figures detailed below;



45

Tweets



65.5K

Tweet
impressions



1,376

Profile visits



39

Mentions

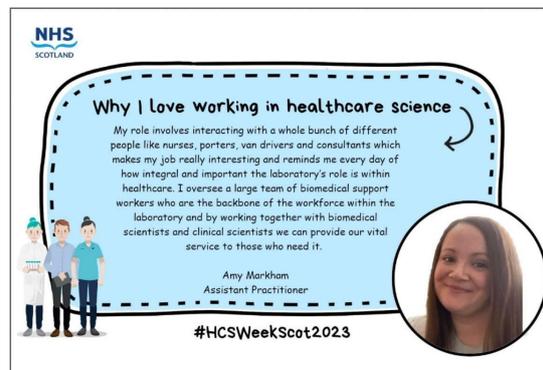
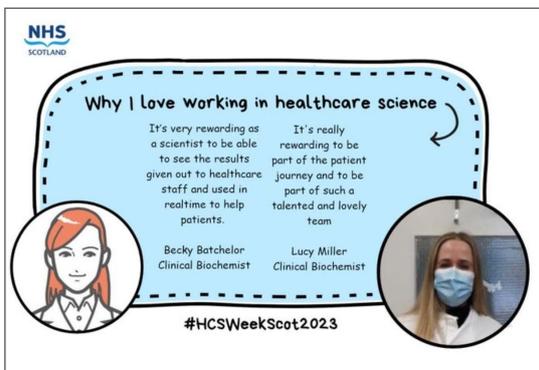


40

New followers

'Why I love working in Healthcare Science'

We distributed a placard from the NHS careers team to promote 'Why I love working in Healthcare Science' to engage our colleagues to promote awareness about their roles. We had lots of participation with some examples of this engagement below from Western General Blood Sciences, NHS Lothian, Genetics team at NHS Lothian, National Services Scotland, Medical Physics and Clinical Engineering, NHS Lothian.



Other social media interactions from colleagues;

NHS National Services Scotland



Tweet text:

On [#HCSWeekScot2023](#), Shona Cairns shares how data and intelligence relating to healthcare-associated infections and antimicrobial resistance support the identification of strategies that reduce the burden of infection, protect patients and the wider population [#ProudToWorkAtNSS](#)

[Link to full tweet](#)

Earned:



1,245
views



5
retweets



15
likes

NHS Grampian



Earned:



2,500
views



2
retweets



4
likes

Tweet text:

[#HealthcareScienceWeek](#) [#HCSWeekScot2023](#) Sheila is an associate practitioner in Respiratory Physiology and Sleep Science. Sheila fulfils an essential role within the pulmonary function lab, inc. assisting the Healthcare Scientists in diagnostic investigations. [@hcsnes](#) [@NHSGHealthcSci](#)

[Link to full tweet](#)

NHS Healthcare Science Careers

NHS SCOTLAND **Careers** Search... [View vacancies](#)

[Home](#) [Shape your future](#) [Explore careers](#) [Work with us](#) [Blog](#)

[Home](#) / [Explore careers](#) / [Healthcare science](#)

Healthcare science

The healthcare science workforce is involved in 80% of diagnostic decisions in patient care. They're at the heart of improving healthcare and advancing scientific development through technology and innovation.

Who are healthcare scientists?

Did you know that there are more than 50 different healthcare science careers?

Healthcare scientists use science, data, product design, and engineering to:

- prevent, diagnose, monitor, and treat medical conditions
- design and develop custom medical devices
- commission and maintain medical equipment
- make, improve, and adapt assistive technology

There are many routes to a rewarding healthcare science career, including Modern Apprenticeships, entry-level support roles, and training programmes.

The NES core team have been working in partnership with the NHS Scotland careers team will get this statement approved from the CHSO Scottish Government team to help improve the visibility of Healthcare Science career's in the NHS with the following activity over this financial year through the following actions;

- updating the careers website with new Healthcare Science career profiles (Clinical Perfusionist, Clinical Scientist Embryology, Clinical Scientist Molecular pathology and Genetics, Clinical Photographer, Clinical Engineering, Clinical Technologist, Associate Practitioner – Life Sciences, Healthcare Support Worker – Life Sciences)
- engagement with Schools and Higher Education Institutions by the use of Social media promotional activity of Live virtual career events through partners such as skills development Scotland, My world of work, Education for Scotland, DYW Live.
- working on further career resources such as leaflets for career engagement and events, and promotional career videos, and interactive learning.
- reaching out to our Healthcare Science colleagues for Subject Matter Experts on the various specialities.
- linking our career resources and Healthcare Science resources and NHS Scotland Careers pages to our new HCS training website.

This financial year 2022/23, we have had 11,043 page views of the Healthcare Science job profiles and 843 views of the blog posts. That is 11,886 page views in total - 2.9% of total website traffic.

Future objectives for Healthcare Science Careers in the next financial year are 2023/24;

- to continue working in partnership with NHS Scotland Careers team, Specialist Matter Experts and Scottish Government team to overhaul and improve the existing job profile pages
- adding a further 12 new job profile pages in an aim to improve the performance of Healthcare Science pages on the career's website.
- development of a new national Healthcare Science careers resource. Increased engagement with young people through opportunities like DYW Live



We have had

11,043
page views

of the HCS job profiles
and 843 views of the
blog posts -

2.9% of total
website traffic.

Communications

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

We utilise various communication platforms and our engagement to our Healthcare Science colleagues such as;

- Annual Report
- Emails to our subscribers with Mailchimp
- Turas Learn – Healthcare Science e-Learning.
- HCS Notice Board
- Social media communication on the platforms of Twitter, Facebook and Instagram with the handle @hcsnes on all 3 platforms to capture a wider demographic for our audience.
- Mailchimp
- Corporate NES Healthcare Science website
- HCS Training website (new website referenced on [page 101 of this report](#))



We gained

66.2K tweet impressions,

40 new followers,

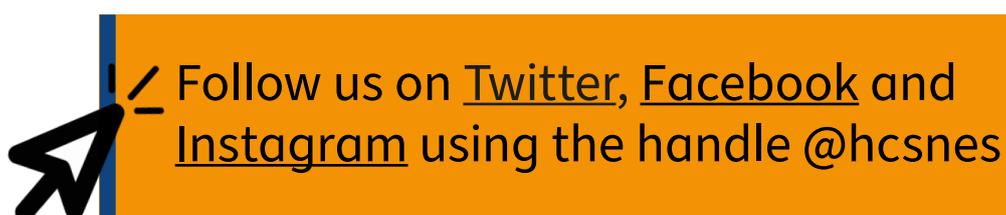
91 clicks, **232**

retweets and **470**

likes in March 2023.

As of March 2023, we had reached 232 followers on [Twitter](#) which is still our highest engagement platform for social media posts. We continue to utilise the mail chimp email communications from the core team for the latest news and updates with 44 emails distributed to 983 subscribers, including the distribution of our 4 noticeboards in this financial year.

Now with our new training website that was launched in February 2023, this has provided another platform for communications and awareness for the learning, guidance and support available from the core team to reach out our workforce, stakeholders and the wider community to improve the visibility of Healthcare Science.



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 October 2022 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.

Our advisory group membership has been widened since then to include NES alumni (past members of the core team) and new trainees. The group will move to a more ad hoc consultative body rather than a single annual meeting.

NES Healthcare Science Objectives 2023/24

These build upon previous years objective and include:



Review and improve our centre self-assessments for the next cycle of training recognition



Support and monitor the quality of training in the Healthcare Scientist workforce



Engage earlier in the year to determine demand for Clinical Scientist and other training posts - ahead of national planning cycles



Continue to develop our CPD offer through e-Learning opportunities for the HCS community on Turas Learn



Consolidate training to an online offer

I 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
HSST	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
NTN	National Training Number
SG	Scottish Government
STP	Scientist Training Programme (Postgraduate level)
TPM	Training Programme Management
Turas	NES app that includes TPM

Alternative Formats

This resource may be made available, in full or summary form, in alternative formats and community languages. Please contact us on **0131 656 3200** or e-mail: **altformats@nes.scot.nhs.uk** to discuss how we can best meet your requirements.



NHS Education for Scotland

Westport 102, West Port
Edinburgh EH3 9DN
Tel: 0131 656 3200
www.nes.scot.nhs.uk