

# Standards of Proficiency for Higher Specialist Scientists

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## **Introduction**

The Academy for Healthcare Science (AHCS) brings together a wide variety of scientific disciplines in healthcare across the UK into a united voice for healthcare science. One of our key tasks is to uphold professional standards across Healthcare Science.

The AHCS believe it is vital to establish an appropriate and effective system for registration and regulation across the whole Healthcare Science workforce which supports the delivery of safe, high quality services to improve outcomes for patients.

By ensuring healthcare staff are of a high standard, we ensure safe and effective services for patients whilst providing broader assurance for the public and commissioners of services. The Academy believes that delivering a coherent and comprehensive regulatory framework for the profession is crucial for public safety.

The changes brought about through Modernising Scientific Careers have been a major change for the education and training of everybody working in Healthcare Science. For the first time there is a coherent training and education framework across the whole of the healthcare science workforce to support a clear regulatory framework.

## **About the Academy Register - Practitioner part**

The Academy has established a register which currently operates for Healthcare Science Practitioners who are not regulated by the Health and Care Professions Council (HCPC) as biomedical scientists.

This register is open for applications and we have achieved Accreditation by the Professional Standards Authority for Health and Social Care (PSA) for our Practitioner register. This quality mark demonstrates that we meet the Professional Standards Authority's high standards in governance, standard-setting, education and training, management of the register, complaints handling and information.

## Routes to registration

As a general principle, for whatever level of practice healthcare scientists work at, there will be two routes to registration, namely:

1. Completing an approved education and training route (see page 6) Or
2. By the formal assessment of prior education, training and experience against the relevant requirements for registration. After having been successfully assessed against these requirements, individuals are awarded a Certificate of Equivalence by the Academy (see page 6).

### *Note: Approval of Training Programmes*

The AHCS approves training programmes leading to registration to ensure that they meet the AHCS Standards of Education and Training. It does this by ensuring that training programmes are accredited to these standards by the Lead local Education and Training Board (LETB) for Healthcare Science – Health Education West Midlands, via the National School of Healthcare Science and the National Commissioner for Healthcare Science education, Health Education England.

## Higher Specialist Scientists

The Higher Specialist Scientist Training programme is a five-year work-based programme supported by an underpinning part-time doctoral level programme. HSST will deliver expert and senior scientists to work with medical colleagues and clinical teams. Their scientific expertise and leadership will provide important benefits and added value to patients. Clinical scientists have been employed in the NHS for over 40 years as consultant Clinical Scientists.

A recent review of consultant clinical scientist appointments in the NHS in England and Wales identified more than 600 people in this role. These very senior clinical scientists provide clinical scientific advice and patient care alongside medical consultants and are involved across the healthcare spectrum.

## What are the Standards of Proficiency for Higher Specialist Scientists?

To be and to continue to be registered with us, registrants must be and be able to demonstrate that they are '**fit to practise**'. By fitness to practise, we mean that someone has the skills, knowledge and capacity to practise safely.

These standards are also used to approve education programmes by ensuring that someone who successfully completes an approved training programme is able to meet these standards. We will also use these standards when we assess whether someone's education, training and professional practice is equivalent to that required of a Higher Specialist Scientist (that is, we undertake an equivalence assessment, which when successfully completed results in an award of a Certificate of Equivalence by the Academy).

## About the Standards of Proficiency

These Standards of Proficiency set out the minimum standard that a person must meet in order to register with the Academy for Healthcare Science (the Academy) as a Higher Specialist Scientist (HSS).

The standards:

- Provide a statement of the proficiency achieved by a Clinical Scientist who completes Higher Specialist Scientist Training (HSST). This will be evidenced by the “Certificate of Completion of HSST” - issued by the National School of Healthcare Science, to confer eligibility to apply to the Academy to join the Higher Specialist Scientist Register
- Will be applied to assess whether a person’s education, training and professional practice is ‘equivalent’ to that required of an HSS. Compliance with the standards through a successful formal equivalence assessment will result in an award of a “HSS Certificate of Equivalence to HSST” by the Academy and eligibility to apply to join the Higher Specialist Scientist Register.

Entry onto the Higher Specialist Scientist Register can only occur for scientists who are registered as Clinical Scientists with the Health Care Professions Council (HCPC). Accordingly, these Standards of Proficiency have been cross-referenced with the HCPC Standards of Proficiency for Clinical Scientist Registration.

Our Standards of Proficiency cover the five domains of *Good Scientific Practice*

as interpreted at HSS level:

1. Professional Practice
2. Scientific Practice
3. Clinical Practice
4. Research, Development and Innovation
5. Clinical Leadership

These standards are not the same as the scope of practice of an HSS. We define scope of practice as the area or areas of a registrant’s profession in which they have the knowledge, skills and experience to practise lawfully, safely and effectively, in a way that meets our standards and does not pose any danger to the public or to them.

We recognise that the practice of experienced registrants often becomes more focused and specialised. This might be because of specialisation in a particular area of practice or within a particular group, or a movement into roles in management, education or research. As registrants’ scope of practice changes, they may not be able to demonstrate that they meet each and every standard required in the Standards of Proficiency. This does not present any problems, provided they make sure that they are practising safely and effectively within their given scope of practice and do not practise in areas where they are not proficient.

Application to the Academy for the Certificate of Equivalence will require compliance with these standards in the context of the scientific specialism of the individual applicant and the evidence provided will need to demonstrate this context.



## Domain One: Professional Practice

To gain entry on to the Higher Specialist Scientist Register you must demonstrate that you are able to:

### STANDARD 1 – PRACTISE WITH THE PROFESSIONALISM EXPECTED OF A CONSULTANT CLINICAL SCIENTIST

- 1.1 Demonstrate an understanding of Good Scientific Practice at Consultant Clinical Scientist level
- 1.2 Comply with the codes of conduct of the Health and Care Professions Council; and the Academy for Healthcare Science
- 1.3 Ensure that conduct at all times justifies the trust of patients and colleagues and maintains the public's trust in the scientific profession

### STANDARD 2 – ENSURE PROFESSIONALISM IN WORKING WITH PEERS AND WITH SERVICE USERS

- 2.1 Lead a team to work effectively with senior colleagues in cross-professional settings and across organisational boundaries
- 2.2 Lead a team to work in partnership with colleagues and other organisations in the best interest of patients, local communities and the wider population
- 2.3 Create a culture of openness with patients, their families, carers or representatives and colleagues, including if anything goes wrong; welcoming and listening to feedback and addressing concerns promptly
- 2.4 Communicate complex clinical scientific and technical information in a wide range of settings and formats, including to patients and the public
- 2.5 Liaise with peers, clinical users of the service, patients and the public on all aspects of service delivery to ensure that the service is fit for purpose
- 2.6 Communicate research, innovation and development findings as appropriate, including peer reviewed journals and at national and international conferences



## STANDARD 3 – ENSURE PROFESSIONALISM IN AREAS OF GOVERNANCE AND SERVICE ACCREDITATION

- 3.1 Assume overall accountability for ensuring compliance with the governance and risk management requirements for a broad scientific service
- 3.2 Demonstrate a high level of professionalism in personal performance, including confidentiality, ethical standards and financial probity
- 3.3 Ensure effective clinical governance of scientific services and personal practice according to their organisation's clinical governance policies
- 3.4 Ensure the service meets service accreditation standards
- 3.5 Ensure the formal reporting and recording of any adverse incidents is in line with organisational policy
- 3.6 Ensure adverse events and complaints are investigated so that lessons learnt are shared appropriately and that systems are put in place to minimise the risk or recurrence

## STANDARD 4 – DIRECT THE EDUCATION AND TRAINING OF OTHERS

- 4.1 Develop a strategic approach to the provision of appropriate training programmes for the breadth of the scientific workforce and contribute to training other groups of staff within healthcare
- 4.2 Advise on national training requirements and curriculum for the breadth of training in the scientific workforce
- 4.3 Evaluate and make arrangements for the teaching and training requirements of scientific staff, professional colleagues and users of the service
- 4.4 Provide scientific staff with appropriate professional and personal development opportunities through robust appraisal processes, with access to appropriate training for their jobs and the line management support needed to succeed

- 4.5 Participate in clinical scientific and technical teaching, training and assessment of peers, undergraduates, post-graduates and other healthcare professionals within relevant scientific areas of practice using effective methods of learner centred feedback
- 4.6 Develop and introduce teaching programmes in own area of specialist practice and continually evaluate and improve teaching and assessment activities using critical reflection
- 4.7 Demonstrate personal training, skills and qualifications (where relevant) to provide high quality teaching, training, assessment and feedback
- 4.8 Evaluate the quality of teaching and training provided and make recommendations for improvement

## **Domain Two: Scientific Practice**

To gain entry on to the Higher Specialist Scientist Register you must demonstrate that you are able to:

### **STANDARD 5 – LEAD SCIENTIFIC SERVICES**

- 5.1 Assess the demand and specification for evolving scientific services with users, clinical colleagues and other relevant stakeholders
- 5.2 Evaluate the scientific literature and other scientific sources and work with others to develop scientific and business cases for service improvement
- 5.3 Lead a clinical scientific department offering a broad range of services and creating a culture of continuous improvement and innovation
- 5.4 Provide a high level of scientific expertise to complex problems in own area of specialist practice
- 5.5 Ensure that clinical scientific services are delivered with a commitment to excellent quality, safety, confidentiality, accountability, reliability, communication and professional and managerial integrity

## STANDARD 6 – DIRECT SCIENTIFIC VALIDATION AND EVALUATION

- 6.1 Ensure the clinical scientific validation of analytical results so that complex investigations are accurately and critically evaluated
- 6.2 Provide consultant level clinical scientific advice, including interpretation of investigations and their outcomes, therapies and their implications for patient care and management, and recommendations for additional or more complex investigations
- 6.3 Provide scientific advice on legislative compliance in own specialist area of practice
- 6.4 Bring critical analysis to the practice of the clinical scientific specialism, ensuring that regular review of research and evidence is undertaken so that adaptation to practice can be made in a timely and cost effective manner

## STANDARD 7 – ASSURE SAFETY IN THE SCIENTIFIC SETTING

- 7.1 Ensure delivery of the highest standards of health & safety in the working environment
- 7.2 Introduce and critically evaluate measures to identify, actively manage and mitigate risk to patients
- 7.3 Ensure services are delivered in clean and safe environments that are fit for purpose, based on national best practice

## Domain Three: Clinical Practice

To gain entry on to the Higher Specialist Scientist Register you must demonstrate that you are able to:

### STANDARD 8 – ENSURE CLINICAL RELEVANCE OF SCIENTIFIC SERVICES PROVIDED

- 8.1 Ensure the provision of highly developed and advanced clinical scientific expertise, advice and interpretation to the multi-professional clinical team and to patients, undertaking scientific responsibilities at a level of accountability similar to that of consultant doctors, but with the recognition that the overall clinical responsibility for patients resides with an accountable medical consultant or General Practitioner
- 8.2 Lead high quality patient focused clinical scientific services that promote excellent patient outcomes, support patient involvement and engagement and continually seek to improve the safety and quality of NHS clinical scientific services
- 8.3 Collaborate with colleagues across organisational boundaries to develop, promote and participate in a multi-professional approach to high quality patient care and management

### STANDARD 9 – DELIVER EFFECTIVE CLINICAL SERVICES

- 9.1 Play a direct role in the management of complex patients, as part of a multi-professional team, including assessment of the patient's relevant history, developing an investigation strategy, interpreting results and agreeing a management and treatment plan in partnership with the patient, carers, medical staff and the rest of the multi professional team
- 9.2 In appropriate circumstances and within the context of particular and defined clinical circumstances, impart scientific results to and discuss with patients or their families, investigations, risks and outcomes that may be highly sensitive, emotive or have serious prognostic implications, recognising that the responsibility for the overall care of the patient rests with the accountable medical consultant or General Practitioner
- 9.3 Respond positively to and promote new developments that enable patients to have improved and safer access to information about their care

## Domain Four: Research, Development and Innovation

To gain entry on to the Higher Specialist Scientist Register you must demonstrate that you are able to:

### STANDARD 10 – LEAD RESEARCH, DEVELOPMENT AND INNOVATION IN CLINICAL PRIORITY AREAS

- 10.1 Contribute at the highest level to the strategic development and direction of the organisation so that the added value of clinical science services and their impact on patient care is fully realised
- 10.2 Lead and shape the application of advances in science, technology, research, innovation, especially in the area of genomics and personalised / precision medicine, and education to support continuous improvement of patient outcomes;
- 10.3 Through the initiation and translation of cutting edge scientific research and education, bring strategic direction, innovation and continuous improvement into practice
- 10.4 Promote safe and high quality care by ensuring that research and evidence based practice is at the vanguard of clinical scientific services

### STANDARD 11 – EVALUATE RESEARCH, DEVELOPMENT AND INNOVATION OUTCOMES TO IMPROVE SCIENTIFIC SERVICE PROVISION

- 11.1 Develop and apply a strategy to optimise the impact of clinical audit to deliver outcome focused quality improvement programmes
- 11.2 Continually improve the quality of clinical scientific services by directing and planning the introduction, evaluation and application of improved scientific and operational procedures
- 11.3 Evaluate published research and innovation for patient benefit and make recommendations for improvements in the quality of services and patient outcomes based on these

## STANDARD 12 – PROMOTE A CULTURE OF INNOVATION

- 12.1 Generate a culture that values and supports innovation and quality by promoting and stimulating research and innovation both within the service and across service boundaries
- 12.2 Initiate and direct research and innovation programmes to completion, evaluate outcomes and amend service provision as appropriate
- 12.3 Identify opportunities to innovate and create a culture where innovation flourishes

## STANDARD 13 – ASSURE RESEARCH GOVERNANCE

- 13.1 Design and lead a strategy to achieve and / or maintain service accreditation
- 13.2 Ensure compliance with the NHS ethical and research governance framework

## Domain Five: Clinical Leadership

To gain entry on to the Higher Specialist Scientist Register you must demonstrate that you are able to:

## STANDARD 14 – ENSURE STRATEGIC LEADERSHIP

- 14.1 Lead strategic service improvement across a broad service, demonstrating an ability to successfully initiate, manage and sustain change aimed at improving patient outcomes
- 14.2 Lead and motivate clinical scientific staff to ensure effective delivery and achievement of agreed service objectives in a changing healthcare environment

## STANDARD 15 – ENSURE CLINICAL SCIENTIFIC LEADERSHIP

- 15.1 Ensure scientific services reflect the needs and preferences of patients, their families, carers as well as the public health requirements of the populations they serve
- 15.2 Direct the operation of a broad service to ensure compliance with local, national and internationally accepted standards and guidelines
- 15.3 Participate in appropriate local regional, national and international scientific groups
- 15.4 Play a leading role in appropriate local, regional, national and international clinical scientific groups
- 15.5 Contribute to the activities of national professional bodies and the formulation of national/international guidelines on clinical, scientific, and safety issues relating to services
- 15.6 Ensure that scientific services are delivered in accordance with recommendations for national screening programmes, diagnostic practice and health and safety guidance
- 15.7 Ensure that engagement in the commissioning of scientific services is carried out with full compliance to good practice

## STANDARD 16 – ASSURE EFFECTIVE MANAGEMENT OF RESOURCES

- 16.1 Ensure that staff and non-staff resources are assessed and deployed to obtain high quality services whilst offering best value for money