



Improving quality, protecting patients

Proposed standards for Register of
Healthcare Science Practitioners

Consultation

December 2013 to February 2014

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Foreword

The Academy for Healthcare Science is the uniting voice of the diverse healthcare science workforce in the UK, bringing together a wide variety of scientific disciplines in healthcare.

One of our key tasks is to uphold professional standards across Healthcare Science. By ensuring healthcare staff are of a good standard, we ensure safe and effective services for patients while providing broader assurance for the public and commissioners of services. While our continuing ambition is to see statutory regulation put in place across all the Healthcare Science profession, we realise that it is vital to establish an appropriate and effective system for registration and regulation of those parts of the Healthcare Science workforce that are not currently regulated by law through the Health and Care Professions Council.

The Academy believes that such regulation is at the heart of demonstrating and developing the professionalism of the Healthcare Science workforce which, in turn, is the key to the delivery of safe, high quality services to improve outcomes for patients.

The changes brought about through *Modernising Scientific Careers* have been a step change for the education and training of everybody working in Healthcare Science. For the first time there is a single coherent training and education framework across the whole of the healthcare science workforce. The Academy plays a key part in the delivery of *Modernising Scientific Careers* and we believe that providing a single coherent solution so there is a comprehensive regulatory framework for the profession is a crucial part of this.

We have continued to work closely with the existing voluntary registration bodies and related professional bodies across a number of healthcare science specialisms, together with service users and others to who have helped us to build on our thinking with a wealth of insight and experience. We are very grateful for their ongoing involvement and continued contribution.

This document sets out our proposed standards for regulating those Healthcare Science Practitioners who are not already covered by statutory regulation through protection of title. In developing these we have drawn on the guidance of the Professional Standards Authority for Health and Social Care (PSA) which oversees all registers, both statutory and non-statutory.

Foreword

We have also tried to align the standards with the HCPC Standards of Proficiency used for those Healthcare Science Practitioners subject to statutory regulation. In this way we hope to move toward a seamless system for the entire Practitioner workforce.

Alongside our proposed standards, this consultation sets out the broader context for this work. We welcome your views on whether these standards are reasonable, appropriate and necessary to ensure safe and effective practice by Healthcare Science Practitioners.



Sir Duncan Nichol

Chair of Academy for Healthcare Science

About the Healthcare Science workforce

Healthcare Science plays an increasingly important role in the delivery of high-quality health and social care. Using rapidly-changing science and technology to assess, test, diagnose, treat and rehabilitate patients, the healthcare science workforce is the ‘backbone’ of the NHS.

The 50,000 healthcare scientists represent just five per cent of the NHS workforce, yet their work underpins eighty per cent of clinical diagnoses for patients. In addition, they play a key role across treatment pathways, particularly in the key NHS priority areas such as cardiovascular disease, respiratory disease and cancer.

The Healthcare Science workforce is split into four divisions:

- Life Sciences
- Physiological Sciences
- Physical Sciences and Biomedical Engineering
- Bioinformatics

Within these divisions are more than fifty specialisms of healthcare science, covering the breadth of skills across science, technology, engineering and mathematics, from Analytical Toxicology through to Vascular Science (a full list of these specialisms can be found on our website). The Healthcare Science profession brings together individuals working at all career levels, from assistants and associates through to Consultant Clinical Scientists (see Table One).

The *Modernising Scientific Careers* programme introduced for the first time a single coherent training and education framework across the whole of the Healthcare Science workforce. The framework facilitates movement between Healthcare Science workforce groups. This means that staff can train through to Consultant Clinical Scientist, which encourages lateral movement into different healthcare science specialties. This will result in more flexible and patient/employer focused Healthcare Scientists and supports the recognition of previous scientific experience, training and qualifications.

In developing the policy around *Modernising Scientific Careers*, it was recognised that the previous arrangements where each specialism individual adhoc training arrangements was neither fit for the current demands on the NHS nor was it becoming practically or financially sustainable.

The development of the new system was led by the Chief Scientific Officer Professor Sue

Table One: Careers and roles in Healthcare Science

Career Level	Role activities	Education and Training route
Assistant	Undertake clearly defined task and protocol based, high volume, low risk activities. Training through workplace based structured training and apprenticeships.	Apprenticeships, NVQs (or equivalent) underpinned by an awards and qualifications framework.
Associate	Undertake more advanced and complex high volume, low risk investigative tasks. Training through workplace training and Foundation Degree.	Foundation Degrees, Apprenticeships and NVQs (or equivalent) underpinned by an awards and qualifications framework.
Practitioner	Apply technology in the delivery and reporting of quality assured tests, investigations and interventions. Activities outlined in protocols but uses judgement and deals with ambiguity. Training through Practitioner Training Programme (PTP).	PTP (Practitioner Training Programme) – undergraduate degree with clinical placement.
Clinical Scientist	Complex scientific and clinical roles. High risk, low volume activities which require highly skilled staff able to exercise clinical judgement about complex facts and clinical situations. Training through Scientist Training Programme (STP).	STP (Scientist Training Programme) – postgraduate degree (Masters-level) with clinical placement.
Consultant Clinical Scientist	In-depth, highly complex role. Similar to medical consultant role as requires clinical judgement, scientific expertise, leadership and dealing with uncertainty in direct patient care. Training through Higher Specialist Training (HSST) programme.	HSST (Higher Specialist Scientific Training) at doctorate level.

Hill, with her team working across the four countries of the UK and with key stakeholders. It was devised through an iterative process of consultation, engagement and deliberative interactive events reaching more than 6000 people.

The major themes running throughout all of the training programmes within *Modernising Scientific Careers* are based on the values and behaviours reflected in the NHS Constitution and include patient safety, patient-focused care, innovation in science, technology and delivering services differently in order to reflect the changing demographics and requirements of patients. Crucially, the involvement of patients throughout the developmental and implementation process has ensured that *Modernising Scientific Careers* delivers changes designed to improve patient outcomes.

How the workforce is currently regulated

There are about 20,000 individuals working at Practitioner level - representing just under half of the entire Healthcare Science workforce. While many of these will be Biomedical Scientists – who are regulated by law under ‘protection of title’*, many thousands of Healthcare Science Practitioners currently sit outside the statutory system.

In February 2011, the Government set out its approach to the future regulation of the health and care workforce with the publication of the Command Paper *Enabling Excellence*[#]. This stated that the Government’s policy would be that no further groups should be brought into statutory regulation at that time, but instead proposed a system of Accredited Voluntary Registers.

The Academy for Healthcare Science continues to believe that patients and the service would be best served if everyone working in healthcare science were regulated by law. As a step towards our ambition of statutory regulation across the entire Healthcare Science workforce, the Academy is establishing a Register for Healthcare Science Practitioners for those who meet our standards and are not covered by statutory regulation.

The changes brought through *Modernising Scientific Careers* have been a step change for the education and training of everybody working in Healthcare Science. For the first time there is a single coherent training and education framework across the whole of the healthcare science workforce, across the four countries of the UK.

The Academy plays a key part in the delivery of *Modernising Scientific Careers* and we believe that providing a single coherent solution to ensuring a comprehensive regulatory framework for the profession across the health systems of England, Scotland, Wales and Northern Ireland is a significant step further forward for the Healthcare Science profession and the individuals who work within it.

We intend to ensure that this register is accredited by the Professional Standards Authority for Health and Care, the organisation that both oversees statutory registers (such as the Health and Care Professions Council) and accredits voluntary registers. This will demonstrate that our register is well run and requires our registrants meet high standards of

* ‘Protection of title’ is an approach to regulating professions. It means that a person can only use a title professionally (such as architect, physiotherapist, dentist) if they are registered and regulated by an appropriate organisation.

[#] A Command Paper is a formal statement of Government policy. *Enabling Excellence* can be found at www.gov.uk/government/publications/enabling-excellence-autonomy-and-accountability-for-health-and-social-care-staff

About the proposed standards

As with all organisations involved in regulating professions, the Academy's register must define the standards required of someone who wants to register with us, and the standards they must meet to continue their registration. Our proposed standards are set out in this document for consultation. They include:

- **standards of proficiency:** these set out the basic education and training that someone must have to register with us
- **standards of conduct:** the minimum standards that practitioners must meet in their day to day professional lives
- **standards of continuing professional development:** how practitioners ensure their professional knowledge is up to date

In addition to these standards, when someone first registers with us or renews their registration, they must also demonstrate that they are of good character and in good health. We will ask applicants and registrants to make a self-declaration that they meet these requirements.

We are extremely grateful for the involvement of professional bodies, voluntary registration bodies and service user representatives in the development of these standards, both through attending the workshops and by providing feedback on the draft standards as they have developed.

About the proposed standards

These standards were developed by individuals from within the Healthcare Science Practitioner community and service user representatives. This process began with two workshops which debated the key risks posed to service users and the wider public by Healthcare Science Practitioners and the minimum (threshold) standards required to mitigate these risks.

Following the workshops, the standards were further developed to ensure they:

- covered key learning outcomes and the body of knowledge necessary for safe and effective practice by a newly registered practitioner;
- complemented the standards required of Biomedical Scientists by the Health and Care Professions Council; and
- took account of the standards, values and behaviours required of clinical staff by the NHS Constitution.

You will notice that the proposed standards are very similar to those used by the Health and Care Professions Council. We have deliberately aligned our standards to ensure consistency of regulation across the Healthcare Science workforce, whether that regulation is by law or through the Academy. This will ensure a future move to statutory regulation is simple to deliver and will require our registrants to make few changes in practice.

Over recent months there has been an increasing focus on the importance of professionalism to the NHS. We felt it was important to take account these wider issues and the changes in the regulation of health and social care professionals.

We have taken account of the findings of the reports following the events at Mid-Staffordshire Hospitals Trust, the Keogh and Berwick reviews and recent work by the Law Commission. Standards 1 and 8 of the proposed standards of proficiency are intended to address these issues.

We would be particularly interested to hear your views on how well you think that our proposed standards address issues around professionalism, patient experience, safety and quality.

Responding to the consultation

You can respond to this consultation at any time between and **1 December 2013 and 28 February 2014**.

To respond to this consultation, please complete our online questionnaire at:

www.ahcs.ac.uk/Pstandards

The consultation website has been structured to help to get your views on particular aspects of the standards and the development process. It also provides the opportunity for you to give us broader views and opinions that you have on these proposals.

Please note that we do not normally accept responses by telephone or in person. We normally ask that consultation responses are made in via our online survey. However, if you are unable to respond in online, please contact us on 0845 450 2858 to discuss any reasonable adjustments that would help you to respond.

Following the consultation – implementing the register

Once the consultation period has ended, we will analyse the responses we have received and amend the standards accordingly. We will produce a document summarising the consultation responses we received and explaining the decisions we have taken as a result. This will be published on the Academy's website.

The redrafted standards will be considered by our Council and Board at their next available meetings. Once the standards have been formally approved through the Academy processes, the register will open.

Once the register is open, we will apply to the Professional Standards Authority for accreditation to demonstrate our commitment to rigorous governance and quality assurance of the Register. We view this as the best way to improve patient and public protection in the absence of statutory regulation. The accreditation process has been developed so that the public, employers, commissioners, purchasers and planners can select healthcare workers who are on an independently assessed and quality assured register.

We will regularly review our standards and consult on any changes we propose to make. We will work with professional bodies, voluntary registration bodies, individual professionals and service users to ensure that our standards continue to be fit for purpose.

Proposed standards of proficiency

Standards of proficiency set out the minimum standards that someone must meet in order to register with us for the first time. They are the standards that someone must demonstrate through their education and training. These standards are used to approve education programmes, 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 practitioner (that is, we undertake an equivalence assessment, which when successfully completed results in an award of a Certificate of Equivalence from the Academy).

Our proposed Standards of Proficiency cover three areas:

1. Professional autonomy and accountability
2. Skills required for practise as a Healthcare Science Practitioner
3. Knowledge of Healthcare Science

These standards are not the same as someone's scope of practice. 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 with a particular group, or a movement into roles in management, education or research. As registrants' scope of practice change, 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 the areas where they are not proficient to do so.

Proposed standards of proficiency: Professional autonomy and accountability

To be registered with us, you must demonstrate that you:

Standard 1 Understand your role in healthcare science and its contribution to the delivery of high quality healthcare

- 1.1 Understand that your first concern is always the service user and the public.
- 1.2 Understand the need to respect and uphold the rights, dignity, confidentiality and autonomy of service users including in your role in the testing, investigation, diagnosis, treatment and therapy process and in maintaining health and wellbeing.
- 1.3 Are able to maintain the highest standards of care and service, treating every individual with compassion, dignity and respect.
- 1.4 Understand the need to take responsibility not only for the care that you personally provide (whether or not your role involves direct service user/patient contact), but also for your wider contribution to the aims of your team and the healthcare system as a whole.
- 1.5 Understand the current structure and function of health and social care services in the UK.
- 1.6 Are able to actively contribute to sustainably improving services by working in partnership with service users, colleagues, local communities and the public.

Standard 2 Are able to practise safely and effectively within your scope of practice

- 2.1 Understand the need to work within the limits of your personal competence
- 2.2 Understand the need to work within your agreed scope of practice for lawful, safe and effective healthcare science
- 2.3 Know the limits of your practice and when to seek advice or refer to another professional

Proposed standards of proficiency: Professional autonomy and accountability

Standard 3 Are able to practise within the legal and ethical boundaries of your profession as a Healthcare Science Practitioner

- 3.1 Are able to exercise a professional duty of care.
- 3.2 Understand the standards of proficiency, conduct and continuing professional development expected of you by the Academy for Healthcare Science.
- 3.3 Know about, and be able to meet, the current legislation and policies applicable to your work.
- 3.4 Understand the need, where appropriate, to hold indemnity insurance.

Standard 4 Are able to maintain fitness to practise

- 4.1 Understand the importance of maintaining your own health.
- 4.2 Understand the need to maintain high standards of personal, professional and business conduct.
- 4.3 Understand the need to maintain, develop and update your knowledge and skills once registered.

Standard 5 Are able to practise as an autonomous professional, exercising your own professional judgement

- 5.1 Are able to draw on appropriate skills and knowledge in order to make professional judgements.
- 5.2 Are able to assess a situation, determine the nature and severity of the problem and call upon the required knowledge and experience to deal with the problem.
- 5.3 Know the limits of your practice and when to seek advice or refer to another professional.
- 5.4 Recognise that you are personally responsible for and must be able to justify your decisions.

Proposed standards of proficiency:

Professional autonomy and accountability

Standard 6 Are aware of the impact of culture, equality and diversity on practice

- 6.1 Understand the requirement to adapt practice to meet the diverse needs of service users.
- 6.2 Understand the need to take account of a service user's individual physical, psychological, religious and cultural needs when delivering healthcare.
- 6.3 Understand the need to respect and uphold the rights, dignity, values, and autonomy of service users (including their role in the diagnostic and therapeutic process and in maintaining health and wellbeing).
- 6.4 Understand the need to address issues of inequality of service provision for all communities.

Standard 7 Are able to practise in a non-discriminatory manner

Standard 8 Understand the need for openness and transparency in the management and delivery of healthcare

- 8.1 Understand the need to protect service users from risk or harm presented by another person's conduct, performance or health and to act appropriately when concerns are identified or raised.
- 8.2 Understand the duty of candour you owe to service users/patients and the public, and know how to act accordingly.
- 8.3 Understand how to share information as appropriate with service users/patients, carers, colleagues and other services to support the quality of care in line with published guidance and legal requirements, taking account of data protection and confidentiality.
- 8.4 Understand that your conduct should at all times justify the trust of service users/patients, carers, colleagues and the public in the scientific profession.

Proposed standards of proficiency: Professional autonomy and accountability

Standard 9 Understand the importance of, and be able to maintain, confidentiality

- 9.1 Understand the need, when appropriate, to obtain informed consent.
- 9.2 Understand the need to maintain the confidentiality of patients'/service users' information and records in line with published guidance, legal requirements and the wishes of the service user.
- 9.3 Understand that the requirements of confidentiality and informed consent extends to (for example) test results, recordings, digital images and illustrations.

Standard 10 Are able to maintain records appropriately

- 10.1 Understand the need to maintain a complete record including all relevant information related to tests, investigations and treatment
- 10.2 Are able to keep accurate, comprehensive and comprehensible records in accordance with applicable legislation, protocols and guidelines
- 10.3 Are able to provide clear reports using appropriate methods of analysing, summarising and displaying information, in ways that are accessible and understandable by non-scientific professionals

Standard 11 Are able to communicate effectively

- 11.1 Understand how communication skills affect the provision of healthcare science and how the means of communication should be modified to address and take account of sensory and cognitive impairments.

Proposed standards of proficiency: Professional autonomy and accountability

- 11.2 Are able to demonstrate effective and appropriate skills in communicating information, advice, instruction and professional opinion to colleagues, service users, their relatives and carers:
- are able to communicate in English to the standard equivalent to level 7 of the International English Language Testing System, with no element below level 6;
 - understand how communication skills affect the assessment of service users and how the means of communication should be modified to address and take account of factors such as age, physical ability and learning ability;
 - are aware of the characteristics and consequences of non-verbal communication and how this can be affected by (for example) culture, age, ethnicity, gender, religious beliefs and socio-economic status;
 - understand the need to provide service users (or people acting on their behalf) with the information necessary to enable them to make informed decisions;
 - understand the need to use an appropriate interpreter to assist service users whose first language is not English, wherever possible;
 - recognise that relationships with service users should be based on mutual respect and trust, and be able to maintain high standards of care even in situations of personal incompatibility; and
 - are able to inform colleagues and relevant members of the clinical team of outcomes of clinical and scientific procedures to unambiguous standards.

Standard 12 Are able to work appropriately with others

- 12.1 Understand the need to work with other professionals, support staff, service users, careers and relatives in the ways that best serve the interests of individual service users and the public.
- 12.2 Understand the need to work effectively as a member of a multi-disciplinary team.
- 12.3 Understand the need to consult and take advice from colleagues where appropriate.
- 12.4 Understand the need to respect the skills and contributions of your colleagues.
- 12.5 Understand the need to share information with colleagues to protect the health, safety and wellbeing of service users and the public.
- 12.6 Understand the need to maintain responsibility when delegating to others and provide support when necessary.

To be registered with us, you must demonstrate that you:

Proposed standards of proficiency: Skills required for practice as a Healthcare Science Practitioner

Standard 13 Are able to draw on appropriate healthcare science knowledge and skills required for safe and effective practice

- 13.1 Are able to identify and assess the healthcare science needs of service users.
- 13.2 Are able to gather appropriate information within the context of healthcare science and its application in healthcare.
- 13.3 Are able to select and use appropriate standardised and non-standardised assessment techniques, including (where appropriate):
- are able to undertake and record a thorough, sensitive and detailed assessment, using appropriate techniques and equipment;
 - are able to demonstrate practical skills in the essentials of measurement, data generation and analysis;
 - are able to use equipment, methods and other technology in routine clinical investigations in accordance with standard operating procedures;
 - are able to validate routine scientific and technical data and demonstrate compliance with pre-defined quality standards; and
 - are aware of the need to assess and evaluate new equipment, methods and procedures prior to routine use.
- 13.4 Are able to undertake or arrange investigations or assessments as appropriate, using protocols to select standard Healthcare Science procedures.
- 13.5 Are able to conduct appropriate healthcare science procedures, including:
- understand the need to maintain the safety of both service users and those involved in their care;
 - are able to use equipment, methods and other technology in routine clinical investigations in accordance with standard operating procedures, national and international guidelines;
 - are able to perform and supervise standard healthcare science procedures, including working directly with patients (where appropriate), to reproducible and measurable quality standards; and
 - are able to validate standard scientific and technical data and observations from service users according to predetermined quality standards.
- 13.6 Are able to analyse and critically evaluate the information collected, including:
- are able to contribute to the investigation and monitoring of disease processes and normal states;

Proposed standards of proficiency:

Skills required for practice as a Healthcare Science Practitioner

- are able to evaluate the performance of equipment and take corrective action where appropriate;
 - are able to use standard operating procedures to analyse data;
 - are able to participate in the audit of scientific and technical data;
 - are able to evaluate risks and their implications;
 - are able to produce a technical report on data collected and analysis undertaken; and
 - are able to undertake or arrange investigations as appropriate and in accordance with standard protocols.
- 13.7 Are able to report on information collected, analysis undertaken and findings/results identified.
- 13.8 Are able to formulate and deliver specific and appropriate plans and strategies for meeting the healthcare science needs of service users, including setting of timescales.
- 13.9 Are able to use research, reasoning and problem-solving skills to determine appropriate actions, including:
- are able to recognise the value of research to the critical evaluation of practice;
 - are able to engage in evidence-based practice, evaluate practice systematically, and participate in audit procedures;
 - are aware of a range of research methodologies;
 - are able to demonstrate a logical and systematic approach to problem solving;
 - are able to evaluate research and other evidence to inform your practice;
 - are able to participate in collaborative research;
 - are able to perform a basic search of the scientific literature and other sources of information;
 - are able to perform scheduled experimental work and be able to produce and present results; and
 - are able to present data in an appropriate form.
- 13.11 Are able to monitor and review the ongoing effectiveness of planned activity and modify it accordingly, including:
- are able to gather information, including qualitative and quantitative data, that

Skills required for practice as a Healthcare Science Practitioner

helps to evaluate the responses of service users to their care;

- are able to evaluate intervention plans using recognised outcome measures and revise the plans as necessary in conjunction with service users;
- recognise the need to monitor and evaluate the quality of practice and the value of contributing to the generation of data for quality assurance and improvement programmes;
- are able to make reasoned decisions to initiate, continue, modify or cease investigation, treatment or the use of techniques or procedures, and record the decisions and reasoning appropriately;
- are able to select and apply quality control and quality assurance techniques in accordance with standard operating procedures, national and international guidelines; and
- are able to identify and respond appropriately to abnormal outcomes.

Standard 14 Are able to reflect on, evaluate and review practice

14.1 Are able to critically reflect on their performance or situations and understand the need to record the actions they will put in place and the outcome of such reflection.

14.2 Understand the need to keep their professional, scientific, technical knowledge and skills up to date.

Standard 15 Are able to assure the quality of your practice

Proposed standards of proficiency: Skills required for practice as a Healthcare Science Practitioner

- 15.1 Understand your role in the assuring the quality of healthcare delivered to patients/ service users.
- 15.2 Are able to engage in evidence based practice.
- 15.3 Understand the need to plan, take part in and act on the outcome of regular and systematic audit.
- 15.4 Understand the need to respond constructively to the outcome of audit, appraisals and performance reviews, undertaking further training where necessary.

Standard 16 Understand the need to establish and maintain a safe environment in which healthcare is delivered

- 16.1 Understand the need to take reasonable care of health and safety at work for yourself, other members of your team and others, and to co-operate with employers to ensure compliance with health and safety requirements.
- 16.2 Are able to identify and manage sources of risk in the workplace, including manual handling, specimens, raw materials, needlestick injuries, clinical and special waste, equipment, radiation and electricity.
- 16.3 Understand the need to apply correct methods of disinfection, sterilisation and decontamination and deal with waste and spillages correctly.

Proposed standards of proficiency:

Knowledge of Healthcare Science

To be registered with us, you must demonstrate that you:

Standard 17 Understand the key concepts of the knowledge base relevant to Healthcare Science

- 17.1 Understand the structure and function of the human body, together with knowledge of health, disease, disorder and dysfunction relevant to Healthcare Science.
- 17.2 Understand the scientific principles upon which the practice of Healthcare Science is based.
- 17.3 Understand the underpinning knowledge of anatomy, physiology, pharmacology, pathology, biochemistry, immunology, epidemiology, public health medicine, genetics, microbiology and the psychosocial dimensions of health to provide the foundations for study in any of the four divisions of healthcare science namely Physical Sciences and Biomedical Engineering, Life and Pathology Sciences, Physiological Sciences and Bioinformatics.
- 17.4 Are aware of the principles and applications of scientific enquiry, including the evaluation of treatment efficacy and the research process.
- 17.5 Recognise the role of other professions in health and social care.
- 17.6 Understand the theoretical basis of, and the variety of approaches to, assessment and intervention.
- 17.7 Know the basic science underpinning the discipline in which the registrant practises and be able to put it into the clinical context.
- 17.8 Know the main clinical applications of the technology used in the discipline and the importance of decisions arising from the results of standard healthcare science procedures.
- 17.9 Understand the principles and practice of instruments, equipment and methodology used in the discipline.

Knowledge of Healthcare Science

17.10 Know the standards of practice and performance expected from the correct use of relevant equipment, methods and other technology and know how to seek advice when confronted with non-standard data.

17.11 Healthcare Science Practitioners in medical physics and clinical engineering must:

- know the physics and engineering principles and clinical application of clinical, scientific or technical procedures relevant to the specialism;
- know and understand the performance of a range of clinical, scientific or technical procedures relevant to the specialism including measurement principles, indications, contra-indications, limitations;
- understand the quality assurance processes for a range of clinical, scientific or technical procedures relevant to the specialism and to maintaining patient safety including calibration, action levels and infection control;
- understand the equipment lifecycle including specification, procurement commissioning, preventative maintenance, fault-finding and repair, calibration, safety testing and decommissioning for equipment relevant to the specialism; and
- understand the analysis and reporting of data from a range of clinical, scientific or technical procedures relevant to the specialism and the use and limitations of reference ranges, action levels and normal values.

17.12 Healthcare Science Practitioners in physiological science must:

- know the pathophysiology of common conditions affecting patients referred for investigation;
- know the underpinning the performance of a range of physiological (and where appropriate psychophysical) measurement investigations relevant to the specialism including measurement principles, indications, contra-indications, limitations;
- know the quality assurance processes to assure the quality of a range of physiological measurement investigations relevant to the specialism and patient safety including calibration, infection control;
- know the range of physiological measurement investigations undertaken in a paediatric setting including consent, child protection, embryology, child development investigative techniques and treatment options appropriate to the specialism;
- know the therapeutic options including medication, non-pharmacological treatments, rehabilitation, stress management appropriate to the specialism; and
- know frameworks for analysis and reporting of data from a range of physiological measurement investigations relevant to the specialism and the use and limitations of reference ranges/normal values.

Standards of conduct required of Healthcare Science Practitioners

Standards of conduct set the minimum requirements for Healthcare Science Practitioners in their everyday professional lives. They set out how we expect practitioners to act, practice their profession, conduct themselves ethically and, where relevant, conduct their businesses.

During 2012, we worked with professional bodies, voluntary registration bodies, individual professionals, service users and the *Modernising Scientific Careers* team at the Department of Health to develop **Good Scientific Practice**. This sets out for the profession and the public the standards of behaviour and practice that must be achieved and maintained in the delivery of work activities, the provision of care and personal conduct. It covers all parts of the profession, at all times of their professional careers. Some parts of **Good Scientific Practice** are relevant only to healthcare scientists and other parts to assistants or associates. Some parts are relevant to individuals on their first day of practice, for their first day as a manager of a service or as someone involved in the education and training of future healthcare science professionals.

Taken as a whole, **Good Scientific Practice** sets out the standards of conduct expected of the healthcare science workforce and of healthcare science practitioners specifically. We therefore propose that **Good Scientific Practice** be the Standards of Conduct and Ethics required of registrant Healthcare Science Practitioners.

Both when applying for registration and when renewing their registration, Healthcare Science Practitioners will need to demonstrate that they can and are meeting the standards of conduct set out in **Good Scientific Practice**.

We extensively consulted upon **Good Scientific Practice** before it was formally adopted by the Academy. As such, we are not proposing to consult upon these standards again at this stage.

Good Scientific Practice is available on our website at:

www.ahcs.ac.uk/GSP

Proposed standards of continuing professional development

In developing these standards, the Academy is cognisant that the Healthcare Science Practitioner profession covers a number of different disciplines, with various professional bodies and existing voluntary registration organisations, many of which have their own standards for continuing professional development. As such, a structured scheme (with minimum hours to be achieved or points to be gained) would create an unreasonable burden on registrants and might result in some registrants having to meet two different schemes (their professional body's scheme and ours).

We therefore propose a flexible scheme that enables individual professionals to decide how best to maintain and develop their knowledge and skills. These standards draw on those required of Health and Care Professions Council registrants, and will be familiar to, and consistent with, the requirements place on Biomedical Scientists (the statutorily regulated part of the Healthcare Science Practitioner workforce).

We welcome your views on our overall approach to developing these standards, and whether the standards are reasonable, appropriate and capable of ensuring that registrants maintain and develop their knowledge and skills and thereby demonstrate their continued fitness to practise.

Proposed standards of continuing professional development

The proposed standards

As a Registered Healthcare Science Practitioner, you must ensure that you continue to maintain and develop your knowledge and skills to be able to demonstrate your continued fitness to practice. Our proposed standards are that registrants must:

- Maintain a continuous, up-to-date and accurate record of your CPD activities.
- Undertake CPD activities that are a mixture of learning activities relevant to your current or future practice.
- Ensure that their CPD has contributed to the quality of your professional practice.
- Ensure that their CPD benefits the service user.
- When requested by Academy's Registrar, present a CPD portfolio (a written record, with evidence, of your CPD activities and their impact on your professional practice) explaining how they have met the standards for CPD.

As a registrant, you may decide that you could meet our standards by taking part in a scheme run by your professional body or your employer. You might add to this with other activities, or you could structure your own CPD activities around your personal development plan. Our proposed standards will give you the flexibility to plan your own CPD in a way that suits your work, your learning needs, your preferences, and the time and resources available to you. CPD will be a requirement of your ongoing registration with the Academy for Healthcare Science. When you renew your registration, you will need to sign to confirm that you have met our standards for CPD. Each year, we will audit a random sample of registered healthcare science practitioners to make sure our standards are being met. If you are audited, we will write to you and ask you to send us information showing how you have met our CPD standards over the previous two years (or the period for which you have been registered with us).

Proposed standards of continuing professional development

The proposed standards are intended to be flexible, enabling you as a professional to decide how best to maintain your knowledge and skills. But it is important to stress that CPD is an essential requirement of your continuing registration with the Academy as it is one means by which you demonstrate your continuing fitness to practice. The table below provides some examples of how you might demonstrate that you meet our standards of continuing professional development.

<i>Proposed standard</i>	<i>Meeting this standard</i>
Maintain a continuous, up-to-date and accurate record of your CPD activities	You must keep a record of your CPD activities, in whatever form is best for you.
Undertake CPD activities that are a mixture of learning activities relevant to current or future practice.	You must make sure your CPD is a mixture of different kinds of activities – not just one kind of learning – and that it is relevant to your work. It could be relevant to your current role or to a planned future role. You can make your own decisions about the kinds of CPD activities that are relevant to your role and your work. For example, CPD activities could include going on secondment, in-service training, mentoring, or reading or reviewing journal articles.
Ensure that their CPD has contributed to the quality of your professional practice.	You should aim for your CPD to improve the quality of your work. It may not actually improve your work, due to factors beyond your control, but when you choose your CPD activities you should intend for them to improve your work.
Ensure that their CPD benefits the service user.	You should aim for your CPD to improve the quality of your work. Sometimes this is not achievable, but it should be your objective for undertaking CPD.
When requested by Academy’s Registrar, present a CPD portfolio (a written record, with evidence, of your CPD activities and their impact on your professional practice) explaining how they have met the standards for CPD.	If you are chosen for audit, you need to send us a CPD profile to show how you have met our standards.