Improving quality, protecting patients

Standards of Proficiency for Healthcare Science Practitioners

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Foreword

I am pleased to present the Academy for Healthcare Science's Standards of Proficiency for Healthcare Science Practitioners, which first came into effect in July 2014. The standards underpin admission to the Academy's Register of Healthcare Science Practitioners and were developed through extensive discussion and consultation with professional bodies, existing voluntary registration bodies, the Modernising Scientific Careers team at the Department of Health, Health Education England and, most importantly, patient and public representatives. One of the Academy for Healthcare Science's key tasks is to uphold professional standards across Healthcare Science, providing assurance for the public and commissioners of services. Our continuing ambition is to see statutory regulation put in place across the entire Healthcare Science profession. However, we believe it is vital to establish an appropriate and effective system for the registration and regulation of Healthcare Science practitioners who are not currently regulated by law through the Health and Care Professions Council. These standards have been developed to be consistent with the requirements that Healthcare Science practitioners currently regulated by the Health and Care Professions Council have to meet. I am confident that these standards are fit for purpose and reflect safe and effective professional practice for Healthcare Science Practitioners.

Janet Monkman, CEO & Registrar

The standards

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) for the first time. The standards are used to approve education and training programmes and to assess whether a person'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 a Certificate of Equivalence being awarded by the Academy).

Our *Standards of Proficiency* cover three areas:

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

These standards are not the same as a person'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 a registrant's 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 is not a problem, as long as 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.

Standards of Proficiency

To be registered and continue your registration 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 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.

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 policy applicable to your work

3.4 Understand the need, where appropriate, to hold indemnity insurance.

Standard 4: Are able to maintain fitness to practice

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.

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

7.1 Ensure that you treat patients fairly and with respect
7.2 Ensure that you do not treat anyone differently from others because of your views about their age, disability, race, gender, marital status, pregnancy and maternity, religion or beliefs, sex and sexual orientation – these are characteristics that are protected by law*. Or their lifestyle, culture or their social or economic status
7.3 Adapt your practice to be responsive to the needs of individual patients and their carers
7.4 Challenge discriminatory behaviour
7.5 Contribute to delivering your service in ways that are inclusive of and accessible to all population groups.
7.6 Understand equality legislation and apply it to your practice

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.

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 service user's 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

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 gather information, including qualitative and quantitative data, that 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
- Are able to identify and respond appropriately to abnormal outcomes

Standard 12: Are able to work appropriately with others

12.1 Understand the need to work with other professionals, support staff, service users, carers 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.

Skills required for practice as a Healthcare Science Practitioner

To be registered and continue your registration with us, you must demonstrate that you:

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 validate routine scientific and technical data and demonstrate compliance with pre-defined quality standards
- Are aware of the need to assess and evaluate new equipment, methods and procedures prior to routine use
- Are able to undertake or arrange investigations or assessments as appropriate, using protocols to select standard healthcare science procedures

13.4 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 standard healthcare science procedures, including working directly with patients (where appropriate), to reproducible and measurable quality standards
- Are able to validate standard scientific and technical data and observations from service users according to pre-determined quality standards.

13.5 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
- 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 9
- Are able to undertake or arrange investigations as appropriate and in accordance with standard protocols.

13.6 Are able to report on information collected, analysis undertaken and findings / results identified

13.7 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

13.8 Are able to use research, reasoning and problemsolving 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 perform scheduled experimental work and to produce and present results
- Are able to present data in an appropriate form.

13.9 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 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
- 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-todate.

Standard 15: Are able to assure the quality of your practice

15.1 Understand your role in 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 audits

15.4 Understand the need to respond constructively to the outcome of audits, 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 cooperate 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.

Knowledge of Healthcare Science

To be registered and continue your registration 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 three divisions of Healthcare Science – namely Physical Sciences and Biomedical Engineering, Life and Pathology Sciences, and Physiological Sciences

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

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
- 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 and understand the underpinning 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
- 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.

17.13 Healthcare science practitioners in laboratory sciences must:

- Know the pathology of common conditions affecting patients referred for investigation relevant to the specialism and undertake or arrange investigations as appropriate
- Know and understand the underpinning performance of a range investigations relevant to the specialism including principles, indications, contra-indications, limitations

- Know the quality assurance processes to assure the quality of a range of life science investigations relevant to the specialism including equipment and infection control, and understand the need to establish and maintain a safe practice environment
- Know the range of life science investigations undertaken in routine and specialist cases and the development of relevant investigative techniques appropriate to the specialism
- Know frameworks for analysis and reporting of data from a range of life science investigations relevant to the specialism and the use and limitations of reference ranges/ normal values