

*Professional Standards of Behaviour and Practice  
for the Healthcare Science workforce*

**DRAFT**

# **Good Scientific Practice 2019**

Academy for Healthcare Science

**Consultation on proposed revised  
standards**

September 2019

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## Introduction

### Academy for Healthcare Science

The Academy for Healthcare Science (AHCS) is the single overarching body for the entire Healthcare Science workforce in the UK and works alongside the specialist professional bodies to speak with one clear voice for Healthcare Science. It brings together the UK's diverse and specialised scientific community who work across the health and care system including National Health Service (NHS) Trusts, NHS Blood and Transplant, Public Health England, independent healthcare organisations, and the academic sector across the UK. It was also set up explicitly to deliver the Certificate of Attainment and Certificate of Equivalence for the Scientist Training Programme (STP), as well as Registers and equivalence assessment process for those groups outside statutory regulation. In subsequent years, the Academy has evolved, and we now offer a route onto the Assistant and Associate Register, the Practitioner Training Register and onto the Higher Specialist Scientist Register (HSSR). There is an equivalence route onto the Practitioner, Scientist and Higher Specialist parts of the Register.

The Academy's main functions include:

- act as the overarching body for issues related to education, training and development in the UK health system and beyond including standards and quality management of education and training
- ensuring the profession has a high profile sufficient to influence and inform a range of stakeholders on healthcare science and scientific services in the health and social care systems across the UK
- facilitating engagement and support for wider strategic scientific initiatives
- providing a strong and coherent professional voice for the healthcare science workforce.

### 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, the healthcare science workforce is the 'backbone' of the NHS.

There are over 50,000 healthcare science practitioners which 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 areas such as genetic disorders, cardiovascular disease, respiratory disease and cancer.

There are five key groups in the Healthcare Science workforce in the UK<sup>1</sup>:

- **Healthcare Science Assistants and Associates** who support the work of Healthcare Science Practitioners and Clinical Scientists. They perform safe, quality assured, protocol driven, routine, technical and scientific procedures across Healthcare Science. The Healthcare Science Associate works more independently with less direct supervision than a Healthcare Science Assistant.

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<sup>1</sup> Further information can be found at: <https://www.ahcs.ac.uk/about/the-healthcare-science-industry/career-framework-for-healthcare-scientists/>

- **Healthcare Science Associates** also support the work of Healthcare Science Practitioners and Clinical Scientists. They work more independently with less direct supervision than a Healthcare Science Assistant.
- **Healthcare Science Practitioners** who use their expertise in applied technical and scientific techniques to deliver safe quality assured tests, investigations, medical devices management and procedures (in some cases, including specialist therapeutic interventions) on samples, patients and equipment. Senior Healthcare Science Practitioners develop roles in specialist practice, teaching and management.
- **Clinical Scientists** who have clinical and specialist expertise in a specific healthcare science specialism, underpinned by broader knowledge and experience within a healthcare science theme. Clinical Scientists undertake complex scientific and clinical roles, defining and choosing investigative and clinical options, and making key judgements about complex facts and clinical situations. Whilst many work directly with patients, others work in roles where their work impacts on patients or populations. They are involved often in lead roles, in innovation and service improvement, research and development and education and training. Some pursue explicit joint academic career pathways which combine clinical practice and academic activity in research, innovation and education.
- **Consultant Clinical Scientists** who may undertake further training (a five-year doctoral level Higher Specialist Scientist Training programme) or go through the equivalence process and progress to Consultant Clinical Scientists. These roles are integral to patient care and enabling more effective use of the Consultant medical resource. Consultant clinical scientists make a very important contribution to high quality, safe and effective patient care through technological advances, innovation and improved interaction and communication with clinical teams and patients (NHS Employers 2016)<sup>2</sup>.

These five groups work across the clinical specialities, see appendix 1.

*Please note that in the proposed draft standards below and in appendix 3, the Consultant Clinical Scientist group is referred to as Higher Specialist Scientist to match the relevant part of the AHCS Professional Standards Authority Accredited Register*

## Good Scientific Practice

Good Scientific Practice sets out the principles, values and the standards of behaviour and practise for the healthcare science workforce. These standards and values must be achieved and maintained in the delivery of work activities, the provision of care and personal conduct.

Good Scientific Practice was first published in 2012 and is reviewed on a regular basis. The following document sets out the revised standards which are being consulted on.

In revisiting the Good Scientific Practice standards the Academy has reviewed a number of key regulatory documents published since 2012 including those provided by the Health and Care Professions Council, the Nursing and Midwifery Council, the General Medical Council, the Registration Council for Clinical Physiologists (RCCP), and the Register of Clinical Technologists (RCT)

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<sup>2</sup> NHS Employers (2016) Consultant Clinical Scientist Guidance, available at <https://www.nhsemployers.org/your-workforce/recruit/employer-led-recruitment/consultant-clinical-scientist-guidance-project#2>, most recently accessed 05.08.19

(see appendix 2). In addition, feedback was sought from a selection of stakeholders including: patient representatives, the National Health Service, Health Education England Modernising Scientific Careers team, NHS Education for Scotland, the National School of Healthcare Science, RCCP, RCT and the Academy for Healthcare Science itself.

The outcomes of the review and the discussions with key stakeholders have been considered at the Academy's Education, Training and Professional Standards Committee. The Committee requested that some of the duplication in the standards in the 2012 publication be removed.

As a result of this review, 33 standards remain the same, 38 have some revised wording and there are 22 new standards, predominantly in relation to professional practice. *The five Domains under which the standards are grouped remain the same. The list of standards below indicates the changes made to the original standards published in 2012. If you would prefer to read a clean copy of the proposed revised standards please see appendix 3.*

*The Academy acknowledges that certain standards might not be applicable to all of the [groups](#) in the healthcare science workforce in the same way. The proposed standards below therefore includes a statement of the groups it is applicable to: this might be 'all groups' of the workforce and to a specific group(s). In making this assessment we considered the relevant education level<sup>3</sup>, curriculum, and job roles of each group.*

We welcome your views on whether these standards are reasonable, appropriate and necessary to ensure safe and effective practice by the Healthcare science workforce.

## How to respond to this consultation

You can respond to this consultation at any time between 30<sup>th</sup> September and 21<sup>st</sup> October 2019 by completing the Academy's online questionnaire at: <https://www.surveymonkey.co.uk/r/2NMF8N6>

Please note that we do not normally accept responses in writing, by telephone or in person. We normally ask that consultation responses are made via the survey. However, if you are unable to respond in writing, please contact [kirsty.clark@ahcs.ac.uk](mailto:kirsty.clark@ahcs.ac.uk) to discuss any reasonable adjustments that would help you to respond.

Once the consultation period is complete, we will analyse the responses received. We will then publish a document which summarises the comments and explains the decisions taken as a result. This will be published on the Academy's website. Organisations which use the Good Scientific Practice standards as part of a recognised process such as accreditation, or are expected to demonstrate that educational programmes map to the Standards will have a full - academic year from the date of publication to implement the new standards.

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<sup>3</sup> As set out by the Framework for Higher Education Qualifications published by the Quality Assurance Agency for Higher Education (2014).

## Consultation questions

We welcome your response to our consultation and have listed the questions to help you. The questions are not designed to be exhaustive and we welcome your comments on any related issue.

1. Do you think the standards are at the threshold level required for safe and effective practice?
2. Are there any standards which should be amended or removed?
3. Are any additional standards required?
4. Are the standards listed under the correct Domains?
5. Is it helpful to identify which group in the healthcare science workforce each standard applies to?
6. Are there any standards where the 'group' identified needs to be changed?
7. Do you have any comments about the language used in the standards?
8. Do you have any other comments on the standards?

## The purpose of Good Scientific Practice

The purpose of this document is to set out the **Professional Standards** on which good practice is founded. Good Scientific Practice sets out the standards of behaviour and practice that must be achieved and maintained by the Healthcare Science workforce in the delivery of work activities, the provision of care and personal conduct.

Good Scientific Practice uses as a benchmark the Health and Care Professions Council (HCPC) ‘*Standards of Proficiency*’ and ‘*Standards of Conduct, Performance and Ethics*’, but expresses these within the context of the Healthcare Science.

Good Scientific Practice represents standards and values that apply throughout an individual’s career in healthcare science. *Therefore this means that the Good Scientific Practice Standards need to be interpreted within the context of the individual’s role and relevant standards of proficiency.* For example, within epidemiology the individual is required to concern themselves with populations, rather than individual patients.

All learners in the healthcare science workforce will be working towards meeting the Standards set out in this document. Individuals who are already qualified, but who undertake further training and development, will be expected to practice according to the Standards of Good Scientific Practice and within their scope of practice<sup>4</sup>.

Good Scientific Practice benefits:

- **Patients, service users<sup>5</sup>, their families and carers, and the public** by providing information about the standards of professional behaviour they can expect and giving a feedback mechanism about the care they receive;
- **The healthcare science workforce** by demonstrating safe, high-quality effective practice and their professionalism in their place of work;
- **Employer organisations** to support their staff in upholding these professional standards;
- **Educators of the healthcare science workforce** understand what it means to be a registered professional and how Good Scientific Practice helps to achieve that;
- **The National School of Healthcare Science** who ensure that Good Scientific Practice is embedded into all education and training curriculum and assessment, and the accreditation of academic and work-based providers.

To protect the public, the Academy uses Good Scientific Practice in cases of fitness to practise, where the actions of a registrant on one of our Professional Standards Authority approved registers

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<sup>4</sup> 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

<sup>5</sup> The term service user describes other users of healthcare science services for example colleagues. Public Health Organisations, Social Care Organisations

has been questioned. In addition, the Standards are used as the basis of curriculum development at all levels and underpin the Academy's equivalence assessment process<sup>6</sup>.

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<sup>6</sup> Further information about the Academy's equivalence assessment processes can be found at:  
<https://www.ahcs.ac.uk/equivalence/>

## The proposed revised Good Scientific Practice Standards

The professional standards outlined in Good Scientific Practice are set out under five domains:

### Domain 1: Professional Practice

- 1.1 Professional Practice
- 1.2 Probity
- 1.3 Working with Others
- 1.4 Training and Developing Others

### Domain 2: Scientific Practice

- 2.1 Scientific Practice
- 2.2 Technical Practice
- 2.3 Quality

### Domain 3: Clinical Practice

- 3.1 Clinical Practice
- 3.2 Investigation and Reporting

### Domain 4: Research, Development and Innovation

- 4.1 Research, Development and Innovation

### Domain 5: Clinical Leadership

- 5.1 Leadership

*As noted earlier, the Academy acknowledges that certain standards might not be applicable to all of the [groups](#) in the healthcare science workforce in the same way, therefore in the following standards we have identified where a standard is applicable to 'all groups' of the workforce or a specific group(s). In making this assessment we considered the relevant education level<sup>7</sup>, curriculum, and job roles.*

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<sup>7</sup> As set out by the Framework for Higher Education Qualifications published by the Quality Assurance Agency for Higher Education (2014).

## Domain 1: Professional Practice

All patients and service users are entitled to good standards of professional practice and probity from the Healthcare Science workforce. In maintaining your fitness to practise as a part of the Healthcare Science workforce you must:

1.1	Professional Practice	Difference from 2012	Relevant to:
1.1.1	Make the patient your first concern, <a href="#">whose safety and well-being always comes before any professional or other loyalties</a>	Revised wording	All
1.1.2	Exercise your professional duty of care <a href="#">and be open and candid with patients and service users about all aspects of care and treatment, including when any mistakes or harm have taken place in-line with your 'duty of candour'</a>	Revised wording	All
1.1.3	<a href="#">Always</a> work within the agreed scope of practice <a href="#">and personal competence</a> for lawful, safe and effective healthcare science	Revised wording	All
1.1.4	Keep your professional, scientific, clinical and technical knowledge and skills up to date, <a href="#">maintaining a record of evidence of your Continuing Professional Development as required by the relevant register. Ensure that the services you provide are in line with the current best practice.</a>	Revised wording	All
1.1.5	Respond constructively to the outcome of audit, appraisals and performance reviews, undertaking further training where necessary.	No change	All
1.1.6	Engage fully in evidence based practice	No change	All
1.1.7	Draw on appropriate skills and knowledge in order to carry out duties as required.	No change	All
1.1.8	Act without delay on concerns raised by patients, <a href="#">their families and</a> carers, <a href="#">or the public</a> , if you have good reason to believe that you or a colleague may be putting <a href="#">others or yourself</a> at risk	Revised wording	All

1.1.9	Never discriminate unfairly against patients, carers or colleagues, <a href="#">or allow your personal views to affect your professional relationship or the care, treatment or other services that you provide</a>	Revised wording	All
1.1.10	Treat each patient as an individual, <a href="#">respecting</a> their dignity, privacy and confidentiality. <a href="#">Respect that this right to privacy and confidentiality continues after they have died</a>	Revised wording	All
1.1.11	Uphold the rights, values and autonomy of every service user, valuing their role in the diagnostic and therapeutic process and in maintaining health and well-being	Split from original 1.1.10 as it covered two areas	All
1.1.12	Work collaboratively, as appropriate, with patients and carers towards shared goals, actively listening to them and taking account of their needs and wishes	New standard	All
1.1.13	Make good use of the resources available to you	New standard	All
1.1.14	Recognise that you are personally responsible for and must be able to justify your decisions	New standard	All
1.1.15	Ensure you have the necessary knowledge of, and skills in the English language to provide a good standard of practice and care in the UK.	New standard	All
1.1.16	Provide patients with the information they want or need to know in a way they can understand which is also sensitive and responsive to the situation. You should make sure that arrangements are made, wherever possible, to meet patients' language and communication needs.	New standard	All
1.1.17	Use all forms of spoken, written and digital communication (including social media and networking sites) responsibly, respecting the right to privacy of others at all times.	New standard	All
1.1.18	Ensure you or any staff you supervise only disclose confidential information if either: you have permission to do so from your employer; the law allows it; it is in the patient's best interest; or it is in the public interest, such as if it is necessary to protect public safety	New standard	All
1.1.19	Respond promptly, fully and honestly to complaints, and ensure that a patient's complaint will not adversely affect the care or treatment you provide or arrange.	New standard	All
1.1.20	Keep to the laws of the country in which you are practising	New standard	All
1.1.21	Maintain the level of health you need to carry out your professional role. If your physical or mental health might affect your performance or judgement or put others at risk, make	New standard	All

changes to how you practise, inform others including your employer, or stop practising altogether

1.1.22	Co-operate with any investigation into your conduct or competence; the conduct or competence of others; or the care, treatment or other services provided to patients	New standard	All
1.1.23	Not deny treatment to patients because their medical condition may put you at risk. If a patient poses a risk to your health or safety, you should take all available steps to minimise the risk before providing treatment or making other suitable alternative arrangements for providing treatment.	New standard	All
<i>1.2</i>	<i>Probity</i>	<i>Difference from 2012</i>	<i>Relevant to:</i>
1.2.1	Make sure that your conduct at all times justifies the trust of patients, carers and colleagues <a href="#">including trainees</a> and maintains the public's trust in the <a href="#">healthcare science</a> profession	Revised wording	All
1.2.2	Inform the appropriate regulatory body and any employer without delay if, at any time and <a href="#">anywhere in the world</a> , you have accepted a caution, been charged with or found guilty of a criminal offence, or if any finding has been made against you as a result of fitness to practise procedures, <a href="#">or if you are suspended from any regulated post</a> , or if you have any restrictions placed on your scientific, clinical or technical practice	Revised wording	All
1.2.3	Be open, honest and act with integrity at all times, including but not limited to: writing reports, signing documents, providing information about your qualifications, experience, and position in the scientific community, and providing written and verbal information to any formal enquiry or litigation, including that relating to the limits of your scientific knowledge and experience	No change	All
1.2.4	Take all reasonable steps to verify information in your reports and documents, including research, <a href="#">ensuring that no information is left out deliberately</a>	Revised wording	All
1.2.5	Work within the Standards of Conduct, Performance and Ethics set by your <a href="#">regulator</a>	Revised wording	All
1.2.6	If for any reason you have concerns about patient safety, report the issue adhering strictly to your workplace policy	New standard	All
1.2.7	Ensure that any advertisements or publications you produce for your professional service (or for any other professional activities in which you participate, including expert opinion) are	New standard	All

accurate, ethical, do not mislead, do not misrepresent your skills, experience and qualifications, and do not exploit vulnerabilities

1.2.8	Declare issues that might create conflicts of interest and make sure they do not influence your judgement.	New standard	All
<b>1.3</b>	<b><i>Working with Others</i></b>	<b><i>Difference from 2012</i></b>	<b><i>Relevant to:</i></b>
1.3.1	Work with <a href="#">others, internal and external to your organisation</a> , in ways that best serve patients' interests	Revised wording	All
1.3.2	Work effectively as a member of a multi-disciplinary team	No change	All
1.3.3	Consult and take advice from colleagues where appropriate	No change	All
1.3.4	Be readily accessible when you are on duty	No change	All
1.3.5	Respect the skills and contributions of your colleagues	No change	All
1.3.6	Participate in regular reviews of team performance	No change	All
1.3.7	Be aware of how your behaviour might influence others within and outside the team.	New standard	All
<b>1.4</b>	<b><i>Training and Developing Others</i></b>	<b><i>Difference from 2012</i></b>	<b><i>Relevant to:</i></b>
1.4.1	<a href="#">Provide work-based development for colleagues to enhance/improve their skills, knowledge and professional behaviour</a>	Revised wording	All
1.4.2	Support colleagues who have difficulties with performance, conduct or health	No change	All
1.4.3	Contribute to the education and training of colleagues and develop the skills, attitudes and practices of a competent <a href="#">educator</a>	Merger of two standards Revised wording	Practitioner, Scientist, Higher Specialist Scientist
1.4.4	<a href="#">Ensure that junior colleagues and students are properly supervised and have the support they need to enable them to learn and to practice safely.</a>	Revised wording	Practitioner, Scientist, Higher Specialist Scientist

## Domain 2: Scientific Practice

As a part of the Healthcare Science workforce, you will keep your scientific and technical knowledge and skills up to date to effectively:

2.1	<i>Scientific Practice</i>	<i>Difference from 2012</i>	<i>Relevant to:</i>
2.1.1	Undertake scientific investigations, within standard operating procedures, using qualitative and quantitative methods to aid the screening, diagnosis, prognosis, monitoring and/or treatment of health and disorders appropriate to the discipline	No change	All
2.1.2	Investigate and monitor disease processes and normal states	No change	All
2.1.3	Provide clear reports using appropriate methods of analysing, summarising and displaying information	No change	All
2.1.4	Support patients and the public to promote and manage their own health and wellbeing, and to make informed decisions.	New standard	All
2.1.5	Develop investigative strategies/ procedures/ processes that take account of relevant clinical and other sources of information	No change	Practitioner, Scientist, Higher Specialist Scientist
2.1.6	Critically evaluate data, draw conclusions from it, formulate actions and recommend further investigations where appropriate	No change	Practitioner, Scientist, Higher Specialist Scientist
2.1.7	Provide scientific advice to ensure the safe and effective delivery of services.	No change	Practitioner, Scientist, Higher Specialist Scientist

2.2	<i>Technical Practice</i>	<i>Difference from 2012</i>	<i>Relevant to:</i>
2.2.1	Work within the principles and practice of instruments, equipment and methodology used in the relevant scope of practice	No change	All
2.2.2	Demonstrate practical skills in the essentials of measurement, data generation <a href="#">and analysis as appropriate to your job role</a>	Revised wording	All
2.2.3	Assess and evaluate new technologies prior to their <a href="#">introduction into routine clinical practice</a>	Revised wording	Practitioner, Scientist, Higher Specialist Scientist
2.2.4	Identify and manage sources of risk in the workplace, including <a href="#">those related to</a> specimens, raw materials, clinical and special waste, equipment, radiation and electricity	Revised wording	All
2.2.5	Apply principles of good practice in health and safety to all aspects of the workplace, <a href="#">ensuring that regulatory and legal requirements are met</a>	Revised wording	All
2.2.6	Apply correct methods of disinfection, sterilisation and decontamination and deal with waste and spillages correctly	No change	All
2.2.7	Demonstrate appropriate level of skill in the use of information and communications technology	No change	All
2.2.8	Select and correctly use appropriate personal protective equipment	New standard	All
2.2.9	Provide technical advice to ensure the safe and effective delivery of services.	No change	Practitioner, Scientist, Higher Specialist Scientist
2.3	<i>Quality</i>	<i>Difference from 2012</i>	<i>Relevant to:</i>
2.3.1	Participate in quality assurance programmes <a href="#">including regular and systematic audit</a>	Revised wording	All
2.3.2	Maintain an effective audit trail and work towards continuous <a href="#">quality</a> improvement	Revised wording	All
2.3.3	Set, maintain and apply quality standards, control and assurance techniques for all <a href="#">healthcare science activities appropriate to your scope of practice, including restorative action</a>	Revised wording	Practitioner, Scientist, Higher Specialist Scientist

2.3.4	Make judgements on the effectiveness of processes and procedures in order to ensure <a href="#">patient, service user and the public’s safety, and to enhance the service and care provided to patients and service users, feeding back to colleagues as necessary.</a>	Revised wording	All
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### Domain 3: Clinical Practice

As a part of the Healthcare Science workforce, you will keep your clinical skills up to date and undertake the clinical duties appropriate to your role in order to effectively:

3.1	Clinical Practice	Difference from 2012	Relevant to:
3.1.1	Ensure that you and any staff you <a href="#">may</a> supervise understand the need for informed consent and obtain <a href="#">informed</a> consent <a href="#">from the patient (or service user or other appropriate authority as necessary)</a> before undertaking any investigation, examination, provision of treatment, or involvement of patients and carers in teaching or research	Revised wording	All
3.1.2	Ensure that you, and <a href="#">any</a> staff you <a href="#">may</a> supervise, understand the wider clinical consequences of decisions made based on your actions or advice	Revised wording	All
3.1.3	Undertake <a href="#">and record</a> detailed clinical assessment using appropriate techniques and equipment and where appropriate to your scope of practice, ensuring that the outcomes of these investigations are reviewed regularly with users of the service	No change	All
3.1.4	Plan and determine the range of clinical/scientific investigations or products required to meet diagnostic, therapeutic, rehabilitative <a href="#">and/or</a> treatment needs of patients taking account of the complete clinical picture	Revised wording	All
3.1.5	Plan and agree investigative strategies and clinical protocols for the optimal diagnosis, monitoring and therapy of patients with a range of disorders	No change	Practitioner, Scientist, Higher Specialist Scientist
3.1.6	Provide specialised clinical investigation and/or analysis appropriate to your <a href="#">specialty</a>	Revised wording	Practitioner, Scientist, Higher Specialist Scientist

3.1.7	Provide interpretation of complex and/or specialist data in the context of the clinical question <a href="#">which may be</a> posed	Revised wording	Practitioner, Scientist, Higher Specialist Scientist
3.1.8	Provide clinical advice based on the results obtained, including a diagnostic or therapeutic opinion for further action to be taken by the individual directly responsible for the care of the patient	No change	Practitioner, Scientist, Higher Specialist Scientist
3.1.9	Provide expert clinical advice to stakeholders in order to optimise the efficiency and effectiveness of clinical investigation of individuals and groups of patients	No change	Practitioner, Scientist, Higher Specialist Scientist
3.1.10	Prioritise the delivery of investigations, services or treatment based on <a href="#">the</a> clinical need of patients	Revised wording	Practitioner, Scientist, Higher Specialist Scientist
3.1.11	Represent the work of your <a href="#">team</a> in multidisciplinary clinical meetings to discuss patient outcomes and the appropriateness of services provided.	Revised wording	Practitioner, Scientist, Higher Specialist Scientist
<b>3.2</b>	<b><i>Investigation and Reporting</i></b>	<b><i>Difference from 2012</i></b>	<b><i>Relevant to:</i></b>
3.2.1	Perform <a href="#">quality assured</a> investigations and procedures <a href="#">or</a> design products <a href="#">as part of the</a> investigation, diagnosis, treatment, management, rehabilitation or planning in relation to the range of patient conditions/equipment within a <a href="#">given</a> specialist scope of practice	Revised wording	Practitioner, Scientist, Higher Specialist Scientist
3.2.2	Monitor and report on progress of patient conditions/use of technology and the need for further interventions.	No change	Practitioner, Scientist, Higher Specialist Scientist

## Domain 4: Research, Development and Innovation

As a part of the Healthcare Science workforce, research development and innovation are key to your role. It is essential in helping the NHS address the challenges of the ageing population, chronic disease, health inequalities and rising public expectations on the NHS. In your role, you will undertake the research, development and innovation appropriate to your role in to effectively:

4.1	<i>Research, Development and Innovation</i>	<i>Difference from 2012</i>	<i>Relevant to:</i>
4.1.1	Support the wider healthcare team in the spread and adoption of innovative technologies and practice	No change	All
4.1.2	Encourage dialogue and debate about research and practice, and act as a positive role model for developing, challenging and implementing innovation	New standard	All
4.1.3	<a href="#">Seek opportunities to</a> present data, research findings and innovative approaches to practice to peers <a href="#">and others</a>	Revised wording	All
4.1.4	<a href="#">Undertake, participate in, or manage</a> <sup>8</sup> research and development within <a href="#">an appropriate</a> governance framework <a href="#">acting with honesty and integrity in all aspects of Research, Development and Innovation</a>	Revised wording	All
4.1.5	<a href="#">Participate in collaborative research, involving patients and the public where appropriate, applying</a> a range of research methodologies including experimental methods	Revised wording	All
4.1.6	Engage in evidence-based practice, participate in audit procedures and critically search for, appraise and identify innovative approaches to practice and delivery of healthcare, seeking the views of patients	No change	All
4.1.7	Develop, evaluate, validate and verify new scientific, technical, diagnostic, monitoring, treatment and therapeutic procedures and, where indicated by the evidence, adapt and embed them in routine practice	No change	Practitioner, Scientist, Higher Specialist Scientist

<sup>8</sup> As your job role requires

4.1.8	Evaluate research and other available evidence to inform own practice in order to ensure that it remains at the leading edge of innovation.	No change	Practitioner, Scientist, Higher Specialist Scientist
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### Domain 5: Clinical Leadership

All patients and service users have a right to expect that Healthcare Science services efficiently and effectively managed to meet service needs. As a leader in Healthcare Science, you will seek to effectively:

5.1	Leadership	Difference from 2012	Relevant to:
5.1.1	Actively develop or maintain and use your leadership skills, qualities and behaviours	New standard	All
5.1.2	Respect the skills and contributions of your colleagues, treating your colleagues fairly and with respect	Merger of two standards	All
5.1.3	Make suitable arrangements to ensure that roles and responsibilities are covered when you are absent, including handover <a href="#">to competent colleagues</a> at sufficient level of detail	Revised wording	All
5.1.4	Ensure that patients, carers and colleagues understand your role and the responsibilities of other members of the team	No change	All
5.1.5	Ensure that <a href="#">colleagues are aware of the</a> systems in place through which they can raise concerns <a href="#">about patient safety</a>	No change	All
5.1.6	Act as an ambassador for the Healthcare Science <a href="#">profession</a>	Revised wording	All
5.1.7	Maintain responsibility when delegating healthcare activities and provide support as needed	No change	All
5.1.8	Refer patients to appropriate health professionals where necessary	No change	Practitioner, Scientist, Higher Specialist Scientist
5.1.9	Ensure regular reviews of team performance and take steps to develop and strengthen the team; <a href="#">this might include leading by example and undertaking a range of continual professional development activities</a>	Revised wording	Practitioner, Scientist, Higher Specialist Scientist
5.1.10	<a href="#">Actively contribute to steps being taken</a> to remedy any deficiencies in team performance	Revised wording	All

5.1.11	Identify and take appropriate action to meet the development needs of those for whom you have management, supervision or training responsibilities	No change	Practitioner, Scientist, Higher Specialist Scientist
5.1.12	Ensure when delegating the care of a patient or service user to a colleague, you are satisfied that the person providing care has the appropriate qualifications, skills and experience to provide safe care for the patient	New standard	Practitioner, Scientist, Higher Specialist Scientist
5.1.13	Share all relevant information with colleagues involved in your patients' care when you delegate care or refer patients to other health or social care providers.	New standard	Practitioner, Scientist, Higher Specialist Scientist

**Good Scientific Practice Standards (2012) removed from the revised standards above to reduce duplication within the standards**

- 1.4.5 Share information with colleagues to protect patient safety
- 2.2.1 Plan, take part in and act on the outcome of regular and systematic audit
- 3.1.2 Ensure that you and the staff you supervise maintain confidentiality of patient information and records in line with published guidance
- 3.1.4 Demonstrate expertise in the wider clinical situation that applies to patients who present in your discipline
- 3.1.5 Maintain up to date knowledge of the clinical evidence base that underpins the services that you provide and/or supervise and ensure that these services are in line with the best clinical evidence
- 3.1.17 Ensure that regular and systematic clinical audit is undertaken and be responsible for modifying services based on audit findings
- 3.1.8 Ensure that detailed clinical assessments are undertaken and recorded using appropriate techniques and equipment and that the outcomes of these investigations are reviewed regularly with users of the service
- 3.1.10 Undertake and record a detailed clinical assessment using appropriate techniques and equipment
- 3.2.1 Plan and conduct scientific, technical, diagnostic, monitoring, treatment and therapeutic procedures with professional skill and ensuring the safety of patients, the public and staff
- 3.2.4 Interpret and report on a range of investigations or procedures associated with the management of patient conditions/equipment
- 4.1.1 Search and critically appraise scientific literature and other sources of information

- 4.1.7 Interpret data in the prevailing clinical context
- 4.1.8 Perform experimental work, produce and present results
- 5.1.3 Protect patients from risk or harm presented by another person's conduct, performance or health

## Appendix 1 AHCS List of Healthcare Science Specialties

Healthcare Science falls into four broad and overlapping areas – the four divisions. These are:

### *Life sciences*

- Blood sciences – clinical biochemistry / clinical immunology / haematology and transfusion science / histocompatibility and immunogenetics
- Cellular sciences – cytopathology / histopathology / reproductive science
- Genomic sciences – genomics / genomic counselling
- Infection sciences – microbiology / virology

### *Physical sciences*

- Radiotherapy physics
- Imaging with ionising radiation
- Imaging with non- ionising radiation
- Radiation safety physics
- Clinical pharmaceutical science
- Clinical measurement and development
- Device risk management and governance
- Rehabilitation engineering
- Reconstructive science

### *Physiological sciences*

- Audiology
- Ophthalmic and vision science
- Neurophysiology
- Gastrointestinal physiology
- Urodynamic science
- Critical care science
- Cardiac science
- Vascular science
- Respiratory and sleep physiology

### *Bioinformatics*

Clinical Bioinformatics is a cross-divisional field. This is an increasingly important emerging division within Healthcare Science, due to the NHS Genomics and Personalised Medicine agendas.

- Applied Epidemiology
- Genomics
- Health Informatics Science
- Clinical Bioinformatics for the physical sciences
- Health and Wellbeing Digital Science

*Note* The areas outlined above are not a static and the list is continually changing as healthcare science develops

## Appendix 2 List of documents reviewed

### GMC

- Good Medical Practice (2013 and update 2014)

### Health and Care Professions Council

- Standards of Performance, Conduct and Ethics (January 2016)
- Guidance on Confidentiality (October 2017)
- Guidance on Social Media (October 2017)
- Guidance on Health and Character August 2017)

### Nursing and Midwifery Council

- The Code (2015 and update 2018)

### The Registration Council for Clinical Physiologists

- Code of Conduct (January 2015)

### Register of Clinical Technologists

- Code of Professional Conduct (2014 and issued 2018)

## Appendix 3 Proposed Good Scientific Practice Standards 2019 – clean copy

### Domain 1: Professional Practice

All patients and service users are entitled to good standards of professional practice and probity from the Healthcare Science workforce.

In maintaining your fitness to practise as a part of the Healthcare Science workforce you must:

<i>1.1</i>	<i>Professional Practice</i>	<i>Relevant to:</i>
1.1.1	Make the patient your first concern, whose safety and well-being always comes before any professional or other loyalties	All
1.1.2	Exercise your professional duty of care and be open and candid with patients and service users about all aspects of care and treatment, including when any mistakes or harm have taken place in-line with your ‘duty of candour’	All
1.1.3	Always work within the agreed scope of practice and personal competence for lawful, safe and effective healthcare science	All
1.1.4	Keep your professional, scientific, clinical and technical knowledge and skills up to date, maintaining a record of evidence of your Continuing Professional Development as required by the relevant register. Ensure that the services you provide are in line with the current best practice.	All
1.1.5	Respond constructively to the outcome of audit, appraisals and performance reviews, undertaking further training where necessary	All
1.1.6	Engage fully in evidence based practice	All
1.1.7	Draw on appropriate skills and knowledge in order to carry out duties as required	All
1.1.8	Act without delay on concerns raised by patients, their families and carers, or the public, if you have good reason to believe that you or a colleague may be putting others or yourself at risk	All
1.1.9	Never discriminate unfairly against patients, carers or colleagues, or allow your personal views to affect your professional relationship or the care, treatment or other services that you provide	All
1.1.10	Treat each patient as an individual, respecting their dignity, privacy and confidentiality. Respect that this right to privacy and confidentiality continues after they have died	All
1.1.11	Uphold the rights, values and autonomy of every service user, valuing their role in the diagnostic and therapeutic process and in maintaining health and well-being	All
1.1.12	Work collaboratively, as appropriate, with patients and carers towards shared goals, actively listening to them and taking account of their needs and wishes	All
1.1.13	Make good use of the resources available to you	All

1.1.14	Recognise that you are personally responsible for and must be able to justify your decisions	All
1.1.15	Ensure you have the necessary knowledge of, and skills in the English language to provide a good standard of practice and care in the UK	All
1.1.16	Provide patients with the information they want or need to know in a way they can understand which is also sensitive and responsive to the situation. You should make sure that arrangements are made, wherever possible, to meet patients' language and communication needs	All
1.1.17	Use all forms of spoken, written and digital communication (including social media and networking sites) responsibly, respecting the right to privacy of others at all times	All
1.1.18	Ensure you or any staff you supervise only disclose confidential information if either: you have permission to do so from your employer; the law allows it; it is in the patient's best interest; or it is in the public interest, such as if it is necessary to protect public safety	All
1.1.19	Respond promptly, fully and honestly to complaints, and ensure that a patient's complaint will not adversely affect the care or treatment you provide or arrange	All
1.1.20	Keep to the laws of the country in which you are practising	All
1.1.21	Maintain the level of health you need to carry out your professional role. If your physical or mental health might affect your performance or judgement or put others at risk, make changes to how you practise, inform others including your employer, or stop practising altogether	All
1.1.22	Co-operate with any investigation into your conduct or competence; the conduct or competence of others; or the care, treatment or other services provided to patients	All
1.1.23	Not deny treatment to patients because their medical condition may put you at risk. If a patient poses a risk to your health or safety, you should take all available steps to minimise the risk before providing treatment or making other suitable alternative arrangements for providing treatment.	All

1.2	<i>Probity</i>	<i>Relevant to:</i>
1.2.1	Make sure that your conduct at all times justifies the trust of patients, carers and colleagues including trainees and maintains the public's trust in the healthcare science profession	All
1.2.2	Inform the appropriate regulatory body and any employer without delay if, at anytime and anywhere in the world, you have accepted a caution, been charged with or found guilty of a criminal offence, or if any finding has been made against you as a result of fitness to practise procedures, or if you are suspended from any regulated post, or if you have any restrictions placed on your scientific, clinical or technical practice	All
1.2.3	Be open, honest and act with integrity at all times, including but not limited to: writing reports, signing documents, providing information about your qualifications, experience, and position in the scientific community, and providing written and verbal information to any formal enquiry or litigation, including that relating to the limits of your scientific knowledge and experience	All
1.2.4	Take all reasonable steps to verify information in your reports and documents, including research, ensuring that no information is left out deliberately	All
1.2.5	Work within the Standards of Conduct, Performance and Ethics set by your regulator	All

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|-------|--|-----|
| 1.2.6 | If for any reason you have concerns about patient safety, report the issue adhering strictly to your workplace policy  | All |
| 1.2.7 | Ensure that any advertisements or publications you produce for your professional service (or for any other professional activities in which you participate, including expert opinion) are accurate, ethical, do not mislead, do not misrepresent your skills, experience and qualifications, and do not exploit vulnerabilities | All |
| 1.2.8 | Declare issues that might create conflicts of interest and make sure they do not influence your judgement.   | All |

<b>1.3</b>	<b><i>Working with Others</i></b>	<b><i>Relevant to:</i></b>
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- |       |   |     |
|-------|---|-----|
| 1.3.1 | Work with others, internal and external to your organisation, in ways that best serve patients' interests | All |
| 1.3.2 | Work effectively as a member of a multi-disciplinary team   | All |
| 1.3.3 | Consult and take advice from colleagues where appropriate   | All |
| 1.3.4 | Be readily accessible when you are on duty  | All |
| 1.3.5 | Respect the skills and contributions of your colleagues   | All |
| 1.3.6 | Participate in regular reviews of team performance  | All |
| 1.3.7 | Be aware of how your behaviour might influence others within and outside the team.                        | All |

<b>1.4</b>	<b><i>Training and Developing Others</i></b>	<b><i>Relevant to:</i></b>
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- |       |   |   |
|-------|---|---|
| 1.4.1 | Provide work-based development for colleagues to enhance/improve their skills, knowledge and professional behaviour                               | All   |
| 1.4.2 | Support colleagues who have difficulties with performance, conduct or health  | All   |
| 1.4.3 | Contribute to the education and training of colleagues and develop the skills, attitudes and practices of a competent educator                    | Practitioner,<br>Scientist, Higher<br>Specialist<br>Scientist |
| 1.4.4 | Ensure that junior colleagues and students are properly supervised and have the support they need to enable them to learn and to practice safely. | Practitioner,<br>Scientist, Higher<br>Specialist<br>Scientist |

## Domain 2: Scientific Practice

As a part of the Healthcare Science workforce, you will keep your scientific and technical knowledge and skills up to date to effectively:

2.1	<i>Scientific Practice</i>	<i>Relevant to:</i>
2.1.1	Undertake scientific investigations, within standard operating procedures, using qualitative and quantitative methods to aid the screening, diagnosis, prognosis, monitoring and/or treatment of health and disorders appropriate to the discipline	All
2.1.2	Investigate and monitor disease processes and normal states	All
2.1.3	Provide clear reports using appropriate methods of analysing, summarising and displaying information	All
2.1.4	Support patients and the public to promote and manage their own health and wellbeing, and to make informed decisions.	All
2.1.5	Develop investigative strategies/ procedures/ processes that take account of relevant clinical and other sources of information	Practitioner, Scientist, Higher Specialist Scientist
2.1.6	Critically evaluate data, draw conclusions from it, formulate actions and recommend further investigations where appropriate	Practitioner, Scientist, Higher Specialist Scientist
2.1.7	Provide scientific advice to ensure the safe and effective delivery of services	Practitioner, Scientist, Higher Specialist Scientist
2.2	<i>Technical Practice</i>	<i>Relevant to:</i>
2.2.1	Work within the principles and practice of instruments, equipment and methodology used in the relevant scope of practice	All
2.2.2	Demonstrate practical skills in the essentials of measurement, data generation and analysis as appropriate to your job role	All
2.2.3	Assess and evaluate new technologies prior to their introduction into routine clinical practice	Practitioner, Scientist, Higher Specialist Scientist
2.2.4	Identify and manage sources of risk in the workplace, including those related to specimens, raw materials, clinical and special waste, equipment, radiation and electricity	All
2.2.5	Apply principles of good practice in health and safety to all aspects of the workplace, ensuring that regulatory and legal requirements are met	All
2.2.6	Apply correct methods of disinfection, sterilisation and decontamination and deal with waste and spillages correctly	All
2.2.7	Demonstrate appropriate level of skill in the use of information and communications technology	All
2.2.8	Select and correctly use appropriate personal protective equipment	All

2.2.9	Provide technical advice to ensure the safe and effective delivery of services.	Practitioner, Scientist, Higher Specialist Scientist
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<b>2.3</b>	<b>Quality</b>	<b>Relevant to:</b>
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2.3.1	Participate in quality assurance programmes including regular and systematic audit	All
2.3.2	Maintain an effective audit trail and work towards continuous quality improvement	All
2.3.3	Set, maintain and apply quality standards, control and assurance techniques for all healthcare science activities appropriate to your scope of practice, including restorative action	Practitioner, Scientist, Higher Specialist Scientist
2.3.4	Make judgements on the effectiveness of processes and procedures in order to ensure patient, service user and the public's safety, and to enhance the service and care provided to patients and service users, feeding back to colleagues as necessary.	All

### Domain 3: Clinical Practice

As a part of the Healthcare Science workforce, you will keep your clinical skills up to date and undertake the clinical duties appropriate to your role in order to effectively:

<b>3.1</b>	<b>Clinical Practice</b>	<b>Relevant to:</b>
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3.1.1	Ensure that you and any staff you may supervise understand the need for informed consent, and obtain informed consent from the patient (or service user or other appropriate authority as necessary) before undertaking any investigation, examination, provision of treatment, or involvement of patients and carers in teaching or research	All
3.1.2	Ensure that you, and any staff you may supervise, understand the wider clinical consequences of decisions made based on your actions or advice	All
3.1.3	Undertake and record a detailed clinical assessment using appropriate techniques and equipment and where appropriate to your scope of practice, ensuring that the outcomes of these investigations are reviewed regularly with users of the service	All
3.1.4	Plan and determine the range of clinical/scientific investigations or products required to meet diagnostic, therapeutic, rehabilitative and/or treatment needs of patients taking account of the complete clinical picture	All
3.1.5	Plan and agree investigative strategies and clinical protocols for the optimal diagnosis, monitoring and therapy of patients with a range of disorders	Practitioner, Scientist, Higher Specialist Scientist
3.1.6	Provide specialised clinical investigation and/or analysis appropriate to your specialty	Practitioner, Scientist, Higher Specialist Scientist
3.1.7	Provide interpretation of complex and/or specialist data in the context of the clinical question which may be posed	Practitioner, Scientist, Higher Specialist Scientist
3.1.8	Provide clinical advice based on the results obtained, including a diagnostic or therapeutic opinion for further action to be taken by the individual directly responsible for the care of the patient	Practitioner, Scientist, Higher

		Specialist Scientist
3.1.9	Provide expert clinical advice to stakeholders in order to optimise the efficiency and effectiveness of clinical investigation of individuals and groups of patients	Practitioner, Scientist, Higher Specialist Scientist
3.1.10	Prioritise the delivery of investigations, services or treatment based on the clinical need of patients	Practitioner, Scientist, Higher Specialist Scientist
3.1.11	Represent the work of your team in multidisciplinary clinical meetings to discuss patient outcomes and the appropriateness of services provided.	Practitioner, Scientist, Higher Specialist Scientist
<b>3.2</b>	<b><i>Investigation and Reporting</i></b>	<b><i>Relevant to:</i></b>
3.2.1	Perform quality assured investigations and procedures or design products as part of the investigation, diagnosis, treatment, management, rehabilitation or planning in relation to the range of patient conditions/equipment within a given specialist scope of practice	Practitioner, Scientist, Higher Specialist Scientist
3.2.2	Monitor and report on progress of patient conditions/use of technology and the need for further interventions.	Practitioner, Scientist, Higher Specialist Scientist

## Domain 4: Research, Development and Innovation

As a part of the Healthcare Science workforce, research development and innovation are key to your role. It is essential in helping the NHS address the challenges of the ageing population, chronic disease, health inequalities and rising public expectations on the NHS. In your role, you will undertake the research, development and innovation appropriate to your role in to effectively:

<b>4.1</b>	<b><i>Research, Development and Innovation</i></b>	<b><i>Relevant to:</i></b>
4.1.1	Support the wider healthcare team in the spread and adoption of innovative technologies and practice	All
4.1.2	Encourage dialogue and debate about research and practice, and act as a positive role model for developing, challenging and implementing innovation	All
4.1.3	Seek opportunities to present data, research findings and innovative approaches to practice to peers and others	All
4.1.4	Undertake, participate in, or manage <sup>9</sup> research and development within an appropriate governance framework acting with honesty and integrity in all aspects of Research, Development and Innovation	All
4.1.5	Participate in collaborative research, involving patients and the public where appropriate, applying a range of research methodologies including experimental methods	All
4.1.6	Engage in evidence-based practice, participate in audit procedures and critically search for, appraise and identify innovative approaches to practice and delivery of healthcare, seeking the views of patients	All

<sup>9</sup> As your job role requires

4.1.7	Develop, evaluate, validate and verify new scientific, technical, diagnostic, monitoring, treatment and therapeutic procedures and, where indicated by the evidence, adapt and embed them in routine practice	Practitioner, Scientist, Higher Specialist Scientist
4.1.8	Evaluate research and other available evidence to inform own practice in order to ensure that it remains at the leading edge of innovation.	Practitioner, Scientist, Higher Specialist Scientist

## Domain 5: Clinical Leadership

All patients and service users have a right to expect that Healthcare Science services efficiently and effectively managed to meet service needs. As a leader in Healthcare Science, you will seek to effectively:

5.1	<i>Leadership</i>	<i>Relevant to:</i>
5.1.1	Actively develop or maintain and use your leadership skills, qualities and behaviours	All
5.1.2	Respect the skills and contributions of your colleagues, treating your colleagues fairly and with respect	All
5.1.3	Make suitable arrangements to ensure that roles and responsibilities are covered when you are absent, including handover to competent colleagues at sufficient level of detail	All
5.1.4	Ensure that patients, carers and colleagues understand your role and the responsibilities of other members of the team	All
5.1.5	Ensure that colleagues are aware of the systems in place through which they can raise concerns about patient safety	All
5.1.6	Act as an ambassador for the Healthcare Science profession	All
5.1.7	Maintain responsibility when delegating healthcare activities and provide support as needed	All
5.1.8	Refer patients to appropriate health professionals where necessary	Practitioner, Scientist, Higher Specialist Scientist
5.1.9	Ensure regular reviews of team performance and take steps to develop and strengthen the team; this might include leading by example and undertaking a range of continual professional development activities	Practitioner, Scientist, Higher Specialist Scientist
5.1.10	Actively contribute to steps being taken to remedy any deficiencies in team performance	All
5.1.11	Identify and take appropriate action to meet the development needs of those for whom you have management, supervision or training responsibilities	Practitioner, Scientist, Higher Specialist Scientist
5.1.12	Ensure when delegating the care of a patient or service user to a colleague, you are satisfied that the person providing care has the appropriate qualifications, skills and experience to provide safe care for the patient	Practitioner, Scientist, Higher Specialist Scientist

- 5.1.13 Share all relevant information with colleagues involved in your patients' care when you delegate care or refer patients to other health or social care providers. Practitioner, Scientist, Higher Specialist Scientist

## Appendix 4 Acronyms

AHCS	Academy for Healthcare Science
HCPC	Health and Care Professions Council
HSSR	Higher Specialist Scientist Register
NHS	National Health Service
RCCP	Registration Council for Clinical Physiologists
RCT	Register of Clinical Technologists
STP	Scientist Training Programme