



# **POSTGRADUATE MEDICAL EDUCATION**

## **WFME GLOBAL STANDARDS FOR QUALITY IMPROVEMENT OF MEDICAL EDUCATION**

**The 2023 Revision**

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## FOREWORD AND DEFINITIONS

We will begin with a definition of postgraduate medical education. We refer to the whole process of postgraduate medical education in any medical specialty (including primary care or general practice<sup>1</sup>) as the **'postgraduate medical education programme'** or the **'postgraduate programme'**.

A postgraduate medical education programme may or may not encompass a higher degree, such as a Master's award or a PhD. Where such academic qualifications are part of the postgraduate medical education programme, these standards will apply. However, they do not apply to a stand-alone Master's degree or PhD.

WFME recognises three phases of medical education:

<b>Basic medical education:</b>	The undergraduate phase that occurs in medical school.
<b>Postgraduate medical education:</b>	The phase of planned preparation for specialisation that may occur <sup>2</sup> between graduation from medical school and recognition as a qualified independent practitioner. We refer to those going through this stage as 'postgraduate doctors' <sup>3</sup> .
<b>Continuing professional development:</b>	The education and training that occur during independent practice, after the completion of mandatory postgraduate medical education, or immediately after graduation from medical school if postgraduate medical education is optional. <sup>4</sup>

Producing a more detailed, universally acceptable definition of postgraduate medical education is a challenge because of the wide diversity of approaches. In different countries, postgraduate medical education might be provided by a university, by the healthcare service, or by specialist organisations. It might be influenced by the government. It might be linked to service planning. It might be related to the local or national configuration of specialties. It might be relatively organised as a course, or it might be relatively fluid. It might occur in one location or many. Patterns of work, career development, employment, and experience will vary. The length of postgraduate medical education varies from country to country and sometimes from specialty to specialty. It might have to be paid for, or, more commonly, postgraduate doctors might be paid for their contribution to the service. Methods

<sup>1</sup> Specialties, in our definition, include general practice or primary care, as well as hospital-based, laboratory-based, and other community-based disciplines.

<sup>2</sup> Formal postgraduate medical education, as defined here, is not required in some countries, or may only be for some career tracks in some countries.

<sup>3</sup> There is considerable debate about what people in postgraduate medical education should be called. For a summary of this, see: McNally, S. (2022) *What Should we Call 'Junior Doctors'?* Available at: <https://www.medschools.ac.uk/media/2942/jnrdocreport-april-2022-on-wwwscarlettmcnallycouk-1mb.pdf>

<sup>4</sup> In some countries, graduates are allowed to enter independent practice straight from medical school. In this case, they will go directly into the phase of continuing professional development.

of selection, assessment, and final certification also vary from country to country. Therefore, regulatory processes and quality assurance vary.

For these reasons, and because there is no robust evidence to suggest that one approach is more advisable than another, we leave our definition at a general level that delineates a stage rather than a process. We intend that the standards can be applied to a wide variety of postgraduate medical education purposes and arrangements. Given, also, that formal postgraduate medical education does not routinely occur in all countries, these standards might be directly applicable, or might be used to assist the design or review of postgraduate medical education. This simply reflects wide contextual variation in requirements and practice.

Our second definition involves the meaning of ‘**responsible body**’. The range of organisations that define and manage postgraduate medical education is such that we cannot be specific. It might be an institution, a number of bodies working jointly, the health care service itself, government, professional bodies, and many others. We have therefore chosen to use the term ‘responsible body’ and leave each user of the standards to define what body or bodies that is, in their context.

Our final definition concerns ‘**quality assurance vs quality improvement**’. Although the main purpose of these standards is to assist in the quality improvement of postgraduate medical education, we also refer to ‘quality assurance’ where that is appropriate. The two are related but different. Quality assurance findings may contribute to quality improvement. For us, quality assurance relates to establishing compliance with defined standards or requirements, and is a judgement made at one point in time for purposes of accountability. Quality improvement, however, refers to the continuing systems, processes, or interventions that institutions might put in place to address problems or make the educational programme and its outcomes better.

[The World Federation for Medical Education \(WFME\)](#) is pleased to publish this new edition of the Standards for Postgraduate Medical Education in the continuing programme of *Global Standards for Quality Improvement of Medical Education*. The first edition of these standards was published in 2003, and the second edition in 2012 with a revision in 2015, followed by this current 2023 edition which presents a principles-based approach.

WFME has always emphasised that the standards are a guide to the development and evaluation of medical education in all settings. They are not mandatory and should be used and applied in whatever way seems most helpful. They are not prescriptive, and not a rule-book. They are intended to be used as a framework to be modified and customised for the local context.

## BACKGROUND

### Reasons for the revised standards

With increasing recognition of the importance of context in medical education, the World Federation for Medical Education (WFME) took the decision to review its standards to ensure that they can be applied in all contexts and circumstances<sup>5</sup>.

Added to this was our recognition that medical education, as a social science, tends to follow socially constructed values and ideas<sup>6</sup>, rather than being a primarily evidence-based discipline. Educational practice, therefore, varies between social and geographical contexts, and is influenced by culture, epidemiology, the healthcare system, and material and human resources. So, what is right for one postgraduate programme, or one part of the globe, might not be right for another. In these standards, we encourage everyone to consider what is appropriate for their own context, and what might improve their own current practice.

WFME therefore decided to modify its standards, away from prescriptive, process-based requirements towards a principles-based approach<sup>7</sup> which encourages each responsible body, agency, or institution to make its own version of the postgraduate standards that is contextually appropriate. Those local standards would then address the design, delivery, management, and quality improvement of postgraduate medical education, but in a manner tailored to the respective context.

We also recognise that postgraduate medical education is much more variable and driven by contextual conditions than basic medical education. Because of that, postgraduate medical education is often a bridge between medical school and the local context. So, we might suggest that postgraduate medical education programmes could effectively contribute to improvement in population health and patient outcomes.

At postgraduate level, the healthcare service, and the needs it is based on, often have a major impact on the process of medical education. The very wide variety of health system models, with different patterns of working, delivering services at primary, secondary, and tertiary healthcare facilities, with different ideologies and levels of resources, mean that these standards must fit highly contrasting and changing contexts.

Added to international differences in the healthcare service, are differences in career trajectories and opportunities, and in the employment status of postgraduate doctors. Opportunities for postgraduate medical education might be linked to universities, governments, professional bodies, or employers. Postgraduate medical education might be linked to more or less well-defined curricula.

<sup>5</sup> Karle, H., Christensen, L., Gordon, D. and Nystrup, J. (2008) Neo-colonialism versus sound globalisation policy in medical education. *Medical Education*, 42, 956–958.

<sup>6</sup> Grant, J. and Grant, L. (2023) Quality and constructed knowledge: Truth, paradigms, and the state of the science. *Medical Education*, 57, 1, 4-6.

<sup>7</sup> Black, J., Hopper, M. and Band, C. (2007) Making a success of principles-based regulation. *Law and Financial Markets Review*, May, 191-206.

There are also differences in the bodies who are responsible for postgraduate education; these might be the university, the medical school, a specific postgraduate deanery separate from the undergraduate school, the healthcare service itself, or professional bodies. They might be public or private and subject to specific regulatory requirements.

In addition to these differences in organisation and responsibility, there are parallel differences in educational approaches and assessment systems.

In developing these revised standards, we were also aware of the contrasts between basic medical education and postgraduate medical education. A frequent key factor is the postgraduate doctor's growing involvement in and responsibility for patient care, and preparation for independent practice<sup>8</sup>. The role of clinical and educational supervisors therefore may take on different meanings from teaching and supervising undergraduate medical students.

We have taken all these factors into account in preparing these revised, principles-based standards so that they are relevant and can be used in any context.

The new standards invite institutions or organisations that wish to use them, to modify and develop them for their own culture, resources, aspirations, and values, while still addressing the specified areas of performance. We would encourage a variety of locally relevant standards to be derived which encourage appropriate and effective postgraduate medical education, within the broad framework that is set out in this publication.

### **Organisation of the revised standards**

As in previous versions of these standards, we have set out a framework of areas for defining and managing medical education, along with a statement of the importance of each. The importance of the principles-based standards in each area is presented, along with guidance and key questions to consider when applying these to any given context. The guidance suggests the issues to be taken into account when developing a version of each standard for the local context. The key questions can be used to inform evaluations of the quality of provision.

The standards address the elements of postgraduate medical education which encompass the totality of all processes and activities offered to facilitate postgraduate doctors' learning, wellbeing, and achievement, including the management and quality improvement of medical education programmes.

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<sup>8</sup> We recognise that in some countries, graduates go straight to independent practice without a period of postgraduate medical education. But if postgraduate medical education does occur, then these characteristics usually apply.

The standards are presented in eight areas:

1. Mission and values
2. Curriculum
3. Assessment
4. Postgraduate doctors
5. Teachers and clinical supervisors
6. Education and training<sup>9</sup> resources
7. Quality improvement
8. Governance and administration

### **What are principles-based standards?**

Principles-based standards are stated at a broad level of generality rather than being prescriptive. They address the components of the postgraduate programme, such as postgraduate doctor support, curriculum model, and the assessment system. But they do not say how support should be offered, nor what curriculum model should be adopted, nor what assessment methods should be used. They ask that the mission and values of the postgraduate medical education programme should be stated, but not what those should be. Those are contextual decisions for local responsible bodies. In this way, principles-based standards can meet the different needs of regulatory agencies and postgraduate medical education designers, providers, and managers around the world to prepare independent practitioners, whatever their resources, contexts, purposes, and stages of development.

### **Using principles-based standards**

This principles-based approach is designed to set out the areas for consideration, with accompanying guidance, to enable agencies, institutions, national authorities, and responsible bodies in any and every context to decide on their own standards for effective postgraduate medical education, according to their purposes and circumstances. They might be used for new or established postgraduate medical education programmes in any medical specialty, and for new or established regulatory systems.

The revised standards offer flexibility for local decision-making about the specific qualities and characteristics that are required and are culturally and contextually appropriate. The standards are intended to be elegant, streamlined, and straightforward. They require thought and discussion, so they deter a shallow or instrumental compliance response. It is hoped that they might trigger a deep analysis of the postgraduate medical education process.

These revised standards can be applied as they are or can be used as the basis of a more specific set of locally defined requirements. Each standard offers associated guidance and key questions, to help discussion and definition of the level of specificity that is fit for purpose. That purpose might range from local institutional development to national regulation.

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<sup>9</sup> We use 'training' here to cover such resources as procedural simulators.

WFME recognises that some agencies, institutions, national authorities, and other responsible bodies might need more guidance before they can set their own standards. WFME therefore welcomes requests for further guidance. Bodies might also consult with [WFME Regional Associations](#) or local qualified medical educationists. The standards might also be a matter for discussions in regional meetings.

We hope that the revised standards will stimulate productive analysis, thought, conversations, and decisions, whether they are applied as presented here, or are supplemented with more specific requirements.

## THE STANDARDS

### 1. MISSION AND VALUES

#### Importance of this area

This area concerns the purpose and values of postgraduate medical education and its role in career progression. It provides the frame of reference against which all other activities can be judged. The mission statement reflects the programme's distinct qualities and its relationship to the healthcare system.

#### 1.1 STATING THE MISSION

**The responsible body provides a public mission statement that sets out the purposes, values, priorities, and goals of its postgraduate medical education programme(s) in relation to context and culture.**

##### Guidance:

Consider the context, culture, and values underpinning the mission statement.

Consider the role, users, and uses of the mission statement.

Briefly and concisely describe the programme's purpose, values, education goals, and research functions, in relation to the healthcare service, societal, individual and communities' needs, the promotion of health, and prevention and treatment of illness.

Indicate the extent to which the statement has been developed in consultation with a wide range of stakeholders including alumni, patients, carers, current staff and postgraduate doctors, community representatives, organisations, and the healthcare service.

Consider the relationship of the postgraduate medical education programme to the values and conduct of the healthcare system.

Describe how the postgraduate medical education programme positively enhances population and patient outcomes.

Describe how the mission statement guides the curriculum, quality assurance, and quality improvement, in accordance with the values and expectations of various stakeholders, including the profession, institution, and the community.

Describe how the statement is made public.

Describe how the mission statement is periodically reviewed and adapted.

**Key questions:**

What cultural and contextual values underpin the mission statement?

How is the mission statement linked to the postgraduate medical education programme?

Which interested groups were involved in its development and why?

How does the mission statement address the relationship between the postgraduate medical education programme, the healthcare service, and the community?

How does the mission statement reflect the roles, needs, and interests of doctors, patients, and society?

How does the mission statement guide the curriculum and postgraduate medical education programme as a whole?

How is it used to develop specific goals for planning, quality assurance, quality improvement, and management of the postgraduate medical education programme?

How does the mission statement encompass the values and conduct of the healthcare system?

How does it fit with the regulatory standards of the relevant accrediting agency and with relevant governmental requirements, if any?

How is it publicised and shared with all stakeholders, key interest groups, and users?

What is the process for periodical review and amendment of the mission statement?

## 2. CURRICULUM

### Importance of this area

This area addresses the essential processes and outcomes for postgraduate medical education.

There are many choices available in relation to the design of the curriculum.

The structure, content, and educational methods chosen are related to the relevant mission, outcomes, and context. These take into account the resources available to enable the postgraduate doctor to achieve those outcomes. The curriculum takes into account the qualities of the graduates entering the postgraduate medical education programme and the requirements for progress through it. To make those choices, we need to consider what 'curriculum' means at the level of postgraduate medical education, and how this differs from a curriculum at the level of medical school, where students are progressing through a structured programme as a group. At postgraduate level, each postgraduate doctor's journey is largely individual.

### What is a 'curriculum' at postgraduate level?

The curriculum is the foundation of the postgraduate medical education programme as a whole. At postgraduate level, it will state defined outcomes but will not describe all of the experiences that a postgraduate doctor has, because at this level, postgraduate doctors learn through the unpredictable practice of clinical medicine, service specialties, or public health, as well as through formal events.

Postgraduate medical education is, by its nature, experience-based, with an accumulation of knowledge and skills often based largely on opportunistic professional exposure and experience. While postgraduate medical education programmes should have a proposed or defined range of expected knowledge and skills to be achieved, these are rarely prepared and delivered in a structured and sequenced fashion.

At this level too, postgraduate doctors will develop their own perspective on practice, learning, and professional development. They will cultivate their own interests. They are on their way to becoming independent, specialised practitioners. Postgraduate medical education, therefore, will see postgraduate doctors developing as individual and specialised practitioners, with a unique set of experiences, and developing individuality in their learning process, knowledge, and skills. There will be personal and professional growth that is unique to each individual. A curriculum statement cannot address all of this, but the medical education programme must recognise it.

The development of expertise and proficiency in practice depends on experience, and the application of knowledge and skills. Experience can be deliberately designed, or it can occur as a result of service-based patient care and is usually a combination of both. Some experiences will be amenable to predictable control, but much will be unpredictable. The

organisation of the service will influence the balance of predictable and unpredictable learning.

In addition, postgraduate medical education has different characteristics in different specialties. Professional and sociocultural contexts will differ between locations. Standards for curriculum must enable those differences to be considered and expressed.

The role of the curriculum at postgraduate level is therefore different from its role in basic medical education. A postgraduate curriculum should define the essential and minimum required outcomes and experiences rather than describing or prescribing the totality of individual rich postgraduate experience and associated in-depth learning, nor the full characteristics of the individual, safe, independent practitioner that the postgraduate medical education programme sets out to produce.

Postgraduate medical education in clinical specialties involves applying the knowledge gained during basic medical education to patient care and developing skills and proficiency in clinical problem solving and management, as well as acquiring higher level knowledge, skills, and behaviours, which might include, for example, teamworking, in the postgraduate doctor's chosen specialty.

Learning through patient care has unpredictable elements. So, supervision and feedback, rather than teaching, become important educational tools, in addition to teaching in the clinical environment. There may also be formal education and training events away from the workplace. In biomedical sciences, the same activities apply, although problem-solving and management occur in relation to laboratory processes.

A curriculum at postgraduate level is therefore different from a medical school curriculum, in its use and relationship to the organisation of learning. Achievement of the stated outcomes should be demonstrated, and these will be supplemented by the postgraduate doctor's opportunistic, service-based, and supervised learning.

A curriculum at postgraduate level, therefore, might be defined as a managerial, ideological, and planning document that should:

- inform the postgraduate doctor what to expect including entry requirements, length, and organisation of the programme and its flexibilities, the assessment system, and methods of postgraduate doctor support,
- promote and define appropriate outcomes of postgraduate medical education that will have an impact on the health of patients and communities,
- advise the teacher and supervisor what to do to deliver the content, and support the postgraduate doctor in their task of personal and professional development,
- advise the postgraduate doctor what to expect from the teacher and supervisor<sup>10</sup>,
- enable the responsible body to set appropriate assessments of the postgraduate doctor's achievements and implement relevant evaluations of the postgraduate medical education provision,

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<sup>10</sup> This may include seeking regular feedback from teachers and supervisors on the postgraduate doctor's performance.

- recognise the role of experiential, self-directed<sup>11</sup>, and opportunistic learning in postgraduate medical education and enable their integration into the learning process,
- inform society how the programme is executing its responsibility to produce the next generation of specialised doctors appropriately<sup>12</sup>.

*A note about the classification of outcomes:* In these standards, we refer to outcomes in the categories of knowledge, skills, and behaviours. There are many different classifications of outcomes. We have chosen to classify them as outcomes that are observable and measurable. So, we have avoided, for example, attitudes, aptitudes, and values which are complex constructs, difficult to influence, define and assess, and do not have a predictable link to behaviour.

## 2.1 CURRICULUM AND LICENSURE<sup>13</sup>

**The responsible body has defined the relationship between curriculum organisation and licensure for specialty practice, including specialty postgraduate medical education and sub-specialty postgraduate medical education.**

### **Guidance:**

Curriculum organisation will depend on routes to licensure and the arrangements for both general and specialist licences to practise. Responsible bodies will therefore need to consider:

- how the curriculum meets requirements for licensure,
- how the profession has been consulted about the curriculum,
- whether there are shared curriculum elements among pathways to different specialties e.g., a core common curriculum and a specialty curriculum<sup>14</sup>,
- how specialty postgraduate medical education and sub-specialty postgraduate medical education are organised,
- the knowledge, skills, and behaviours necessary to meet the specific requirements of licensure and specialty qualification,
- what bodies, with what powers to support implementation, have responsibility for developing these curricula and outcomes,

<sup>11</sup> Self-directed learning here means learning that is entirely determined by the postgraduate doctor, both in terms of intended outcomes and method of learning.

<sup>12</sup> Definition adapted from: Grant, J. (2019) Principles of contextual curriculum design. Chapter 5, pp 71-88. In: Swanwick, T., Forrest, K. and O'Brien, B.C. (eds) *Understanding Medical Education: Evidence, Theory, and Practice*. Third edition. Wiley Blackwell, Oxford.

<sup>13</sup> 'Licensure' here refers to the listed qualification for practice as a qualified specialist. In some countries, this might be called 'registration' or 'certification'.

<sup>14</sup> A core curriculum would encompass elements that are common to all postgraduate medical education programmes, either within a specialty area, such as surgery, or across all postgraduate specialties. The core curriculum might be addressed at the beginning of the postgraduate medical education programme, for example where all postgraduate doctors planning to enter any surgical sub-specialty will acquire the same basic surgical skills, knowledge, and behaviours before specialising further, or may be covered as vertical themes throughout the postgraduate medical education programme, in cases such as professionalism or team-working.

- what bodies are responsible for licensure and what relationship they have with the bodies responsible for developing, supporting, implementing, and quality assuring or reviewing curricula.

**Key questions:**

How do postgraduate curricula map on to the routes to general and specialist licensure to practise?

How are specialty postgraduate medical education and qualification, and sub-specialty postgraduate medical education and qualification organised?

Is the relationship between core or common curriculum elements and specialty-related elements clear?

Is responsibility for setting curricula clear? How were stakeholders, including the profession, consulted?

What is the relationship between the body setting the curriculum and the body certifying licensure to practise? Are roles and powers rational and complementary?

How often are curricula reviewed and revised?

Who is responsible for curriculum quality assurance or review?

## 2.2 INTENDED LEARNING OUTCOMES

**The responsible body has defined the learning outcomes that postgraduate doctors should have achieved by the end of their postgraduate medical education in preparation for moving to the next career stage in terms of knowledge, skills, and behaviour.**

**Guidance:**

Outcomes can be set out in any manner that clearly describes what is intended in terms of knowledge, skills, and behaviour as a specialist.

Ensure that the defined learning outcomes align with the postgraduate medical education programme's mission.

Ensure that the defined outcomes map on to relevant national regulatory standards or government and employer requirements, and the values and standards that the profession sets in relation to practice and personal performance.

Analyse whether the specified learning outcomes address the knowledge, skills, and behaviour that each part of the postgraduate medical education programme will support the postgraduate doctor to attain. These curriculum outcomes can be expressed in a variety of different ways that are amenable to judgement (assessment), feedback, and action.

Consider how the outcomes can be used as the basis for the formal design and delivery of content, and for tracking experience and its effects, as well as the assessment of learning and evaluation of the postgraduate medical education programme.

Ensure that the curriculum recognises that individual learning will occur beyond that specified in the curriculum statement, both as opportunistic and self-directed learning.

**Key questions:**

How were the intended outcomes for the medical education programme as a whole and for each aspect of that programme designed, developed, and communicated to actual and potential postgraduate doctors?

Which stakeholders were involved in their development? How was the profession consulted?

How do they relate to the intended career paths of postgraduate doctors?

What makes the chosen outcomes appropriate to the social and professional context of the programme?

Does the recognition of learning achievement take into account learning through formal processes, service-based learning, and other opportunistic, self-directed, and extra-curricular learning?

**2.3 CURRICULUM ORGANISATION AND STRUCTURE**

**The responsible body has clearly described the overall organisation of the curriculum, the recognition of self-directed and opportunistic learning, and the principles underlying the curriculum model employed.**

**Guidance:**

This standard refers to the way in which content (knowledge and skills) and experiences (behaviours) are organised within the curriculum. There are many options and variants. Choice of curriculum design is related to the mission, intended outcomes, resources, organisation, and context of the postgraduate medical education programme.

**Key questions:**

What are the principles behind the chosen curriculum design?

How was the model of curriculum organisation chosen? To what extent was the model influenced or informed by local regulatory requirements?

What is the structural or organisational relationship between the different areas of learning and development which the curriculum encompasses?

How does the curriculum take account of and support self-directed and opportunistic learning?

How does the curriculum design support the mission of the postgraduate medical education programme?

## 2.4 CURRICULUM CONTENT

- a) **The curriculum builds on the learning outcomes that the postgraduate doctors achieved by the end of their basic medical education.**
- b) **The responsible body can explain the reasons for inclusion of content in the curriculum designed to prepare postgraduate doctors for their subsequent role as competent independent specialist<sup>15</sup> practitioners.**
- c) **Content in at least four principal domains is described:**
  - **the scientific and practice basis of the specialty,**
  - **clinical, service, public health sciences, and skills,**
  - **health system sciences and population health,**
  - **relevant behavioural, ethical, and social science topics.**

**Guidance:**

The curriculum states what postgraduate doctors' entry knowledge and skills are assumed to be.

The curriculum should guide the transition from basic medical education to independent practice.

Curriculum content in all domains should be sufficiently developed to enable the postgraduate doctor to achieve the intended outcomes of the curriculum, to deliver safe patient care or laboratory services during postgraduate medical education, and to progress safely to independent practice.

<sup>15</sup> Remember that in these standards, primary care is regarded as a specialty.

Curricula may vary according to the postgraduate medical education programme as a whole, country, and context, but all are likely to include content from at least four principal domains:

- The scientific and practice basis of the specialty, including the range of conditions to be diagnosed and managed.
- Clinical sciences and skills which include the knowledge and related professional skills required for the postgraduate doctor to assume appropriate responsibility for patient care during postgraduate medical education and when moving on to independent practice<sup>16</sup>.
- Health systems science which includes population health, public health, and delivery of healthcare at local level.
- Behavioural and social sciences which are relevant to the local context and culture and include principles of professional practice including ethics.

**Key questions:**

Who is responsible for determining the content of the curriculum, including clinical, public health, or laboratory experiences?

How does the postgraduate curriculum co-ordinate with and build on the basic medical education curriculum?

How is curriculum content decided? What steps and consultations are involved?

How does the curriculum link with local healthcare service needs and requirements?

What elements of the scientific and practice basis of the specialty are included in the curriculum? How are these choices made?

What elements of behavioural and social sciences are included in the curriculum? How are these choices made?

What elements (if any) of health systems science are included in the curriculum? How are these choices made?

How does the postgraduate medical education programme modify curriculum content related to advances in knowledge and practice, and the future of the specialty?

<sup>16</sup> Where the curriculum is for laboratory sciences, this guidance should be modified accordingly.

## 2.5 LEARNING METHODS AND EXPERIENCES

**The postgraduate medical education programme employs or recognises a range of learning methods and experiences, including self-directed and opportunistic learning, and provision of supervision and feedback on performance in the workplace, to ensure that postgraduate doctors achieve the intended outcomes of the curriculum and of their own personal learning.**

### **Guidance:**

Learning methods and experiences include techniques for teaching and learning designed to achieve the stated outcomes and methods that support postgraduate doctors in their own self-directed and opportunistic learning, as well as the provision of supervision, mentoring, and timely feedback.

Those experiences might be formal or informal, group-based or individual, and may occur inside a medical school, in a postgraduate medical education organisation, in the community, or in primary, secondary, or tertiary care institutions. Choice and arrangement of postgraduate medical education experiences will be determined by the curriculum, local service and cultural issues in education, and by available human and material resources.

Skilfully designed and supported virtual learning methods (digital, distance, distributed<sup>17</sup>, or e-learning) and simulation may be considered, presented, and defended as a complementary postgraduate medical education approach under appropriate circumstances, including societal emergencies.

### **Key questions:**

What principles inform the selection and recognition of learning methods and experiences defined in the curriculum? How were these principles derived?

According to what principles are the chosen learning methods and experiences quality assured?

How are supervision and feedback planned and delivered?

In what ways are the learning methods and experiences appropriate to the local context, service, resources, and culture?

How are the learning methods and experiences tracked and evaluated to ensure appropriateness and effectiveness?

<sup>17</sup> See the [WFME Standards for Distributed and Distance Learning in Medical Education \(DDL\), 2021](#).

## 2.6 CURRICULUM DELIVERY AND SITES OF LEARNING

**The postgraduate medical education programme employs a range of quality assured and supported sites of learning that provide the clinical experience required to achieve the specified outcomes.**

### **Guidance:**

Postgraduate medical education may require attachment to a range of clinical, public health or laboratory departments and sites in primary, secondary, and tertiary care, to ensure postgraduate doctors' achievement of the specified outcomes.

The planned relationship between these (the rotations), the range of experience offered, the quality of education and training, effective supervision and feedback are key factors in curriculum coverage and delivery of postgraduate medical education.

Protocols, guidance, and support should be provided to all postgraduate medical education departments and sites.

### **Key questions:**

What criteria are used to identify appropriate experiential sites to ensure curriculum coverage?

How is adequate provision of resources to support learning ensured in the experiential sites?

How are decisions made about the initial and continuing use of experiential sites of postgraduate medical education?

How are these sites supported and quality assured for the experience they offer?

How are these sites supported to provide that quality of experience?

How is a balance maintained between service and learning in the experiential sites?

How is the rotation between sites planned and described?

## 2.7 OPPORTUNITIES FOR HIGHER DEGREES AND RESEARCH

The postgraduate medical education programme offers opportunities for research, either as part of the programme, or as time out of the programme to conduct a higher research degree.

### Guidance:

The responsible body ensures that opportunities for research are made available to postgraduate doctors either as part of their postgraduate medical education programme, or as time away from the programme to pursue a higher degree or other research work.

Where opportunities for research are offered, time to conduct this should be provided.

Where higher degrees are awarded as part of postgraduate medical education, the timing and requirements for these are made clear.

Where the postgraduate medical education programme enables study for a higher degree for those postgraduate doctors who choose to do this, the requirements and conditions for these are clear.

### Key questions:

How does the postgraduate medical education programme offer opportunities for research, either as part of the programme, or as time out of the programme to conduct a higher research degree?

How are mandatory higher degrees organised within the postgraduate medical education programme?

How are optional degrees organised and made available?

### 3. ASSESSMENT

#### Importance of this area

Assessment assures, drives, guides, creates, and optimises learning while providing opportunities for feedback. In the context of postgraduate medical education, a system of assessment must exist, which incorporates multiple assessments that achieve the purposes of the responsible body and its stakeholders including the communities served. While knowledge and skills are acquired, postgraduate medical education is characterised by a gradual increase in responsibility for patient care, under supervision, leading to independent practice. In support of this, the programme must have a series of formative and summative assessments that address the development of the postgraduate doctor in their chosen specialty, as well as levels of competence and performance that the postgraduate doctor must achieve before moving on to increased responsibility for patient care. Observation of postgraduate doctors in the provision of clinical services should be central to the system, given its aim of ensuring readiness for independent practice.

Postgraduate medical education, as well as career paths, vary considerably within and across countries, and judgments about the applicability of the assessment standards must take this into account. Importantly, the assessment system of a responsible body may well be implemented across a variety of locations, clinical, laboratory, and public health sites, and teaching programmes. Hence, management, quality assurance, and quality improvement of the assessment system is a particular challenge, but one that must be met.

#### 3.1 ASSESSMENT POLICY AND SYSTEM

**The responsible body has a system of assessment that is mapped onto the process and outcomes of the postgraduate programme. It ensures that multiple coordinated assessments are aligned with the learning outcomes; the system incorporates observation of postgraduate doctors in the provision of clinical, laboratory, or public health services for both formative and summative purposes; and the system is communicated to all stakeholders.**

#### **Guidance:**

An assessment policy with a system that guides and supports its implementation will entail the use of multiple formative and summative methods that will contribute to acquisition of the knowledge, clinical, laboratory, or public health skills and behaviours needed to be a postgraduate doctor and then an independent doctor. The policy and the system should be responsive to the organisation of postgraduate medical education, the mission of the responsible body, its specified outcomes, the resources available, and the context.

**Key questions:**

How does the assessment system map on to the process and outcomes of the postgraduate programme?

Which assessments are used for each of the specified intermediate and long-term outcomes?

How are decisions made about the number, timing, and balance of formative and summative assessments?

How are assessments integrated and coordinated across the range of outcomes and the curriculum?

**3.2 ASSESSMENT IN SUPPORT OF LEARNING  
(FORMATIVE ASSESSMENT)**

**The system of assessment regularly identifies postgraduate doctors' strengths and weaknesses and provides them with actionable feedback. The feedback is accompanied by guidance that directs postgraduate doctors to educational resources and experiences, thereby ensuring the opportunity to learn.**

**Guidance:**

Feedback is one of the biggest drivers of educational achievement<sup>18</sup>. Postgraduate doctors need to be assessed early and regularly throughout the postgraduate programme for purposes of providing feedback that guides their learning. This includes early identification of underperforming postgraduate doctors and the offer of performance improvement measures.

**Key questions:**

How are postgraduate doctors assessed to support their learning?

What feedback is provided to postgraduate doctors based on their formative assessments?

How are postgraduate doctors assessed to determine those who need additional help?

What systems of support are offered to those postgraduate doctors with identified needs?

<sup>18</sup> Hattie, J., and Timperley, H. (2007) The power of feedback. *Review of Educational Research*, 77, 1, 81-112.

### 3.3 ASSESSMENT IN SUPPORT OF DECISION-MAKING (SUMMATIVE ASSESSMENT)

The system of assessment informs decisions on progression and completion. The summative assessments used as part of the system are well designed, producing reliable and valid results, and appropriate to measuring both intermediate and long-term education and training outcomes.

#### Guidance:

Assessment of the decision-making process is essential to accountability and critical to the protection of patients and communities. These assessments must be fair to postgraduate doctors and, as a system of assessments, they must attest to all aspects of competence. To accomplish these ends, they must meet standards of quality.

#### Key questions:

How are the plans for the content of assessments developed?

How are decisions about passing made for the summative assessments?

What appeals mechanisms regarding assessment results are in place for postgraduate doctors?

What information is provided to postgraduate doctors and other stakeholders, concerning the content, style, and quality of assessments?

How are assessments used to guide and determine postgraduate doctor progression between successive stages of the course or programme?

### 3.4 QUALITY ASSURANCE OF THE ASSESSMENT SYSTEM

There are mechanisms in place to assure the quality of assessments across all locations and with different assessors. Assessment data contribute to the improved performance of teachers, clinical, laboratory and public health supervisors, courses, and the institution<sup>19</sup>. The assessment system addresses issues of patient safety and the increasing independence of the postgraduate doctor.

#### Guidance:

It is important for the responsible body to review its individual assessments regularly, as well as the whole assessment system. It is also important to use quality assurance data from the assessments, as well as feedback from stakeholders, for continuous quality improvement of each assessment, the assessment system, implementation of the system in different locations and with different assessors, the postgraduate programme, patient safety, and the responsible body<sup>20</sup>.

#### Key questions:

Who is responsible for planning and implementing a quality assurance system for assessment?

What quality assurance steps are planned and implemented?

How does the quality assurance system ensure consistent implementation of assessment across different locations and with different assessors?

How are comments and experiences about the assessments gathered from postgraduate doctors, teachers, supervisors, and other stakeholders?

How are individual assessments analysed to ensure their quality?

How are data from assessments used to evaluate the postgraduate programme in practice?

How are the assessment system and individual assessments regularly reviewed and revised?

<sup>19</sup> As described in [Standard 7](#).

<sup>20</sup> It should be noted that this is distinct, though related to quality assurance and quality improvement for the educational programme ([Standard 7](#)).

## 4. POSTGRADUATE DOCTORS

### Importance of this area

Appropriate selection and progression policies and systems for support of postgraduate doctors are important for quality, management, and outcomes of the postgraduate medical education programme, and for the safety of patients and target populations, and wellbeing of postgraduate doctors. Where selection policies are centrally managed<sup>21</sup>, it is important to know how decisions are made about the placement of applicants in available postgraduate medical education positions.

A key issue for postgraduate doctors is that of equity. It is common for medical graduates from diverse socio-cultural backgrounds to join medical education programmes at postgraduate level in another geographical location. This might require special attention to ways of ensuring that they reach a level platform with local graduates in terms of, for example, communication, knowledge of the health service, or career development.

#### 4.1 SELECTION AND PROGRESSION POLICY

**The responsible body has a publicly available policy that sets out the aims, principles, criteria, requirements, and processes for the selection, placement, and progression of postgraduate doctors, including the number of available postgraduate medical education posts, processes for voluntary withdrawal, and a process of appealing against decisions.**

#### **Guidance:**

Where selection and progression procedures are governed by national policy, it is clear how equitable decisions are made about selection and placement, and how these rules are applied locally.

Where the responsible body sets aspects of its own selection and progression policy and process, clarify the relationship of these to the mission statement, relevant regulatory requirements, and the local context.

The admissions process should reflect selection on the basis of the agreed, explicit qualities needed by graduates to serve their societies.

The following issues are important in developing the policy:

- the relationship between the size of postgraduate doctor intake (including any international postgraduate doctor intake) and the resources, capacity, and infrastructure available to train them adequately,

<sup>21</sup> Examples of national selection processes are:

The United States National Residency Matching Programme: <https://www.nrmp.org>

The United Kingdom Foundation Programme: <https://foundationprogramme.nhs.uk/about/>

UK Medical Specialty Recruitment: <https://medical.hee.nhs.uk/medical-training-recruitment>

- the principles underpinning availability of postgraduate medical education posts, and the actual numbers and locations of such posts, equality, equity<sup>22</sup>, inclusivity, and diversity issues,
- policies for re-application, deferred entry, and transfer from other postgraduate medical education programmes,
- policies for progression,
- policies for voluntary withdrawal from postgraduate medical education,
- fair and due process for dismissal from the programme,
- appeals procedures against decisions.

Describe the relationship between the capacity of the postgraduate medical education programme and the number of available career posts for trained doctors to move into.

Consider the following issues for an equitable selection, placement, and progression process:

- requirements for selection,
- stages in the process of selection,
- stages in the placement of successful applicants in postgraduate medical education programmes,
- mechanisms for making offers,
- conditions for progression through postgraduate medical education,
- processes for voluntary withdrawal,
- mechanisms for making and accepting complaints.

Identify funding for the selection process.

**Key questions:**

How is alignment determined between the selection, placement and progression policy, and the mission of the responsible body?

How does the selection and progression policy fit with regulatory (accreditation) or government requirements?

How is the selection and progression policy tailored to local and national workforce needs?

<sup>22</sup> Equality means that resources are allocated equally, regardless of need, whereas equity means that resources are allocated according to need. These approaches are therefore contradictory, and the approach to be adopted must be rationally selected.

How is the selection and progression policy designed to be fair and equitable within the local context?

How are issues of equality, equity, inclusivity, and diversity addressed?

How is the selection and progression policy publicised?

How is the capacity of the postgraduate medical education programme aligned with available career posts for newly qualified doctors? How is the balance between supply and demand managed?

How is the selection and progression system regularly monitored, reviewed, and revised?

What is the fair and due process for dismissal from the programme?

What is the appeals process for challenging decisions?

How are selection processes funded?

#### 4.2 PERFORMANCE IMPROVEMENT AND EXIT FROM THE PROGRAMME

**The responsible body has a publicly available policy that sets out processes and opportunities for performance improvement, an appeals process, and the conditions that would require a postgraduate doctor to leave the programme.**

##### **Guidance:**

A process is in place to identify problems with academic or professional performance, especially at an early stage.

Where a postgraduate doctor is demonstrating problems with academic or professional performance, the responsible body sets out a programme of performance improvement.

Where a postgraduate doctor does not respond to performance improvement measures and support, the responsible body sets out fair processes for requiring the postgraduate doctor to leave the programme, with career guidance, if appropriate.

The responsible body establishes an appeals process in relation to performance improvement and exit from the programme.

**Key questions:**

How are problems with academic or professional performance defined and identified, especially at an early stage?

What performance improvement programmes are available to the postgraduate doctor experiencing such difficulties?

What processes are set out that require the postgraduate doctor to leave the programme?

What advice or career guidance is offered to a postgraduate doctor who is required to leave the programme?

What is the arrangement for appeals against the decisions?

**4.3 INTERNATIONAL MEDICAL GRADUATES<sup>23</sup>**

**The responsible body has a publicly available policy for recognition of qualifications, induction and support of international medical graduates that ensures equitable opportunities.**

**Guidance:**

A policy on the recognition and equivalence of degrees gained in another country is available.

The responsible body identifies the challenges faced by international medical graduates in relation to selection, preparation, induction, and progress through postgraduate medical education.

A policy and implementation plan are in place to address each of the challenges.

A process is in place for international medical graduates to provide feedback about the programme, share concerns, and access support.

<sup>23</sup> An international medical graduate has graduated from a medical school outside the country where they intend to train or practise.

**Key questions:**

What are the processes and principles whereby degrees acquired in another country are recognised and judged as equivalent or acceptable?

How does the responsible body identify the challenges faced by international medical graduates in relation to selection, preparation, induction, and progress through postgraduate medical education?

What policy, special programmes, and implementation plans are in place to address each of the challenges?

What process is in place for international medical graduates to provide feedback about the programme, share concerns, and access support?

**4.4 POSTGRADUATE DOCTOR WORK AND STUDY**

**Recognising that key learning takes place through patient care, postgraduate doctors have a clear programme which specifies overall workload and working hours, that balances education and service provision responsibilities and commitments, with adequate and appropriate supervisory arrangements, and time for study, including preparation for and sitting professional examinations.**

**Guidance:**

Provide a description of activities, including service responsibilities, education, supervisory and study time.

Provide guidance on the minimum and maximum number of working hours required, including leave arrangements.

Provide guidance on workload and responsibilities.

Provide guidance on arrangements for preparing for and sitting professional examinations.

**Key questions:**

How are workload and working hours calculated and specified?

How are workplans for service provision, education, and study decided, disseminated, and enforced?

What guidance is provided on minimum and maximum number of working hours required, and leave arrangements?

What guidance is provided on clinical workload and responsibilities?

What arrangements for examination preparation and sitting are in place?

**4.5 POSTGRADUATE DOCTOR SAFETY**

**The responsible body has clarified the legal status of the postgraduate doctor in relation to patient care and has implemented a quality improvement system that addresses issues of the postgraduate doctor's physical and psychological safety in the postgraduate medical education environment.**

**Guidance:**

Define the meaning of physical and psychological safety for the postgraduate doctor.

Establish the postgraduate doctor's legal status and responsibility for patient care.

Establish how responsibility for postgraduate doctor safety is taken at both management level and in the postgraduate medical education environment.

Identify risks to postgraduate doctor safety in the postgraduate medical education environment.

Show how risks to postgraduate doctor safety are handled, mitigated, and monitored.

**Key questions:**

What is the legal status of the postgraduate doctor in relation to responsibility for patient care?

How is physical and psychological postgraduate doctor safety defined by the responsible body?

What groups or individuals have responsibility for postgraduate doctor safety at programme management level and within postgraduate medical education sites and environments?

How are risks to postgraduate doctor safety identified, recorded, and reported?

How are risks handled and mitigated?

What records are kept of measures to ensure postgraduate doctor safety and steps taken when risks are identified?

#### 4.6 POSTGRADUATE DOCTOR REMUNERATION AND FEES

**The responsible body has a published and regularly reviewed policy about remuneration to postgraduate doctors for service provided, and fees for postgraduate examinations.**

##### **Guidance:**

In relation to financial security, consider how postgraduate doctors' remuneration covers their costs of living, research, and postgraduate medical education.

Consider how the cost of postgraduate medical education is covered for the postgraduate doctor. If they are providing patient care, or other service, ensure that they are remunerated.

Postgraduate doctors, employers, and bodies responsible for setting and running postgraduate examinations will benefit from shared clarity about postgraduate doctor remuneration and fees for examinations, as well as mechanisms for alleviating difficult-to-cover costs.

The responsible body might gather the required information for higher-level policy-making or negotiate these decisions with all interested parties.

The policy and information will require review and updating as wider economic circumstances change.

##### **Key questions:**

Does the responsible body know how an appropriate minimum living wage is calculated and assured for postgraduate doctors?

What are the pay scales for service and fees for examinations?

How are these published?

How are they reviewed and updated?

#### 4.7 POSTGRADUATE DOCTOR HEALTH AND WELFARE<sup>24</sup>

The responsible body provides postgraduate doctors with accessible and confidential support services in relation to:

- a) physical health,
- b) psychological health, including burn-out,
- c) avoidance of abusive treatment,
- d) conflict resolution,
- e) professional performance,
- f) managing finances,
- g) legal support,
- h) career development.

**Guidance:**

Postgraduate doctors might require support in developing professional skills, in managing disabilities, in physical and mental health and personal welfare, in managing finances, and in career planning. Consider what support is made available to address these individual needs.

Career planning will require information about the number and distribution of both medical education posts and consultant posts for fully trained specialist doctors.

Consider what emergency support services are available in the event of personal trauma or crisis.

Consider how to avoid postgraduate doctors being subjected to abusive treatment from supervisors, peers, managers, patients, or patients' families.

Establish processes for resolution of conflicts between postgraduate doctors and supervisors, or postgraduate doctors and others.

Specify a process to identify postgraduate doctors in need of professional or personal counselling and support.

Specify what legal support or indemnity is available for postgraduate doctors in the advent of adverse events or complaints.

Consider how such services will be publicised, offered, and accessed in a confidential manner, if necessary.

Consider how to develop support services in consultation with postgraduate doctors' representatives.

<sup>24</sup> Sometimes referred to as well-being.

Ensure arrangements for care of postgraduate doctors in the workplace, including availability of food and beverages, and a rest room.

**Key questions:**

In what ways are the professional and personal support and counselling services equitable and consistent with the needs of postgraduate doctors?

How are services provided for:

- a) developing professional skills,
- b) managing disabilities,
- c) avoidance of abusive treatment,
- d) supporting physical and mental health, and personal welfare,
- e) managing finances,
- f) legal support,
- g) career planning?

What information is provided about the number and distribution of both postgraduate medical education posts and consultant posts for fully trained doctors?

How are support and information services recommended and communicated to postgraduate doctors and staff?

What arrangements are in place for care of postgraduate doctors in the workplace, including availability of food and beverages, and a rest room?

How does the responsible body ensure that postgraduate doctors avoid being subjected to abusive treatment from supervisors, peers, managers, patients, or patients' families?

What legal support or indemnity is available for postgraduate doctors in the advent of adverse events or complaints?

What processes are available for resolution of conflicts between postgraduate doctors and supervisors, and postgraduate doctors and others.

In relation to finances:

- a) How are the costs of postgraduate medical education covered for the postgraduate doctor?
- b) How are postgraduate doctors remunerated for any patient care they provide?
- c) How is a minimum living wage assured for them?

How do postgraduate doctor organisations collaborate with the responsible body to develop and implement these services?

How appropriate are these services procedurally and culturally?

How is feasibility of the services judged, in terms of human, financial, and physical resources?

How are the services regularly reviewed with postgraduate doctors' representatives to ensure relevance, accessibility, and confidentiality?

## 5. TEACHERS AND CLINICAL SUPERVISORS

### Importance of this area

Adequate numbers of well-trained, supported and committed teachers, and clinical supervisors, supplemented by other professions, and technical and administrative staff are critical to the achievement of an effective postgraduate medical education programme. Teachers might conduct learning events designed to address specific areas of knowledge and skill, whereas clinical supervisors work with postgraduate doctors and take responsibility for supervision and postgraduate medical education in the workplace. In practice, teachers and supervisors might be the same people, taking different roles at different times.

#### 5.1 TEACHER AND CLINICAL SUPERVISOR ESTABLISHMENT

**The responsible body ensures availability of the number and range of appropriate teachers and clinical or service supervisors required to deliver the postgraduate medical education programme for the given number of postgraduate doctors and locations.**

##### Guidance:

Determine teaching and clinical or service supervisory staff establishment policy, considering:

- a) the number, level, roles, and qualifications of teaching and clinical supervisory staff required to deliver the planned postgraduate medical education programme to the intended number of postgraduate doctors,
- b) the distribution of teaching and clinical supervisory staff by grade and experience,
- c) the balance of teachers' and supervisors' responsibilities for teaching, patient care or service, supervision, and research,
- d) the availability of other professions, and technical and administrative staff to support the postgraduate medical education programme in educational or supervisory roles.

Negotiate job plans which allocate time for teaching, patient care or service, supervision, and research.

##### Key questions:

How did the responsible body arrive at the required number and characteristics of their teaching and clinical or service supervisory staff?

How do the number and characteristics of the teaching and clinical or service supervisory staff align with the design, delivery, and quality assurance of the postgraduate medical education programme, including supervision and feedback?

What education and supervisory support is given to the postgraduate medical education programme by other professions, and technical and administrative staff?

How do job plans allocate time for teaching, patient care or service, supervision, and research? How are these negotiated with the healthcare service, where that is the employer?

## 5.2 TEACHING AND CLINICAL SUPERVISORY STAFF PERFORMANCE AND CONDUCT

**The responsible body specifies, communicates, and monitors the expected performance and conduct of teaching and clinical supervisory staff.**

### **Guidance:**

Develop a clear statement describing the responsibilities of teaching and clinical supervisory staff in relation to the postgraduate medical education programme.

Develop a code of conduct in relation to these responsibilities, setting out rules and expectations to guide appropriate behaviour in these roles.

Ensure that postgraduate doctors are involved in developing that statement and code of conduct, and in contributing to its implementation, and continuing review.

Develop a monitoring and performance improvement process for teaching and supervisory staff.

### **Key questions:**

What information does the responsible body provide for new and existing teaching and clinical supervisory staff and how is this provided?

What behaviours does the code of conduct specify?

What induction and information does the responsible body provide for teaching and clinical supervisory staff?

How do postgraduate doctors contribute to ensuring the performance of teaching and clinical supervisory staff? How are postgraduate doctors' complaints, defined needs, and recommendations collected and used?

Who is responsible for monitoring and reviewing teaching and clinical supervisory staff performance and conduct? How are these responsibilities carried out? What performance improvement support is offered?

### 5.3 CONTINUING PROFESSIONAL DEVELOPMENT FOR TEACHING AND CLINICAL SUPERVISORY STAFF

**The responsible body implements a stated policy on the continuing professional development of its teaching and staff in relation to their discipline, their research, and their postgraduate medical education and supervisory roles.**

**Guidance:**

Develop and publicise a clear description of how the responsible body supports and manages the professional development of each member of teaching and supervisory staff in relation to their discipline, their research, and their postgraduate medical education and supervisory roles.

The continuing professional development of teaching and supervisory staff should be recognised, facilitated, and valued.

**Key questions:**

What information does the responsible body give to new and existing teaching and clinical supervisory staff members on its facilitation or provision of continuing professional development?

How does the responsible body take administrative responsibility for implementation of the teaching and clinical supervisory staff continuing professional development policy?

How does the responsible body ensure protected funds and time to support its teaching and clinical supervisory staff in their continuing professional development?

How is the continuing professional development of teaching and supervisory staff recognised and valued?

## 6. EDUCATION AND TRAINING RESOURCES

### Importance of this area

At postgraduate level, education and training resources are required to support learning in the workplace, as well as supporting preparation for higher professional examinations or the acquisition of specific knowledge and skills. Sufficient educationally and contextually appropriate physical, clinical, laboratory, and information resources, including digital libraries, are critical to delivery of postgraduate medical education, including offering research opportunities.

### 6.1 PHYSICAL FACILITIES FOR TEACHING AND LEARNING

**The responsible body ensures sufficient physical and support facilities to deliver the curriculum, including research opportunities, and to ensure development of clinical performance in the workplace.**

#### Guidance:

Physical facilities include the physical spaces and equipment available to implement the planned curriculum and provide research opportunities for the given number of postgraduate doctors.

Support facilities might include virtual resources and simulations, artificial intelligence, and information technology services.

Equipment might include:

- the items needed for patient care,
- items needed for training in practical techniques,
- specialty-specific equipment,
- information technology and record systems,
- virtual and artificial intelligence resources,
- electronic or distance learning resources,
- physical spaces for study,
- physical spaces and resources for research.

#### Key questions:

How does the responsible body determine and monitor the adequacy of the physical infrastructure (space and equipment) provided for the theoretical and practical learning specified in the curriculum?

How does the responsible body determine and monitor the adequacy of the physical infrastructure provided for workplace learning and patient care?

How does the responsible body ensure resources for PG doctors to conduct research?

## 6.2 WORK-BASED POSTGRADUATE MEDICAL EDUCATION

**The responsible body ensures that the standards of professional practice, including accountability and record-keeping, in the workplace setting are appropriate for effective postgraduate medical education.**

### **Guidance:**

Consider the range and quality of experience in the workplace setting that is required to provide adequate postgraduate medical education in the practice of the discipline to fulfil the requirements of the curriculum.

### **Key questions:**

What range of experience is required and provided for postgraduate doctors to develop as a practitioner in the workplace?

How is responsibility for patient care or service planned and provided in this regard? What is the policy on care of patients or conduct of service processes?

How does the responsible body ensure consistency of curriculum delivery and practical experience in workplace settings?

## 6.3 INFORMATION SOURCES, RESOURCES, AND USE

**The responsible body provides adequate access to virtual and physical information resources to support the postgraduate programme's mission and curriculum, and ensures their ethical use.**

### **Guidance:**

Consider the provision of access to information sources and resources for postgraduate doctors, teachers, and clinical supervisors, both in the workplace and in the study spaces, including online and physical library resources. Evaluate these facilities in relation to the postgraduate medical education programme's mission and curriculum.

Consider how postgraduate doctors might be allocated time for research projects.

Information sources and resources might include:

- those required for research,
- healthcare information systems,
- patient data.

Where information is sensitive, develop rules for their ethical and secure access and use.

**Key questions:**

What opportunities for independent search for information are provided?

What information sources and resources are required by postgraduate doctors, teachers, and clinical supervisors?

What time do postgraduate doctors have for research and use of resources?

How are these provided?

How is their adequacy evaluated?

How does the responsible body ensure that all postgraduate doctors, teachers, and clinical supervisors have access to needed information?

What rules are applied for ethical use of sensitive information?

## 7. QUALITY IMPROVEMENT

### Importance of this area

Throughout this document, reference has been made to the need to evaluate or review all aspects of the programme. This section addresses that issue.

Quality improvement<sup>25</sup> can be seen as the implementation of a variety of processes and methods, designed at local level, to ensure that the postgraduate medical education programme is continually being reviewed and made better. The process therefore serves local needs and is locally run. Regular review of the activities of the postgraduate medical education programme in practice, its management, and outcomes will ensure its appropriateness, effectiveness, and compliance with the mission statement, curriculum, and regulatory requirements, and will provide a means of early intervention if problems arise.

### 7.1 THE QUALITY IMPROVEMENT SYSTEM<sup>26</sup>

**The responsible body has implemented a locally developed quality improvement system that regularly addresses postgraduate medical education in practice, administration, outcomes of the postgraduate medical education programme, and achievement of the mission, along with methods for making improvements.**

#### Guidance:

State which stakeholders are involved in developing the quality improvement system: these might include teachers, supervisors, clinicians, postgraduate doctors, patients, public health and healthcare service representatives.

Consider the purposes, role, design, and management of the responsible body's quality improvement system, including what is regarded as appropriate quality in its planning and implementation practices.

Consider how to gather regular data about the postgraduate programme in practice, its administration, outcomes, and achievement of the mission.

Consider how to collect information from all stakeholders, including postgraduate doctors, teachers, and supervisors

<sup>25</sup> Quality assurance is the judgement made about a programme against defined standards or requirements, at one point in time. Quality improvement involves regular review, and implementation of interventions to solve problems or enhance the programme, which will later be reviewed again as part of the quality improvement cycle.

<sup>26</sup> Quality improvement models and systems can be designed, or are available, such as continuous quality improvement, Kaizen, Six Sigma, Lean, and Total Quality Management. Most are derived from industry. All endeavour to put systems in place to continuously evaluate or monitor and improve all aspects of education and training within the organisation.

Design and apply a decision-making and change management structure and process, as part of quality improvement.

Prepare and disseminate a written document that sets out the quality improvement system.

**Key questions:**

Which stakeholders are involved in developing and implementing the quality improvement process?

How are the purposes and methods of quality improvement, including data collection, and subsequent actions taken, defined and described, and made publicly available?

Are there appropriately knowledgeable and skilled individuals to design and implement the quality improvement system?

How is responsibility for design and implementation of the quality improvement system clearly allocated between the administration, teachers, supervisors, postgraduate doctors, and postgraduate medical education sites?

How are resources allocated to quality improvement?

How has the responsible body involved external stakeholders?

How are the administration, process, and outcomes of the postgraduate medical education programme, and achievement of the mission, evaluated, and improvements made?

How is the quality improvement system used to update the postgraduate medical education programme's design, activities, and management, and hence ensure continuous renewal?

How is the quality improvement system communicated to all stakeholders?

## 7.2 PATIENT SAFETY

**The responsible body has implemented a quality improvement system that addresses issues of postgraduate doctor error and patient safety in the postgraduate medical education environment.**

### **Guidance:**

Establish how responsibility for postgraduate doctor error and patient safety is taken at both management level and in the postgraduate medical education environment.

Identify risks to patient safety in the postgraduate medical education environment.

Identify risks to patient safety deriving from postgraduate doctor error.

Show how risks are mitigated and monitored.

### **Key questions:**

How are postgraduate doctor error and patient safety defined and communicated to stakeholders by the responsible body?

What groups or individuals have responsibility for monitoring postgraduate doctor error and patient safety at programme management level and within postgraduate medical education sites and the healthcare service?

How are risks to patient safety regularly reviewed, identified, recorded, and reported?

How are risks addressed and mitigated?

What records are kept of measures to avoid postgraduate doctor error and ensure patient safety and steps taken when risks are identified?

How are relevant bodies informed of any patient safety issues and risks?

## 8. GOVERNANCE AND ADMINISTRATION

### Importance of this area

Effective implementation, quality assurance, and quality improvement of the postgraduate medical education programme requires management, administration, budget allocation, and accountability involving all interested parties.

#### 8.1 GOVERNANCE

**The responsible body has a defined governance structure in relation to postgraduate medical education including supervision, postgraduate medical education environments and sites, and resource allocation including budgets, which is transparent and accessible to all stakeholders, aligns with the postgraduate programme's mission and functions, and ensures stability of the responsible body<sup>27</sup>.**

##### Guidance:

Consider including patients, communities, service users, and representatives of basic medical education in decisions about governance structures.

Describe the leadership and decision-making model of the responsible body and its committee structure, including remit, responsibilities, membership including representatives of postgraduate medical education sites and postgraduate doctors, responsibilities, and reporting lines.

Decide who has responsibility for budgets and to whom they are accountable.

Ensure that there is appropriate medical leadership and engagement at every level.

Ensure that the responsible body has a risk identification and management procedure.

##### Key questions:

How and by which committees, organisations, or groups are decisions made about the functioning of the responsible body?

By what processes and committee structures are postgraduate medical education environments and sites governed?

How is budget allocation aligned with the mission of the responsible body?

<sup>27</sup> Where local or national government has involvement or influence in relation to governance and administration of postgraduate medical education, a local version of this standard might be developed to account for these arrangements.

What governance arrangements are there to review the performance of the responsible body?

How are risks identified and mitigated?

## 8.2 SHARED GOVERNANCE

**Where responsibility for postgraduate medical education is shared between more than one body, there is a clear statement of roles, responsibilities, and relationships.**

### Guidance:

Identify the bodies involved in the definition, delivery, management, and governance of postgraduate medical education.

Consider including patients, communities, service users, the healthcare service, and representatives of basic medical education, in the governance process.

Define the roles and responsibilities of each and the relationships between them, including accountability and reporting, and involvement in quality improvement processes.

### Key questions:

What bodies are involved in the definition, delivery, management, or governance of postgraduate medical education?

What are their roles and responsibilities and the relationships between them, including accountability and reporting?

## 8.3 POSTGRADUATE DOCTOR AND STAFF REPRESENTATION

**The responsible body has policies and procedures for participation of postgraduate doctors, clinical and service staff, and academic staff in key aspects of the programme's management, activities, and processes.**

### Guidance:

Consider how postgraduate doctors, clinical and service staff, and academic staff might participate in programme planning, implementation, assessment, and quality evaluation and improvement activities, or provide comment on them.

Define mechanisms for arranging the involvement of postgraduate doctors, clinical and service staff, and academic staff in governance and administration, as appropriate.

**Key questions:**

To what extent and in what ways are postgraduate doctors, clinical and service staff, and academic staff involved in the responsible body's decision-making and functioning?

**8.4 ADMINISTRATION**

**The responsible body has appropriate and sufficient administrative support to achieve its goals in postgraduate medical education, and quality of postgraduate medical education environments.**

**Guidance:**

Develop a policy and review process to ensure adequate and efficient administrative staff, and budgetary support for all activities and operations of the responsible body.

**Key questions:**

How do the administrative structure and resources support the functioning of the responsible body?

How does the decision-making process support the functioning of the responsible body?

What is the reporting structure for administration in relation to programme implementation and activities?