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QUALITY IMPROVEMENT IN POSTGRADUATE MEDICAL EDUCATION

WFME International Guidelines

WFME Task Force on Defining International Standards
in Postgraduate Medical Education

Report of the Working Party, Copenhagen, 10-11 September 2001

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CONTENTS

| | |
|---|-----------|
| INTRODUCTION..... | 3 |
| HISTORY | 3 |
| FUNDAMENTALS OF POSTGRADUATE MEDICAL EDUCATION | 3 |
| CONCEPT, PURPOSE AND RATIONALE | 4 |
| USE OF STANDARDS | 6 |
| | |
| THE WFME INTERNATIONAL STANDARDS..... | 7 |
| DEFINITIONS | 7 |
| 1. MISSION AND OUTCOMES | 9 |
| 2. TRAINING PROCESS..... | 11 |
| 3. ASSESSMENT OF TRAINEES | 14 |
| 4. TRAINEES | 15 |
| 5. STAFFING | 17 |
| 6. TRAINING SETTINGS AND EDUCATIONAL RESOURCES | 18 |
| 7. EVALUATION OF TRAINING PROGRAMME | 21 |
| 8. GOVERNANCE AND ADMINISTRATION..... | 23 |
| 9. QUALITY REVIEW AND CONTINUOUS RENEWAL..... | 25 |
| | |
| BIBLIOGRAPHY | 26 |
| | |
| APPENDICES | |
| 1. MEMBERS OF THE WFME WORKING PARTY..... | 27 |
| 2. INTERNATIONAL PANEL OF ADVISORS | 29 |

INTRODUCTION

HISTORY

Since 1984 the WFME has conducted an "International Collaborative Programme for the Reorientation of Medical Education". Cornerstones in this process were the *Edinburgh Declaration* (1988) (1), which was adopted by the World Health Assembly (WHA Resolution 42.38, 1989) (2), and the *Recommendations of the World Summit on Medical Education* (1993) (3), reflected in WHA Resolution 48.8 (1995) (4).

To further promote change and innovation in medical education, the WFME decided to extend implementation of its educational policy to the institutional level as described in a WFME Position Paper (5). The initial focus was on Basic (Undergraduate) Medical Education in medical schools (6,7).

The WFME project on "International Standards in Medical Education" (5), approved by the World Health Organisation (WHO) and the World Medical Association (WMA), has three main intentions, to:

- stimulate authorities, organisations and institutions having responsibility for medical education to formulate their own plans for change and for quality improvement in accordance with international recommendations;
- establish a system of national and/or international evaluation and recognition of medical educational institutions and programmes to assure minimum quality standards for the programmes; and
- safeguard practice in medicine and medical manpower utilization, and its increasing internationalisation, by well-defined international standards in medical education.

In the Position Paper WFME indicated that similar provisions could be made in postgraduate medical education.

To extend its project on *International Standards in Medical Education* to postgraduate medical education the WFME in June 2001 appointed an International Task Force consisting of a Working Party and an International Panel of Advisors, charged with defining international standards for educational programmes in Postgraduate Medical Education.

The deliberations of the Working Party were based on material from a number of sources (8-11). In this *Report* the Working Party defines a set of international standards in postgraduate medical education designed to enable postgraduate medical training institutions at various stages of development, and with different educational, socio-economic and cultural conditions to use the system of standards at a level appropriate to them. Emphasis is placed on standards functioning as a lever for change and reform.

FUNDAMENTALS OF POSTGRADUATE MEDICAL EDUCATION

Postgraduate medical education is the phase of medical education in which doctors develop competencies after completion of their basic medical qualification. This phase of training is usually conducted according to specified regulations and rules. The training has developed from a setting similar to apprenticeship, meaning that the young doctors work in e.g. clinical settings with more experienced colleagues who take the responsibility for their instruction and supervision.

Postgraduate medical education comprises pre-registration training, vocational/professional training, specialist and sub-specialist training and other formalised training programmes for defined expert functions.

In addition to the practical clinical aspects, further theoretical education is required. This can be organised in various ways, either closely connected with the clinical training or through regional, national or international theoretical courses. Such programmes may be managed by universities, specialist boards, medical societies and colleges or institutes for postgraduate medical education.

Postgraduate medical education is part of the continuum of learning in medicine, which also includes Continuing Medical Education (CME) or Continuing Professional Development (CPD). CME/CPD are characterised by self-directed learning rather than supervised training. Although often used to designate the period commencing after completion of undergraduate and/or postgraduate training, it is evident that CME/CPD is a much more far-reaching activity throughout the continuum of medical education.

Internationally, there are considerable variations in the number of recognised specialties and expert functions in medicine and in the organisation, structure, content and requirements in postgraduate medical education. Qualification in expert functions is also obtained through CME. In some regions of the world, specialist training takes place through appointments in hospital departments/health care facilities extending over several years, whereas in other parts there are theoretical courses over shorter periods without specific requirements for practical training.

However, over the last decades there has been an increasing convergence in training methods with emphasis on both practical training and theory. Modern principles of medical education have exerted increasing influence in all countries. In postgraduate medical education highly sophisticated learning programmes have developed, the components of which are planned clinical/practical placements, expert supervision, theoretical teaching, research experience, systematic assessments and evaluation of the training programmes.

The convergence of principles of postgraduate training world-wide has been promoted by greater communication between universities/educational institutions, regulatory bodies, medical societies and medical associations. These again have been influenced by the greater mobility of medical doctors and the increasing internationalisation of the medical workforce, supported by international free trade agreements in various parts of the world, e.g. EU, NAFTA, MERCOSUR. The importance of this development for the medical profession is documented in Europe by the adoption of the Directive for Medical Doctors (12) and the work of the Advisory Committee on Medical Training of the European Commission (13). Thus the need for common international quality assurance systems in postgraduate medical education is strengthened.

CONCEPT, PURPOSE AND RATIONALE

Common international standards can be defined for medical education (5). These take account of the variations in content and process of medical education among countries, due to differences in teaching tradition, culture, socio-economic conditions, the health and disease spectrum, and different forms of health care delivery systems. Such differences can also occur within individual countries. However, the scientific basis of medicine and the endeavour to establish evidence for clinical practice is universal, and the task of medical education throughout its continuum everywhere is the provision of health care. Notwithstanding variations, there is an increasing degree of equivalence of structure, process and product of postgraduate medical education worldwide.

International standards, of course, must be modified or supplemented according to regional, national and institutional needs and priorities. Each country has the responsibility to ensure that its postgraduate medical training programme are supporting national health care delivery objectives.

The WFME has also clearly emphasized that there can be no benefit in fostering uniformity of educational programmes (5). Moreover, quality assurance of medical training programmes must emphasize improvement and provide guidance for achieving such developments to avoid interpretation of standards as a levelling at a lower level of quality.

A central part of the WFME strategy is to give priority to specification of international standards and guidelines for medical education, comprising both institutions and their educational programmes. Adoption of international standards will constitute a new framework for authorities, organisations and institutions responsible for postgraduate medical education to measure themselves. Furthermore, internationally accepted standards could be used as a basis for national and regional recognition and accreditation of postgraduate educational programmes.

Evaluation based on generally accepted standards is an important incentive for improvement and for raising the quality of medical education, both when reorientation and reform are pursued, and also to promote continuous improvement and development.

Adoption of internationally accepted standards has the potential to provide a basis for national evaluation of postgraduate medical education as well as broader regional recognition.

Shared international standards in medical education will facilitate mobility of trainees, and ease the acceptance of medical doctors in countries other than those in which they are trained. Safeguarding competencies of doctors who have been educated in other countries will thereby be facilitated.

Finally, substandard training programmes can be improved by the use of a system of evaluation and accreditation based on internationally accepted standards, thus enhancing the quality of health care, both nationally and internationally.

PREMISES FOR POSTGRADUATE STANDARDS

The WFME Working Party applied the principles which were developed regarding basic medical education (6) to postgraduate medical education. Attention was focused on the general application of guidelines in quality development of medical education. Therefore, for international standards in postgraduate medical education to be generally accepted, the following premises were adopted:

- Only general aspects of postgraduate medical education and training should be covered.
- Standards should be concerned with broad categories of the content, process, educational environment and outcome of postgraduate medical education.
- Standards should function as a lever for change and reform.
- Compliance with standards must be a matter for each community, country or region.
- Standards should be formulated in such a way as to acknowledge regional and national differences in the educational programme, and allow for different local, national and regional profiles and developments.
- Use of a common set of international standards does not imply or require complete equivalence of programme content and outcome of postgraduate medical education.
- Standards should recognize the dynamic nature of programme development.
- Standards are formulated as a tool which authorities, organisations and institutions responsible for postgraduate medical education can use as a basis and a model for their own programme development.
- Standards should not be used in order to rank training programmes.
- Standards are intended not only to set minimum requirements but also to encourage quality development beyond the levels specified. The set of standards, in addition to basic requirements, should include directions for quality development.

- Standards should be further developed through broad international discussion and consensus.
- The value of the standards must be tested in evaluation studies in each region.

Standards must be capable of description, and be meaningful, appropriate, relevant, measurable, achievable and accepted by the users. They must have implications for practice, recognize diversity and foster adequate development.

USE OF STANDARDS

The WFME believes that the set of international standards presented can be used globally as a tool for quality assurance and development of postgraduate medical education in the following ways:

- **SELF-EVALUATION OF PROGRAMMES**

The primary intention of the WFME in introducing an instrument for quality improvement is to provide a new framework against which authorities, organisations and institutions with responsibility for postgraduate medical education can measure themselves in voluntary self-evaluation and self-improvement processes. The guidelines can thus be considered a Self-study Manual.

- **PEER REVIEW**

The process described can be further enhanced by inclusion of evaluation and counselling from external peer review committees.

- **COMBINATION OF SELF-EVALUATION AND EXTERNAL PEER REVIEW.**

The WFME considers such a combination to be the most valuable method.

- **RECOGNITION AND ACCREDITATION**

Depending on local needs and traditions, the guidelines can also be used by national or regional agencies dealing with recognition and accreditation of postgraduate medical education.

THE WFME INTERNATIONAL STANDARDS

DEFINITIONS

Postgraduate Medical Education may be defined as the phase in which doctors train under supervision towards independent practice after completion of their basic medical qualification, and comprises pre-registration training, vocational/professional training, specialist and sub-specialist training and other formalised training programmes. Upon completion of a formal postgraduate training programme a degree, diploma or certificate is usually granted.

Although Postgraduate medical education is a time limited phase of medical education it cannot be clearly separated from Continuing Medical Education (CME) or Continuing Professional Development (CPD)¹. These are carried out during the entire professional life after graduation from the medical school and are characterized by self-directed learning and rarely involve supervised training for extended periods of time.

The WFME recommends the following set of international standards in postgraduate medical education structured according to **9 areas** and **37 sub-areas**.²

AREAS defined as broad components in the structure and process of postgraduate medical education and training cover:

1. Mission and Outcomes
2. Training Process
3. Assessment of Trainees
4. Trainees
5. Staffing
6. Training Settings and Educational Resources
7. Evaluation of Training Process
8. Governance and Administration
9. Quality Review and Continuous Renewal

SUB-AREAS are defined as specific aspects of an area, corresponding to performance indicators.

STANDARDS are specified for each sub-area using two levels of attainment:

- **Basic standard.** This means that the standard must be met and fulfilment demonstrated during evaluation of the training programme.

Basic standards are expressed by a “must”.

¹ CPD refers to the continuing development of the multi-faceted competencies inherent in medical practice and drawn from various domains of knowledge and skills (e.g. medical, managerial, social, personal) needed for high quality professional performance. Although often used to designate the period commencing after completion of postgraduate training, it is evident that CPD is a much more far-reaching activity. The shaping, reshaping and development of a professional - responding to changing societal and individual needs within the context of the evolution of medical science and health care delivery – is a life-long continuing process, starting when the student is admitted to medical school and on-going as long as the doctor is engaged in professional activities.

² WFME is aware of the complex interactions and links between the various areas and sub-areas.

- **Standard for quality development.** This means that the standard is in accordance with international consensus about best practice for postgraduate medical education. Fulfilment of some or all of such standards or that initiatives to do so have or will be taken should be demonstrated. Fulfilment of these standards will vary with the stage and development of the training programme, its resources, the educational policy and other local conditions influencing relevance and priorities. Even the most advanced programmes might not comply with all standards.

*Standards for quality development are expressed by a “**should**”.*

ANNOTATIONS are used to clarify, amplify or exemplify expressions in the standards.

1 MISSION AND OUTCOMES

1.1 STATEMENTS OF MISSION AND OUTCOMES

Basic standard:

The competent authorities **must** define in consultation with the professional organizations the mission and outcome objectives for the various types of postgraduate medical training and make them known. The statements of mission and outcomes **must** describe the practice based training process resulting in a medical doctor competent to undertake comprehensive up to date medical practice in the defined field of medicine in a professional manner, unsupervised and independently or within a team, in keeping with the needs of the health care system.

Quality development:

The mission and outcome objectives **should** encourage appropriate innovation in the training process and allow for development of broader competencies than minimally required and constantly strive to improve patient care that is appropriate, effective and compassionate in dealing with health problems and promotion of health. The training **should** encourage doctors to become scholars within their chosen field of medicine and **should** prepare them for lifelong, self-directed learning and readiness for continuing medical education and professional development.

Annotations:

- Statements of *mission and outcomes* would include general and specific issues relevant to national and regional policy.
- *Competent authorities* would include local and national bodies involved in regulation of postgraduate medical training, and could be a national governmental agency, a national board, a university, a competent professional organisation or a combination.
- *Types of Postgraduate medical training* would include pre-registration training, systematic vocational training, specialist training and other formalized training for expertise in specified areas of medicine.
- *Scholar* refers to deeper and/or broader engagement in the development of the discipline, including responsibility for education, development, research, management, etc.
- *Chosen field of medicine* would include recognised specialties, including general practice, subspecialties and expert functions.

1.2 PARTICIPATION IN THE FORMULATION OF MISSION AND OUTCOMES

Basic standard:

The statement of mission and outcomes of postgraduate training **must** be defined by its principal stakeholders.

Quality development:

Formulation of mission and outcomes statements **should** be based on input from a wider range of stakeholders.

Annotations:

- *Principal stakeholders* would include programme directors, scientific societies, hospital administrations, governmental authorities and professional associations or organisations.
- *A wider range of stakeholders* would include representation of supervisors, trainers, teachers, trainees, other health professions, patients, the community, organisations and health care authorities.

1.3 PROFESSIONALISM AND AUTONOMY

Basic standard:

The training process **must**, based on approved basic medical education, further strengthen professionalism of the doctor.

Quality development:

The training **should** foster professional autonomy to enable the doctor to act in the best interests of the patient and the public.

Annotation:

- *Professionalism* describes the knowledge, skills, attitudes and behaviours expected from individuals during the practice of their profession, and includes concepts such as skills of lifelong learning and maintenance of competence, information literacy, ethical behaviour, integrity, honesty, altruism, service to others, adherence to professional codes, justice, respect for others and self-regulation.

1.4 TRAINING OUTCOMES

Basic standard:

The competent authorities **must** in consultation with the professional organisations define the competencies, which **should** be achieved by trainees as a result of the training programmes.

Quality development:

Both broad and specific competencies to be acquired by trainees **should** be specified and linked with the competencies acquired as a result of basic medical education. Measures of competencies achieved by trainees **should** be used as feedback for programme development.

Annotations:

- *Competencies* can be defined in broad professional terms or as specific knowledge, skills, attitudes and behaviours. Competencies relevant for postgraduate training would, at a level dependant of the chosen field in medicine, include the following areas:
 - Patient care that is appropriate, effective and compassionate for dealing with health problems and health promotion
 - Medical knowledge in the basic biomedical, clinical, behavioural and clinical sciences, medical ethics and medical jurisprudence and application of such knowledge in patient care
 - Interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public
 - Appraisal and utilisation of new scientific knowledge to continuously update and improve clinical practice
 - Function as supervisor, trainer and teacher in relation to colleagues, medical students and other health professions
 - Capability to be a scholar contributing to development and research in the chosen field of medicine
 - Professionalism
 - Interest and ability to act as an advocate for the patient
 - Knowledge of public health and health policy issues and awareness and responsiveness to the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, practice of cost-effective health care, health economics and resource allocations
 - Ability to understand health care, and identify and carry out system-based improvement of care

2 TRAINING PROCESS

2.1 LEARNING APPROACHES

Basic standard:

Postgraduate medical training **must** follow a systematic training programme, which describes generic and discipline-specific components of training. The training **must** be practice based involving the personal participation of the trainee in the services and responsibilities of patient care activities in the training institutions. The training programme **must** encompass integrated practical and theoretical instruction.

Quality Development

Postgraduate medical training **should** interface with basic medical education and continuing medical education/professional development. The training **should** be directed and the trainee guided through supervision and regular appraisal and feedback. The training process **should** ensure an increasing degree of independent responsibility as skill, knowledge and experience grow. Every trainee **should** have access to educational counselling.

Annotations:

- *The training process* would, when appropriate, proceed via a common trunk from general to more specialised content.
- *Educational counselling* would include access to designated tutors or mentors.

2.2 SCIENTIFIC METHODS

Basic standard:

The trainee **must** achieve knowledge of the scientific basis and methods of the chosen field of medicine, and through exposure to a broad range of relevant clinical/practical experience in different settings in the chosen field of medicine become familiar with evidence-based medicine and critical clinical decision-making.

Quality Development:

In the training process the trainee **should** have formal teaching about aspects of evidence-based medicine and be exposed to research methods.

Annotation:

- Training in *scientific thinking* and *research methods* may include the use of elective research projects to be conducted by trainees (cf. 6.5).

2.3 TRAINING CONTENT

Basic standard:

The training process **must** include the practical clinical work and relevant theory of the basic biomedical, clinical, behavioural and social sciences; clinical decision-making; communication skills, medical ethics, public health policy, medical jurisprudence and managerial disciplines required to demonstrate professional practice in the chosen field of medicine.

Quality Development:

The training process **should** ensure development of knowledge, skills, attitudes and personal attributes in the roles as medical expert, health advocate, communicator, collaborator and team-worker, scholar, administrator and manager.

Annotations:

- *The basic biomedical sciences* would, depending on local needs, interests and traditions, typically include anatomy, biochemistry, physiology, biophysics, molecular biology, cell biology, genetics, microbiology, immunology, pharmacology, pathology etc.
- *Clinical sciences* would include the chosen clinical or laboratory disciplines and in addition other relevant clinical/laboratory disciplines.
- *Behavioural and social sciences* would, depending on local needs, interests and traditions, typically include medical psychology, medical sociology, biostatistics, epidemiology, hygiene and public health and community medicine etc.
- *The behavioural and social sciences and medical ethics* should provide the knowledge, concepts, methods, skills and attitudes necessary for understanding socio-economic, demographic and cultural determinants of causes, distribution and consequences of health problems.

2.4 TRAINING STRUCTURE, COMPOSITION AND DURATION

Basic standard:

The overall composition, structure and duration of training and professional development **must** be described with clear definition of goals and expected task-based outcomes and explanation of their relationship to basic medical education and health care delivery. Components which are compulsory and optional **must** be clearly stated.

Quality Development:

Integration of practice and theory **should** be ensured in the training process.

Annotations

- *Structure of training* refers to the overall sequence of attachment to the training settings and responsibility of the doctor and not the details of the training experiences.
- *Integration of practice and theory* would include didactic learning sessions and supervised patient care experiences.

2.5 THE RELATIONSHIP BETWEEN TRAINING AND SERVICE

Basic standard:

The apprenticeship nature of professional development **must** be described and respected and the integration between training and service (on-the job training) **must** be assured.

Quality Development:

The capacity of the health care system **should** be effectively utilised for service based training purposes. The training provided **should** be complementary and not subordinated to service demands.

Annotations:

- *Integration between training and service* implies on one hand delivery of proper health care service by the trainees and on the other hand that learning opportunities are embedded in service functions.
- *Effective utilisation* refers to optimising the use of different clinical settings, patients and clinical problems for training purposes, and at the same time respecting service functions.

2.6 MANAGEMENT OF TRAINING

Basic standard:

The responsibility and authority for organising, coordinating, managing and assessing the individual training setting and the training process **must** be clearly identified.

Quality Development:

Coordinated multi-site training within the chosen field of medicine **should** be ensured to gain exposure to different areas and management of the discipline. The authority responsible for the training programme **should** be provided with resources for planning and implementing methods for training, assessment of trainees and innovations of the training programme. There **should** be representation of staff, trainees and other relevant stakeholders in the planning of the training programme.

Annotation:

- *Other relevant stakeholders* would include other participants in the training process, representatives of other health professions and health authorities.

3 ASSESSMENT OF TRAINEES

3.1 ASSESSMENT METHODS

Basic standard:

Postgraduate medical training **must** include a process of assessment, and the competent authorities **must** define and state the methods used for assessment of trainees, including the criteria for passing examinations or other types of assessment. Assessment **must** emphasise formative in-training methods and constructive feedback.

Quality Development:

The reliability and validity of assessment methods **should** be documented and evaluated. A complementary set of assessment methods **should** be applied. The different stages of training **should** be recorded in a training log-book. An appeal mechanism **should** be established and, when necessary, second opinion, change of trainer/supervisor or supplementary training **should** be arranged.

Annotations:

- The *definition of methods used for assessment* may include consideration of the balance between formative and summative assessment, the number of examinations and other tests, the balance between written and oral examinations, the use of normative and criterion referenced judgements, and the use of portfolio and special types of examinations, e.g. objective structured clinical examinations (OSCE).
- *Evaluation of assessment methods* may include an evaluation of how they promote training and learning.
- *New assessment methods* may include the use of external examiners.

3.2 RELATION BETWEEN ASSESSMENT AND TRAINING

Basic standard:

Assessment principles, methods and practices **must** be clearly compatible with training objectives and **must** promote learning.

Quality Development:

The assessment methods and practices **should** encourage integrated learning and **should** assess predefined practice requirements as well as knowledge, skills and attitudes. The methods used **should** avoid negative consequences of assessment on training.

Annotation:

- *Negative consequences of assessment* would include avoidance of clinical practice obligations in order to prepare for examinations.

3.3 FEEDBACK TO TRAINEES

Basic standard:

Constructive feedback on the performance of the trainee **must** be given on an ongoing basis.

Quality Development:

Acceptable standards of performance **should** be explicitly specified and conveyed to both trainees and supervisors.

Annotations:

- *Feedback* would include planned dialogues between trainees and trainers/supervisors with the purpose of ensuring instructions and remedies necessary to enhance competence development

4 TRAINEES

4.1 ADMISSION POLICY AND SELECTION

Basic standard:

The competent authorities and the medical profession **must** agree upon a policy on the criteria and process for selection of trainees and **must** publish and implement it.

Quality development:

The selection policy **should** define criteria, which considers specific capabilities of potential trainees in order to enhance the result of the training process in the chosen field of medicine. The selection procedure **should** be transparent and admission open to all qualified graduates from basic medical education. The selection procedure **should** include a mechanism for monitoring and appeal.

Annotations:

- The statement on *process of selection of trainees* would include both rationale and methods of selection and may include description of a mechanism for appeal.
- *Monitoring of admission policies* would include improvement of selection criteria, to reflect the capability of trainees to be competent and to cover the variations in required competencies related to diversity of the chosen field of medicine.
- *Criteria for selection* may include consideration of balanced intake according to gender, ethnicity and other social requirements, including the potential need of a special admission policy for underprivileged groups of doctors.

4.2 NUMBER OF TRAINEES

Basic standard:

The number of trainees **must** be proportionate to the clinical/practical training opportunities, supervisory capacity and other resources available in order to ensure training and teaching of adequate quality.

Quality Development:

The number of trainees **should** be reviewed through consultation with relevant stakeholders and regulated periodically to meet the needs of the community and society for trained doctors in the various fields of medicine.

Annotation:

- *Stakeholders* would include those responsible for planning and development of human resources in the local and national health sector.

4.3 SUPPORT AND COUNSELLING OF TRAINEES

Basic standard:

The competent authorities **must** in collaboration with the profession ensure that a system for support, counselling and career guidance of trainees is available.

Quality Development:

Counselling **should** be provided based on monitoring the progress in training and incidents reported and **should** address social and personal needs of trainees.

Annotation:

- *Social and personal needs* would include professional support, health problems, housing problems and financial matters.

4.4 WORKING CONDITIONS

Basic standard:

Postgraduate training **must** be carried out in appropriately remunerated contractual service positions in the chosen field of medicine and **must** involve participation in all medical activities, including on-call duties, relevant for the training, thereby devoting professional activities to practical training and theoretical learning throughout standard working time. The service conditions and responsibilities of trainees **must** be defined and made known to all parties.

Quality development:

Duty hours and on-call time periods for postgraduate students **should** not be excessive and the structuring of duty hours and on-call schedules **should** consider the needs of the patients, continuity of care and the educational needs of the trainee.

Part-time training **should** be allowed under special circumstances, determined by the competent authorities and structured according to an individually tailored programme and the service background. The total duration and quality of part-time training **should** not be less than those of full-time trainees. Interruption of training for reasons such as pregnancy (including maternity/paternity leave), sickness, military service or secondment **should** be compensated.

Annotation:

- *Contractual service positions* would include internship, residency, registrar, senior registrar, etc.

4.5 TRAINEE REPRESENTATION

Basic standard:

There **must** be a policy on trainee representation and appropriate participation in the design and evaluation of the training programme, the working conditions and in other matters relevant to the trainees.

Quality development:

Organisations of trainees **should** be encouraged to be involved in decisions about training processes, conditions and regulations.

Annotation:

- *Trainee representation* would include participation in groups or committees responsible for programme planning at the local or national level.

5 STAFFING

5.1 APPOINTMENT POLICY

Basic standard:

The policy on appointment of trainers, supervisors and teachers **must** specify the expertise required and their responsibilities and duties. The policy **must** specify the duties of the training staff and specifically the balance between educational and service functions and other duties.

Quality development:

All doctors employed in the health care service **should** recognise their responsibility to participate in the practice based postgraduate training of medical doctors. The staff policy **should** ensure that trainers generally are current in the relevant field in its full extent and sub-specialised trainers only approved for relevant specific periods during the training.

Annotations:

- *Expertise* would include recognition as a specialist in the relevant field of medicine
- *Training staff* would include medical doctors and other health personnel
- *Other duties* would include administrative functions as well as other educational or research responsibilities.

5.2 OBLIGATIONS AND DEVELOPMENT OF TRAINERS

Basic standard:

Instructional activities **must** be included as responsibilities in the work-schedules of trainers and their relationship to work-schedules of trainees **must** be described.

Quality development:

Staff policy **should** include support of trainers including training and further development, if appropriate, and **should** appraise and recognise meritorious academic activities, including functions as trainers, supervisors and teachers. The ratio between the number of recognised trainers and the number of trainees **should** ensure close personal interaction and monitoring of the trainee.

Annotation:

- *Recognition of meritorious academic activities* would be by rewards, promotion and/or remuneration.

6 TRAINING SETTINGS AND EDUCATIONAL RESOURCES

6.1 CLINICAL SETTINGS AND PATIENTS

Basic standard:

The training locations **must** be selected and recognised by the competent authorities and **must** have sufficient clinical/practical facilities to support the delivery of training. Training locations **must** have a sufficient number of patients and an appropriate case-mix to meet training objectives. The training **must** expose the trainee to a broad range of experience in the chosen field of medicine and, when relevant, include both inpatient and outpatient (ambulatory) care and on-duty activity.

Quality development:

The number of patients and the case-mix **should** allow for clinical experience in all aspects of the chosen specialty, including training in promotion of health and prevention of disease. Training **should** be carried out both in academic and non-academic based teaching hospitals. When appropriate, part of the training **should** take place in other relevant institutions and community based settings/facilities. The quality of training settings **should** be regularly monitored through site-visits conducted under the responsibility of the competent authorities.

Annotation:

- *Community based settings* would include specialist practices, specialty clinics, nursing homes, primary health care stations and other facilities where health care is provided.

6.2 PHYSICAL FACILITIES AND EQUIPMENT

Basic standard:

The trainee **must** have space and opportunities for practical and theoretical study and have access to adequate professional literature as well as equipment for training of practical techniques.

Quality development:

The physical facilities and equipment for training **should** be evaluated regularly for their appropriateness and quality regarding postgraduate training.

Annotation:

- *Physical facilities* of the training location should include lecture halls, tutorial rooms, laboratories, libraries, information technology equipment, recreational facilities etc.

6.3 CLINICAL TEAMS

Basic standard:

The clinical training **must** include experience in working as a team with colleagues and other health professionals.

Quality development:

The training process **should** allow learning in a multi-disciplinary team resulting in the ability to work effectively with colleagues and other health professions as a member or leader of the health care team and **should** develop competencies in guiding and teaching other health professions.

6.4 INFORMATION TECHNOLOGY

Basic standard:

There **must** be a policy which addresses the effective use of information and communication technology in the training programme.

Quality development:

Trainers and trainees **should** be competent to use information and communication technology for self-learning, accessing information, managing patients and working in health care systems.

Annotations:

- A policy regarding the use of computers, internal and external networks and other means of *information and communication technology* would include coordination with the library services of the institution.
- The use of *information and communication technology* may be part of education for evidence-based medicine and in preparing the trainees for continuing medical education and professional development.

6.5 RESEARCH

Basic standard:

There **must** be a policy that fosters the integration of practice and research in training settings. Description of the training setting **must** include research facilities and research activities and priorities.

Quality development:

Opportunities for combining clinical training and research **should** be made available. Trainees **should** be encouraged to engage in health quality development and research.

6.6 EDUCATIONAL EXPERTISE

Basic standard:

There **must** be a policy on the use of educational expertise relevant to the planning, implementation and evaluation of training.

Quality development:

Access to educational experts **should** be available and evidence demonstrated of the use of such expertise for staff development and for research in the discipline of postgraduate medical education.

Annotations:

- *Educational expertise* would deal with problems, processes and practice of postgraduate medical training and would include medical doctors with experience in medical education, educational psychologists and sociologists etc. It can be provided by an education unit at the institution or be acquired from another national or international institution.
- *Medical education research* investigates the effectiveness of training and learning methods, and the wider institutional context.

6.7 TRAINING IN OTHER SETTINGS AND ABROAD

Basic standard:

There **must** be a policy on accessibility of individualised training opportunities at other sites within or outside the country fulfilling the requirements for the completion of training and for the transfer of training credits.

Quality development:

Regional and international exchange of academic staff and trainees **should** be facilitated by the provision of appropriate resources. The competent authorities **should** establish relations with corresponding national or international bodies with the purpose of facilitating exchange and mutual recognition of training elements.

Annotation:

- Transfer of *training credits* can be facilitated through active programme co-ordination between training institutions.

7 EVALUATION OF TRAINING PROGRAMME

7.1 MECHANISM FOR PROGRAMME EVALUATION

Basic standard:

The relevant authorities and the profession **must** establish a mechanism for evaluation of the training programme that monitors the training process, facilities and progress of the trainee, and ensures that concerns are identified and addressed.

Quality development:

Programme evaluation **should** address the context of the training process, the structure and specific components of the programme and the general outcomes.

Annotations:

- *Mechanisms for programme evaluation* would imply the use of valid and reliable methods and require that basic data about the training programme are available. Involvement of experts in medical education would further broaden the base of evidence for quality of postgraduate training at the institution.
- *Identified concerns* would include problems presented to programme committees, trainers and tutors, etc.
- *The context of the educational process* would include the organisation and resources as well as the learning environment
- *Specific components for programme evaluation* would include training programme description and performance of trainees
- *General outcomes* would be measured e.g. by career choice and performance.

7.2 FEEDBACK FROM TRAINERS AND TRAINEES

Basic standard:

Feedback about programme quality from both trainers and trainees **must** be systematically sought, analysed and acted upon.

Quality development:

Trainers and trainees **should** be actively involved in planning programme evaluation and in using its results for programme development.

Annotation:

- *Feedback about programme* would include trainee reports about conditions in their courses.

7.3 USING TRAINEE PERFORMANCE

Basic standard:

The performance of trainees **must** be evaluated in relationship to the training programme and the mission of postgraduate medical education.

Quality development:

The performance of trainees **should** be analysed in relation to background and entrance qualifications, and **should** be used to provide feedback to the committees responsible for selection of trainees and for programme planning and counselling.

Annotation:

- *Measures of trainee performance* would include information about average duration of training, scores, pass and failure rates at examinations, success and dropout rates, as well as time spent by the trainees on areas of special interest.

7.4 AUTHORISATION AND MONITORING OF TRAINING SETTINGS

Basic standard:

All training programmes **must** be authorised by a competent authority based on well-defined criteria and programme evaluation and with the authority able to grant or, if appropriate, withdraw recognition of training settings, theoretical courses etc.

Quality development:

The competent authorities **should** establish a system to monitor training settings and other educational facilities via site visits or other relevant means.

Annotations:

- *Criteria* for authorisation of training settings would include minimal values for number and mix of patients, equipment, library and IT facilities, training staff and training programme.

7.5 INVOLVEMENT OF STAKEHOLDERS

Basic standard:

The processes and outcome of evaluation **must** involve the managers and administration of training settings, the trainers and trainees and be transparent to all stakeholders.

Quality development:

The processes and outcome of evaluation **should** be credible to the principal stakeholders

Annotations:

- *Stakeholders* would include the medical professional organisations, other health professions, health authorities and authorities involved in training of doctors and allied health personal, hospital owners and providers of primary care, patients and patient organisations.
- *Principal stakeholders* include trainers, trainees and health authorities.

8 GOVERNANCE AND ADMINISTRATION

8.1 GOVERNANCE

Basic standard:

Training **must** be conducted in accordance with regulations concerning structure, content, process and outcome issued by competent authorities. Completion of training **must** be documented by degrees, diplomas, certificates or other evidence of formal qualifications conferred as the basis for formal recognition as a competent medical doctor in the chosen field of medicine by the designated authorities. The competent authority **must** continually assess training programmes, training institutions and trainers. The competent authority **must** be responsible for setting up a programme for quality training.

Quality development:

Procedures **should** be developed that can verify the documented completion of training for use by both national and international authorities.

Annotation:

- *Recognition as a competent medical doctor* would, depending on the level of training, include doctors with the right to independent practice, specialists, sub-specialists, experts etc.

8.2 PROFESSIONAL LEADERSHIP

Basic standard:

The responsibilities of the professional leadership for the postgraduate medical training programme **must** be clearly stated.

Quality development:

The professional leadership **should** be evaluated at defined intervals with respect to achievement of the mission and outcomes of postgraduate medical training.

8.3 FUNDING AND RESOURCE ALLOCATION

Basic standard:

There **must** be a clear line of responsibility and authority for budgeting of training resources.

Quality development:

The budget **should** be managed in a way that supports the mission and outcome objectives of the training programmes and of the service.

Annotation:

- *Budgeting of training resources* would depend on the budgetary practice in each institution and country.

8.4 ADMINISTRATION

Basic standard:

The administrative staff of the postgraduate medical training programmes and training institutions **must** be appropriate to support the implementation of the programme and to ensure good management and deployment of its resources.

Quality development:

The management **should** include a programme of quality assurance and the management **should** submit itself to regular review to achieve quality improvement.

8.5 REQUIREMENTS AND REGULATIONS

Basic standard:

A national body **must** be responsible for defining the number and types of recognised medical specialties and other medical expert functions for which approved training programmes are developed.

Quality development:

Definition of approved postgraduate medical training programmes **should** be made in collaboration with all relevant stakeholders.

Annotation:

- *Relevant stakeholders* would include national and local health authorities, universities, medical professional organisations, the public, etc.

9 QUALITY REVIEW AND CONTINUOUS RENEWAL

Basic standard:

In realising the dynamics of postgraduate medical training the relevant authorities **must** initiate procedures for regular review and updating of the structure, function and quality of the training programmes and **must** rectify identified deficiencies.

Quality development:

The process of renewal **should** be based on prospective studies and analyses and **should** lead to the revisions of the policies and practices of the postgraduate medical training programmes in accordance with past experience, present activities and future perspectives. In so doing it **should** address the following issues:

- *Adaptation of the mission and outcome objectives of postgraduate training to the scientific, socio-economic and cultural development of the society.*
- *Modification of the competencies required on completion of postgraduate training in the chosen field of medicine in accordance with the needs of the environment the newly trained doctor will enter.*
- *Adaptation of the learning approaches and training methods to ensure that these are appropriate and relevant.*
- *Adjustment of the structure, content and duration of training programmes in keeping with the developments in the basic biomedical sciences, the clinical sciences, the behavioural and social sciences, and changes in the demographic profile and health/disease pattern of the population, and in socio-economic and cultural conditions.*
- *Development of assessment principles and methods according to changes in training objectives and methods.*
- *Adaptation of recruitment policy and methods of selection of trainees to changing expectations and circumstances, human resource needs, changes in basic medical education and the requirements of the training programme.*
- *Adaptation of recruitment and policy of appointment of trainers, supervisors and teachers according to changing needs in postgraduate training.*
- *Updating of training settings and other educational resources to changing needs in postgraduate training, i.e. the number of trainees, number and profile of trainers, the training programme and contemporary training principles.*
- *Refinement of the process of programme monitoring and evaluation.*
- *Development of the organisational structure and management principles in order to cope with changing circumstances and needs in postgraduate training and, over time, accommodating to the interests of the different groups of stakeholders.*

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APPENDICES

1. MEMBERS OF THE WFME WORKING PARTY

Judith S. Armbruster, Ph.D.

Executive Director, Residency Review Committees
Accreditation Council for Graduate Medical Education (ACGME)
USA

Philip G. Bashook, EdD

Visiting Research Associate Professor
University of Illinois at Chicago
USA

Leif Christensen, MSc. Soc.

World Federation for Medical Education (WFME)
Denmark

Professor Ernst Goldschmidt

Denmark

Professor Janet Grant

The Open University Centre for Education in Medicine
UK

Dr. Hans Asbjørn Holm

The Norwegian Medical Association
Norway

Dr. Jens Winther Jensen

Permanent Working Group of European Junior Doctors (PWG)
Denmark

Dr. Hans Karle

President, World Federation for Medical Education (WFME)
Denmark

Professor Stefan Lindgren

Faculty of Medicine, University of Lund
Sweden

Professor J.P. d. V. van Niekerk

President, Association of Medical Schools in Africa (AMSA)
South Africa

Dr. Jørgen Nystrup

Past President, Association for Medical Education in Europe (AMEE)
Roskilde Amtssygehus Fjorden
Denmark

Dr. Cillian Twomey

President, Union Européenne des Médecins Spécialistes (UEMS)
Ireland

Theanne Walters

Deputy Executive Officer, Australian Medical Council (AMC)
Australia

2. INTERNATIONAL PANEL OF ADVISORS

Professor A. P. R. Aluwihare

University of Peradenya, Medical Faculty
Sri Lanka

Judith S. Armbruster, Ph.D.

Executive Director, Residency Review Committees
Accreditation Council for Graduate Medical Education (ACGME)
USA

Philip G. Bashook, EdD

Visiting Research Associate Professor
University of Illinois at Chicago
USA

Professor Cheng Boji

Peking University Health Science Center
P.R. China

Leif Christensen, MSc. Soc.

World Federation for Medical Education (WFME)
Denmark

Professor Florian Eitel

Chirurgische Klinik und Poliklinik Klinikum Innenstadt
Ludwig-Maximilians-Universität München
Germany

Professor Ernst Goldschmidt

Denmark

Professor Janet Grant

The Open University Centre for Education in Medicine
UK

Dr. James A. Hallock

President, Educational Commission for Foreign Medical Graduates (ECFMG)
USA

Dr. Hans Asbjørn Holm

The Norwegian Medical Association
Norway

Dr. Moufid Jokhadar

Secretary General, Arab Board of Medical Specializations
Syria

Dr. Hans Karle

President, World Federation for Medical Education (WFME)
Denmark

Dr. David Leach

Executive Director, Accreditation Council for Graduate
Medical Education (ACGME)
USA

Professor Stefan Lindgren

Faculty of Medicine, University of Lund
Sweden

Dr. Donald E. Melnick

President, National Board of Medical Examiners (NBME)
USA

Professor J.P. d. V. van Niekerk

President, Association of Medical Schools in Africa (AMSA)
South Africa

Dr. Jørgen Nystrup

Past President, Association for Medical Education in Europe (AMEE)
Roskilde Amtssygehus Fjorden
Denmark

Professor Albert Oriol-Bosch

Director, Institut d'Estudis de la Salut
Spain

Dr. John Parboosingh

Consultant to the CEO - Professional Development
The Royal College of Physicians and Surgeons of Canada
Canada

Dr. José Patinõ

Executive Director
Panamerican Federation of Associations of Medical Schools (PAFAMS)
Colombia

Dr. Cillian Twomey

President, Union Européenne des Médecins Spécialistes (UEMS)
Ireland

Professor Felix Vartanian

Vice Rector
The Russian Academy of Advanced Medical Studies
Russian Federation

Theanne Walters

Deputy Executive Officer, Australian Medical Council (AMC)
Australia

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QUALITY IMPROVEMENT IN POSTGRADUATE MEDICAL EDUCATION

WFME International Guidelines

WFME Task Force on Defining International Standards
in Postgraduate Medical Education

Report of the Working Party, Copenhagen, 10-11 September 2001

**2001
University of Copenhagen
Denmark**

CONTENTS

| | |
|---|-----------|
| INTRODUCTION..... | 3 |
| HISTORY | 3 |
| FUNDAMENTALS OF POSTGRADUATE MEDICAL EDUCATION | 3 |
| CONCEPT, PURPOSE AND RATIONALE | 4 |
| USE OF STANDARDS | 6 |
| | |
| THE WFME INTERNATIONAL STANDARDS..... | 7 |
| DEFINITIONS | 7 |
| 1. MISSION AND OUTCOMES | 9 |
| 2. TRAINING PROCESS..... | 11 |
| 3. ASSESSMENT OF TRAINEES | 14 |
| 4. TRAINEES | 15 |
| 5. STAFFING | 17 |
| 6. TRAINING SETTINGS AND EDUCATIONAL RESOURCES | 18 |
| 7. EVALUATION OF TRAINING PROGRAMME | 21 |
| 8. GOVERNANCE AND ADMINISTRATION..... | 23 |
| 9. QUALITY REVIEW AND CONTINUOUS RENEWAL..... | 25 |
| | |
| BIBLIOGRAPHY | 26 |
| | |
| APPENDICES | |
| 1. MEMBERS OF THE WFME WORKING PARTY..... | 27 |
| 2. INTERNATIONAL PANEL OF ADVISORS | 29 |

INTRODUCTION

HISTORY

Since 1984 the WFME has conducted an "International Collaborative Programme for the Reorientation of Medical Education". Cornerstones in this process were the *Edinburgh Declaration* (1988) (1), which was adopted by the World Health Assembly (WHA Resolution 42.38, 1989) (2), and the *Recommendations of the World Summit on Medical Education* (1993) (3), reflected in WHA Resolution 48.8 (1995) (4).

To further promote change and innovation in medical education, the WFME decided to extend implementation of its educational policy to the institutional level as described in a WFME Position Paper (5). The initial focus was on Basic (Undergraduate) Medical Education in medical schools (6,7).

The WFME project on "International Standards in Medical Education" (5), approved by the World Health Organisation (WHO) and the World Medical Association (WMA), has three main intentions, to:

- stimulate authorities, organisations and institutions having responsibility for medical education to formulate their own plans for change and for quality improvement in accordance with international recommendations;
- establish a system of national and/or international evaluation and recognition of medical educational institutions and programmes to assure minimum quality standards for the programmes; and
- safeguard practice in medicine and medical manpower utilization, and its increasing internationalisation, by well-defined international standards in medical education.

In the Position Paper WFME indicated that similar provisions could be made in postgraduate medical education.

To extend its project on *International Standards in Medical Education* to postgraduate medical education the WFME in June 2001 appointed an International Task Force consisting of a Working Party and an International Panel of Advisors, charged with defining international standards for educational programmes in Postgraduate Medical Education.

The deliberations of the Working Party were based on material from a number of sources (8-11). In this *Report* the Working Party defines a set of international standards in postgraduate medical education designed to enable postgraduate medical training institutions at various stages of development, and with different educational, socio-economic and cultural conditions to use the system of standards at a level appropriate to them. Emphasis is placed on standards functioning as a lever for change and reform.

FUNDAMENTALS OF POSTGRADUATE MEDICAL EDUCATION

Postgraduate medical education is the phase of medical education in which doctors develop competencies after completion of their basic medical qualification. This phase of training is usually conducted according to specified regulations and rules. The training has developed from a setting similar to apprenticeship, meaning that the young doctors work in e.g. clinical settings with more experienced colleagues who take the responsibility for their instruction and supervision.

Postgraduate medical education comprises pre-registration training, vocational/professional training, specialist and sub-specialist training and other formalised training programmes for defined expert functions.

In addition to the practical clinical aspects, further theoretical education is required. This can be organised in various ways, either closely connected with the clinical training or through regional, national or international theoretical courses. Such programmes may be managed by universities, specialist boards, medical societies and colleges or institutes for postgraduate medical education.

Postgraduate medical education is part of the continuum of learning in medicine, which also includes Continuing Medical Education (CME) or Continuing Professional Development (CPD). CME/CPD are characterised by self-directed learning rather than supervised training. Although often used to designate the period commencing after completion of undergraduate and/or postgraduate training, it is evident that CME/CPD is a much more far-reaching activity throughout the continuum of medical education.

Internationally, there are considerable variations in the number of recognised specialties and expert functions in medicine and in the organisation, structure, content and requirements in postgraduate medical education. Qualification in expert functions is also obtained through CME. In some regions of the world, specialist training takes place through appointments in hospital departments/health care facilities extending over several years, whereas in other parts there are theoretical courses over shorter periods without specific requirements for practical training.

However, over the last decades there has been an increasing convergence in training methods with emphasis on both practical training and theory. Modern principles of medical education have exerted increasing influence in all countries. In postgraduate medical education highly sophisticated learning programmes have developed, the components of which are planned clinical/practical placements, expert supervision, theoretical teaching, research experience, systematic assessments and evaluation of the training programmes.

The convergence of principles of postgraduate training world-wide has been promoted by greater communication between universities/educational institutions, regulatory bodies, medical societies and medical associations. These again have been influenced by the greater mobility of medical doctors and the increasing internationalisation of the medical workforce, supported by international free trade agreements in various parts of the world, e.g. EU, NAFTA, MERCOSUR. The importance of this development for the medical profession is documented in Europe by the adoption of the Directive for Medical Doctors (12) and the work of the Advisory Committee on Medical Training of the European Commission (13). Thus the need for common international quality assurance systems in postgraduate medical education is strengthened.

CONCEPT, PURPOSE AND RATIONALE

Common international standards can be defined for medical education (5). These take account of the variations in content and process of medical education among countries, due to differences in teaching tradition, culture, socio-economic conditions, the health and disease spectrum, and different forms of health care delivery systems. Such differences can also occur within individual countries. However, the scientific basis of medicine and the endeavour to establish evidence for clinical practice is universal, and the task of medical education throughout its continuum everywhere is the provision of health care. Notwithstanding variations, there is an increasing degree of equivalence of structure, process and product of postgraduate medical education worldwide.

International standards, of course, must be modified or supplemented according to regional, national and institutional needs and priorities. Each country has the responsibility to ensure that its postgraduate medical training programme are supporting national health care delivery objectives.

The WFME has also clearly emphasized that there can be no benefit in fostering uniformity of educational programmes (5). Moreover, quality assurance of medical training programmes must emphasize improvement and provide guidance for achieving such developments to avoid interpretation of standards as a levelling at a lower level of quality.

A central part of the WFME strategy is to give priority to specification of international standards and guidelines for medical education, comprising both institutions and their educational programmes. Adoption of international standards will constitute a new framework for authorities, organisations and institutions responsible for postgraduate medical education to measure themselves. Furthermore, internationally accepted standards could be used as a basis for national and regional recognition and accreditation of postgraduate educational programmes.

Evaluation based on generally accepted standards is an important incentive for improvement and for raising the quality of medical education, both when reorientation and reform are pursued, and also to promote continuous improvement and development.

Adoption of internationally accepted standards has the potential to provide a basis for national evaluation of postgraduate medical education as well as broader regional recognition.

Shared international standards in medical education will facilitate mobility of trainees, and ease the acceptance of medical doctors in countries other than those in which they are trained. Safeguarding competencies of doctors who have been educated in other countries will thereby be facilitated.

Finally, substandard training programmes can be improved by the use of a system of evaluation and accreditation based on internationally accepted standards, thus enhancing the quality of health care, both nationally and internationally.

PREMISES FOR POSTGRADUATE STANDARDS

The WFME Working Party applied the principles which were developed regarding basic medical education (6) to postgraduate medical education. Attention was focused on the general application of guidelines in quality development of medical education. Therefore, for international standards in postgraduate medical education to be generally accepted, the following premises were adopted:

- Only general aspects of postgraduate medical education and training should be covered.
- Standards should be concerned with broad categories of the content, process, educational environment and outcome of postgraduate medical education.
- Standards should function as a lever for change and reform.
- Compliance with standards must be a matter for each community, country or region.
- Standards should be formulated in such a way as to acknowledge regional and national differences in the educational programme, and allow for different local, national and regional profiles and developments.
- Use of a common set of international standards does not imply or require complete equivalence of programme content and outcome of postgraduate medical education.
- Standards should recognize the dynamic nature of programme development.
- Standards are formulated as a tool which authorities, organisations and institutions responsible for postgraduate medical education can use as a basis and a model for their own programme development.
- Standards should not be used in order to rank training programmes.
- Standards are intended not only to set minimum requirements but also to encourage quality development beyond the levels specified. The set of standards, in addition to basic requirements, should include directions for quality development.

- Standards should be further developed through broad international discussion and consensus.
- The value of the standards must be tested in evaluation studies in each region.

Standards must be capable of description, and be meaningful, appropriate, relevant, measurable, achievable and accepted by the users. They must have implications for practice, recognize diversity and foster adequate development.

USE OF STANDARDS

The WFME believes that the set of international standards presented can be used globally as a tool for quality assurance and development of postgraduate medical education in the following ways:

- **SELF-EVALUATION OF PROGRAMMES**

The primary intention of the WFME in introducing an instrument for quality improvement is to provide a new framework against which authorities, organisations and institutions with responsibility for postgraduate medical education can measure themselves in voluntary self-evaluation and self-improvement processes. The guidelines can thus be considered a Self-study Manual.

- **PEER REVIEW**

The process described can be further enhanced by inclusion of evaluation and counselling from external peer review committees.

- **COMBINATION OF SELF-EVALUATION AND EXTERNAL PEER REVIEW.**

The WFME considers such a combination to be the most valuable method.

- **RECOGNITION AND ACCREDITATION**

Depending on local needs and traditions, the guidelines can also be used by national or regional agencies dealing with recognition and accreditation of postgraduate medical education.

THE WFME INTERNATIONAL STANDARDS

DEFINITIONS

Postgraduate Medical Education may be defined as the phase in which doctors train under supervision towards independent practice after completion of their basic medical qualification, and comprises pre-registration training, vocational/professional training, specialist and sub-specialist training and other formalised training programmes. Upon completion of a formal postgraduate training programme a degree, diploma or certificate is usually granted.

Although Postgraduate medical education is a time limited phase of medical education it cannot be clearly separated from Continuing Medical Education (CME) or Continuing Professional Development (CPD)¹. These are carried out during the entire professional life after graduation from the medical school and are characterized by self-directed learning and rarely involve supervised training for extended periods of time.

The WFME recommends the following set of international standards in postgraduate medical education structured according to **9 areas** and **37 sub-areas**.²

AREAS defined as broad components in the structure and process of postgraduate medical education and training cover:

1. Mission and Outcomes
2. Training Process
3. Assessment of Trainees
4. Trainees
5. Staffing
6. Training Settings and Educational Resources
7. Evaluation of Training Process
8. Governance and Administration
9. Quality Review and Continuous Renewal

SUB-AREAS are defined as specific aspects of an area, corresponding to performance indicators.

STANDARDS are specified for each sub-area using two levels of attainment:

- **Basic standard.** This means that the standard must be met and fulfilment demonstrated during evaluation of the training programme.

Basic standards are expressed by a “must”.

¹ CPD refers to the continuing development of the multi-faceted competencies inherent in medical practice and drawn from various domains of knowledge and skills (e.g. medical, managerial, social, personal) needed for high quality professional performance. Although often used to designate the period commencing after completion of postgraduate training, it is evident that CPD is a much more far-reaching activity. The shaping, reshaping and development of a professional - responding to changing societal and individual needs within the context of the evolution of medical science and health care delivery – is a life-long continuing process, starting when the student is admitted to medical school and on-going as long as the doctor is engaged in professional activities.

² WFME is aware of the complex interactions and links between the various areas and sub-areas.

- **Standard for quality development.** This means that the standard is in accordance with international consensus about best practice for postgraduate medical education. Fulfilment of some or all of such standards or that initiatives to do so have or will be taken should be demonstrated. Fulfilment of these standards will vary with the stage and development of the training programme, its resources, the educational policy and other local conditions influencing relevance and priorities. Even the most advanced programmes might not comply with all standards.

*Standards for quality development are expressed by a “**should**”.*

ANNOTATIONS are used to clarify, amplify or exemplify expressions in the standards.

1 MISSION AND OUTCOMES

1.1 STATEMENTS OF MISSION AND OUTCOMES

Basic standard:

The competent authorities **must** define in consultation with the professional organizations the mission and outcome objectives for the various types of postgraduate medical training and make them known. The statements of mission and outcomes **must** describe the practice based training process resulting in a medical doctor competent to undertake comprehensive up to date medical practice in the defined field of medicine in a professional manner, unsupervised and independently or within a team, in keeping with the needs of the health care system.

Quality development:

The mission and outcome objectives **should** encourage appropriate innovation in the training process and allow for development of broader competencies than minimally required and constantly strive to improve patient care that is appropriate, effective and compassionate in dealing with health problems and promotion of health. The training **should** encourage doctors to become scholars within their chosen field of medicine and **should** prepare them for lifelong, self-directed learning and readiness for continuing medical education and professional development.

Annotations:

- Statements of *mission and outcomes* would include general and specific issues relevant to national and regional policy.
- *Competent authorities* would include local and national bodies involved in regulation of postgraduate medical training, and could be a national governmental agency, a national board, a university, a competent professional organisation or a combination.
- *Types of Postgraduate medical training* would include pre-registration training, systematic vocational training, specialist training and other formalized training for expertise in specified areas of medicine.
- *Scholar* refers to deeper and/or broader engagement in the development of the discipline, including responsibility for education, development, research, management, etc.
- *Chosen field of medicine* would include recognised specialties, including general practice, subspecialties and expert functions.

1.2 PARTICIPATION IN THE FORMULATION OF MISSION AND OUTCOMES

Basic standard:

The statement of mission and outcomes of postgraduate training **must** be defined by its principal stakeholders.

Quality development:

Formulation of mission and outcomes statements **should** be based on input from a wider range of stakeholders.

Annotations:

- *Principal stakeholders* would include programme directors, scientific societies, hospital administrations, governmental authorities and professional associations or organisations.
- *A wider range of stakeholders* would include representation of supervisors, trainers, teachers, trainees, other health professions, patients, the community, organisations and health care authorities.

1.3 PROFESSIONALISM AND AUTONOMY

Basic standard:

The training process **must**, based on approved basic medical education, further strengthen professionalism of the doctor.

Quality development:

The training **should** foster professional autonomy to enable the doctor to act in the best interests of the patient and the public.

Annotation:

- *Professionalism* describes the knowledge, skills, attitudes and behaviours expected from individuals during the practice of their profession, and includes concepts such as skills of lifelong learning and maintenance of competence, information literacy, ethical behaviour, integrity, honesty, altruism, service to others, adherence to professional codes, justice, respect for others and self-regulation.

1.4 TRAINING OUTCOMES

Basic standard:

The competent authorities **must** in consultation with the professional organisations define the competencies, which **should** be achieved by trainees as a result of the training programmes.

Quality development:

Both broad and specific competencies to be acquired by trainees **should** be specified and linked with the competencies acquired as a result of basic medical education. Measures of competencies achieved by trainees **should** be used as feedback for programme development.

Annotations:

- *Competencies* can be defined in broad professional terms or as specific knowledge, skills, attitudes and behaviours. Competencies relevant for postgraduate training would, at a level dependant of the chosen field in medicine, include the following areas:
 - Patient care that is appropriate, effective and compassionate for dealing with health problems and health promotion
 - Medical knowledge in the basic biomedical, clinical, behavioural and clinical sciences, medical ethics and medical jurisprudence and application of such knowledge in patient care
 - Interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public
 - Appraisal and utilisation of new scientific knowledge to continuously update and improve clinical practice
 - Function as supervisor, trainer and teacher in relation to colleagues, medical students and other health professions
 - Capability to be a scholar contributing to development and research in the chosen field of medicine
 - Professionalism
 - Interest and ability to act as an advocate for the patient
 - Knowledge of public health and health policy issues and awareness and responsiveness to the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, practice of cost-effective health care, health economics and resource allocations
 - Ability to understand health care, and identify and carry out system-based improvement of care

2 TRAINING PROCESS

2.1 LEARNING APPROACHES

Basic standard:

Postgraduate medical training **must** follow a systematic training programme, which describes generic and discipline-specific components of training. The training **must** be practice based involving the personal participation of the trainee in the services and responsibilities of patient care activities in the training institutions. The training programme **must** encompass integrated practical and theoretical instruction.

Quality Development

Postgraduate medical training **should** interface with basic medical education and continuing medical education/professional development. The training **should** be directed and the trainee guided through supervision and regular appraisal and feedback. The training process **should** ensure an increasing degree of independent responsibility as skill, knowledge and experience grow. Every trainee **should** have access to educational counselling.

Annotations:

- *The training process* would, when appropriate, proceed via a common trunk from general to more specialised content.
- *Educational counselling* would include access to designated tutors or mentors.

2.2 SCIENTIFIC METHODS

Basic standard:

The trainee **must** achieve knowledge of the scientific basis and methods of the chosen field of medicine, and through exposure to a broad range of relevant clinical/practical experience in different settings in the chosen field of medicine become familiar with evidence-based medicine and critical clinical decision-making.

Quality Development:

In the training process the trainee **should** have formal teaching about aspects of evidence-based medicine and be exposed to research methods.

Annotation:

- Training in *scientific thinking* and *research methods* may include the use of elective research projects to be conducted by trainees (cf. 6.5).

2.3 TRAINING CONTENT

Basic standard:

The training process **must** include the practical clinical work and relevant theory of the basic biomedical, clinical, behavioural and social sciences; clinical decision-making; communication skills, medical ethics, public health policy, medical jurisprudence and managerial disciplines required to demonstrate professional practice in the chosen field of medicine.

Quality Development:

The training process **should** ensure development of knowledge, skills, attitudes and personal attributes in the roles as medical expert, health advocate, communicator, collaborator and team-worker, scholar, administrator and manager.

Annotations:

- *The basic biomedical sciences* would, depending on local needs, interests and traditions, typically include anatomy, biochemistry, physiology, biophysics, molecular biology, cell biology, genetics, microbiology, immunology, pharmacology, pathology etc.
- *Clinical sciences* would include the chosen clinical or laboratory disciplines and in addition other relevant clinical/laboratory disciplines.
- *Behavioural and social sciences* would, depending on local needs, interests and traditions, typically include medical psychology, medical sociology, biostatistics, epidemiology, hygiene and public health and community medicine etc.
- *The behavioural and social sciences and medical ethics* should provide the knowledge, concepts, methods, skills and attitudes necessary for understanding socio-economic, demographic and cultural determinants of causes, distribution and consequences of health problems.

2.4 TRAINING STRUCTURE, COMPOSITION AND DURATION

Basic standard:

The overall composition, structure and duration of training and professional development **must** be described with clear definition of goals and expected task-based outcomes and explanation of their relationship to basic medical education and health care delivery. Components which are compulsory and optional **must** be clearly stated.

Quality Development:

Integration of practice and theory **should** be ensured in the training process.

Annotations

- *Structure of training* refers to the overall sequence of attachment to the training settings and responsibility of the doctor and not the details of the training experiences.
- *Integration of practice and theory* would include didactic learning sessions and supervised patient care experiences.

2.5 THE RELATIONSHIP BETWEEN TRAINING AND SERVICE

Basic standard:

The apprenticeship nature of professional development **must** be described and respected and the integration between training and service (on-the job training) **must** be assured.

Quality Development:

The capacity of the health care system **should** be effectively utilised for service based training purposes. The training provided **should** be complementary and not subordinated to service demands.

Annotations:

- *Integration between training and service* implies on one hand delivery of proper health care service by the trainees and on the other hand that learning opportunities are embedded in service functions.
- *Effective utilisation* refers to optimising the use of different clinical settings, patients and clinical problems for training purposes, and at the same time respecting service functions.

2.6 MANAGEMENT OF TRAINING

Basic standard:

The responsibility and authority for organising, coordinating, managing and assessing the individual training setting and the training process **must** be clearly identified.

Quality Development:

Coordinated multi-site training within the chosen field of medicine **should** be ensured to gain exposure to different areas and management of the discipline. The authority responsible for the training programme **should** be provided with resources for planning and implementing methods for training, assessment of trainees and innovations of the training programme. There **should** be representation of staff, trainees and other relevant stakeholders in the planning of the training programme.

Annotation:

- *Other relevant stakeholders* would include other participants in the training process, representatives of other health professions and health authorities.

3 ASSESSMENT OF TRAINEES

3.1 ASSESSMENT METHODS

Basic standard:

Postgraduate medical training **must** include a process of assessment, and the competent authorities **must** define and state the methods used for assessment of trainees, including the criteria for passing examinations or other types of assessment. Assessment **must** emphasise formative in-training methods and constructive feedback.

Quality Development:

The reliability and validity of assessment methods **should** be documented and evaluated. A complementary set of assessment methods **should** be applied. The different stages of training **should** be recorded in a training log-book. An appeal mechanism **should** be established and, when necessary, second opinion, change of trainer/supervisor or supplementary training **should** be arranged.

Annotations:

- The *definition of methods used for assessment* may include consideration of the balance between formative and summative assessment, the number of examinations and other tests, the balance between written and oral examinations, the use of normative and criterion referenced judgements, and the use of portfolio and special types of examinations, e.g. objective structured clinical examinations (OSCE).
- *Evaluation of assessment methods* may include an evaluation of how they promote training and learning.
- *New assessment methods* may include the use of external examiners.

3.2 RELATION BETWEEN ASSESSMENT AND TRAINING

Basic standard:

Assessment principles, methods and practices **must** be clearly compatible with training objectives and **must** promote learning.

Quality Development:

The assessment methods and practices **should** encourage integrated learning and **should** assess predefined practice requirements as well as knowledge, skills and attitudes. The methods used **should** avoid negative consequences of assessment on training.

Annotation:

- *Negative consequences of assessment* would include avoidance of clinical practice obligations in order to prepare for examinations.

3.3 FEEDBACK TO TRAINEES

Basic standard:

Constructive feedback on the performance of the trainee **must** be given on an ongoing basis.

Quality Development:

Acceptable standards of performance **should** be explicitly specified and conveyed to both trainees and supervisors.

Annotations:

- *Feedback* would include planned dialogues between trainees and trainers/supervisors with the purpose of ensuring instructions and remedies necessary to enhance competence development

4 TRAINEES

4.1 ADMISSION POLICY AND SELECTION

Basic standard:

The competent authorities and the medical profession **must** agree upon a policy on the criteria and process for selection of trainees and **must** publish and implement it.

Quality development:

The selection policy **should** define criteria, which considers specific capabilities of potential trainees in order to enhance the result of the training process in the chosen field of medicine. The selection procedure **should** be transparent and admission open to all qualified graduates from basic medical education. The selection procedure **should** include a mechanism for monitoring and appeal.

Annotations:

- The statement on *process of selection of trainees* would include both rationale and methods of selection and may include description of a mechanism for appeal.
- *Monitoring of admission policies* would include improvement of selection criteria, to reflect the capability of trainees to be competent and to cover the variations in required competencies related to diversity of the chosen field of medicine.
- *Criteria for selection* may include consideration of balanced intake according to gender, ethnicity and other social requirements, including the potential need of a special admission policy for underprivileged groups of doctors.

4.2 NUMBER OF TRAINEES

Basic standard:

The number of trainees **must** be proportionate to the clinical/practical training opportunities, supervisory capacity and other resources available in order to ensure training and teaching of adequate quality.

Quality Development:

The number of trainees **should** be reviewed through consultation with relevant stakeholders and regulated periodically to meet the needs of the community and society for trained doctors in the various fields of medicine.

Annotation:

- *Stakeholders* would include those responsible for planning and development of human resources in the local and national health sector.

4.3 SUPPORT AND COUNSELLING OF TRAINEES

Basic standard:

The competent authorities **must** in collaboration with the profession ensure that a system for support, counselling and career guidance of trainees is available.

Quality Development:

Counselling **should** be provided based on monitoring the progress in training and incidents reported and **should** address social and personal needs of trainees.

Annotation:

- *Social and personal needs* would include professional support, health problems, housing problems and financial matters.

4.4 WORKING CONDITIONS

Basic standard:

Postgraduate training **must** be carried out in appropriately remunerated contractual service positions in the chosen field of medicine and **must** involve participation in all medical activities, including on-call duties, relevant for the training, thereby devoting professional activities to practical training and theoretical learning throughout standard working time. The service conditions and responsibilities of trainees **must** be defined and made known to all parties.

Quality development:

Duty hours and on-call time periods for postgraduate students **should** not be excessive and the structuring of duty hours and on-call schedules **should** consider the needs of the patients, continuity of care and the educational needs of the trainee.

Part-time training **should** be allowed under special circumstances, determined by the competent authorities and structured according to an individually tailored programme and the service background. The total duration and quality of part-time training **should** not be less than those of full-time trainees. Interruption of training for reasons such as pregnancy (including maternity/paternity leave), sickness, military service or secondment **should** be compensated.

Annotation:

- *Contractual service positions* would include internship, residency, registrar, senior registrar, etc.

4.5 TRAINEE REPRESENTATION

Basic standard:

There **must** be a policy on trainee representation and appropriate participation in the design and evaluation of the training programme, the working conditions and in other matters relevant to the trainees.

Quality development:

Organisations of trainees **should** be encouraged to be involved in decisions about training processes, conditions and regulations.

Annotation:

- *Trainee representation* would include participation in groups or committees responsible for programme planning at the local or national level.

5 STAFFING

5.1 APPOINTMENT POLICY

Basic standard:

The policy on appointment of trainers, supervisors and teachers **must** specify the expertise required and their responsibilities and duties. The policy **must** specify the duties of the training staff and specifically the balance between educational and service functions and other duties.

Quality development:

All doctors employed in the health care service **should** recognise their responsibility to participate in the practice based postgraduate training of medical doctors. The staff policy **should** ensure that trainers generally are current in the relevant field in its full extent and sub-specialised trainers only approved for relevant specific periods during the training.

Annotations:

- *Expertise* would include recognition as a specialist in the relevant field of medicine
- *Training staff* would include medical doctors and other health personnel
- *Other duties* would include administrative functions as well as other educational or research responsibilities.

5.2 OBLIGATIONS AND DEVELOPMENT OF TRAINERS

Basic standard:

Instructional activities **must** be included as responsibilities in the work-schedules of trainers and their relationship to work-schedules of trainees **must** be described.

Quality development:

Staff policy **should** include support of trainers including training and further development, if appropriate, and **should** appraise and recognise meritorious academic activities, including functions as trainers, supervisors and teachers. The ratio between the number of recognised trainers and the number of trainees **should** ensure close personal interaction and monitoring of the trainee.

Annotation:

- *Recognition of meritorious academic activities* would be by rewards, promotion and/or remuneration.

6 TRAINING SETTINGS AND EDUCATIONAL RESOURCES

6.1 CLINICAL SETTINGS AND PATIENTS

Basic standard:

The training locations **must** be selected and recognised by the competent authorities and **must** have sufficient clinical/practical facilities to support the delivery of training. Training locations **must** have a sufficient number of patients and an appropriate case-mix to meet training objectives. The training **must** expose the trainee to a broad range of experience in the chosen field of medicine and, when relevant, include both inpatient and outpatient (ambulatory) care and on-duty activity.

Quality development:

The number of patients and the case-mix **should** allow for clinical experience in all aspects of the chosen specialty, including training in promotion of health and prevention of disease. Training **should** be carried out both in academic and non-academic based teaching hospitals. When appropriate, part of the training **should** take place in other relevant institutions and community based settings/facilities. The quality of training settings **should** be regularly monitored through site-visits conducted under the responsibility of the competent authorities.

Annotation:

- *Community based settings* would include specialist practices, specialty clinics, nursing homes, primary health care stations and other facilities where health care is provided.

6.2 PHYSICAL FACILITIES AND EQUIPMENT

Basic standard:

The trainee **must** have space and opportunities for practical and theoretical study and have access to adequate professional literature as well as equipment for training of practical techniques.

Quality development:

The physical facilities and equipment for training **should** be evaluated regularly for their appropriateness and quality regarding postgraduate training.

Annotation:

- *Physical facilities* of the training location should include lecture halls, tutorial rooms, laboratories, libraries, information technology equipment, recreational facilities etc.

6.3 CLINICAL TEAMS

Basic standard:

The clinical training **must** include experience in working as a team with colleagues and other health professionals.

Quality development:

The training process **should** allow learning in a multi-disciplinary team resulting in the ability to work effectively with colleagues and other health professions as a member or leader of the health care team and **should** develop competencies in guiding and teaching other health professions.

6.4 INFORMATION TECHNOLOGY

Basic standard:

There **must** be a policy which addresses the effective use of information and communication technology in the training programme.

Quality development:

Trainers and trainees **should** be competent to use information and communication technology for self-learning, accessing information, managing patients and working in health care systems.

Annotations:

- A policy regarding the use of computers, internal and external networks and other means of *information and communication technology* would include coordination with the library services of the institution.
- The use of *information and communication technology* may be part of education for evidence-based medicine and in preparing the trainees for continuing medical education and professional development.

6.5 RESEARCH

Basic standard:

There **must** be a policy that fosters the integration of practice and research in training settings. Description of the training setting **must** include research facilities and research activities and priorities.

Quality development:

Opportunities for combining clinical training and research **should** be made available. Trainees **should** be encouraged to engage in health quality development and research.

6.6 EDUCATIONAL EXPERTISE

Basic standard:

There **must** be a policy on the use of educational expertise relevant to the planning, implementation and evaluation of training.

Quality development:

Access to educational experts **should** be available and evidence demonstrated of the use of such expertise for staff development and for research in the discipline of postgraduate medical education.

Annotations:

- *Educational expertise* would deal with problems, processes and practice of postgraduate medical training and would include medical doctors with experience in medical education, educational psychologists and sociologists etc. It can be provided by an education unit at the institution or be acquired from another national or international institution.
- *Medical education research* investigates the effectiveness of training and learning methods, and the wider institutional context.

6.7 TRAINING IN OTHER SETTINGS AND ABROAD

Basic standard:

There **must** be a policy on accessibility of individualised training opportunities at other sites within or outside the country fulfilling the requirements for the completion of training and for the transfer of training credits.

Quality development:

Regional and international exchange of academic staff and trainees **should** be facilitated by the provision of appropriate resources. The competent authorities **should** establish relations with corresponding national or international bodies with the purpose of facilitating exchange and mutual recognition of training elements.

Annotation:

- Transfer of *training credits* can be facilitated through active programme co-ordination between training institutions.

7 EVALUATION OF TRAINING PROGRAMME

7.1 MECHANISM FOR PROGRAMME EVALUATION

Basic standard:

The relevant authorities and the profession **must** establish a mechanism for evaluation of the training programme that monitors the training process, facilities and progress of the trainee, and ensures that concerns are identified and addressed.

Quality development:

Programme evaluation **should** address the context of the training process, the structure and specific components of the programme and the general outcomes.

Annotations:

- *Mechanisms for programme evaluation* would imply the use of valid and reliable methods and require that basic data about the training programme are available. Involvement of experts in medical education would further broaden the base of evidence for quality of postgraduate training at the institution.
- *Identified concerns* would include problems presented to programme committees, trainers and tutors, etc.
- *The context of the educational process* would include the organisation and resources as well as the learning environment
- *Specific components for programme evaluation* would include training programme description and performance of trainees
- *General outcomes* would be measured e.g. by career choice and performance.

7.2 FEEDBACK FROM TRAINERS AND TRAINEES

Basic standard:

Feedback about programme quality from both trainers and trainees **must** be systematically sought, analysed and acted upon.

Quality development:

Trainers and trainees **should** be actively involved in planning programme evaluation and in using its results for programme development.

Annotation:

- *Feedback about programme* would include trainee reports about conditions in their courses.

7.3 USING TRAINEE PERFORMANCE

Basic standard:

The performance of trainees **must** be evaluated in relationship to the training programme and the mission of postgraduate medical education.

Quality development:

The performance of trainees **should** be analysed in relation to background and entrance qualifications, and **should** be used to provide feedback to the committees responsible for selection of trainees and for programme planning and counselling.

Annotation:

- *Measures of trainee performance* would include information about average duration of training, scores, pass and failure rates at examinations, success and dropout rates, as well as time spent by the trainees on areas of special interest.

7.4 AUTHORISATION AND MONITORING OF TRAINING SETTINGS

Basic standard:

All training programmes **must** be authorised by a competent authority based on well-defined criteria and programme evaluation and with the authority able to grant or, if appropriate, withdraw recognition of training settings, theoretical courses etc.

Quality development:

The competent authorities **should** establish a system to monitor training settings and other educational facilities via site visits or other relevant means.

Annotations:

- *Criteria* for authorisation of training settings would include minimal values for number and mix of patients, equipment, library and IT facilities, training staff and training programme.

7.5 INVOLVEMENT OF STAKEHOLDERS

Basic standard:

The processes and outcome of evaluation **must** involve the managers and administration of training settings, the trainers and trainees and be transparent to all stakeholders.

Quality development:

The processes and outcome of evaluation **should** be credible to the principal stakeholders

Annotations:

- *Stakeholders* would include the medical professional organisations, other health professions, health authorities and authorities involved in training of doctors and allied health personal, hospital owners and providers of primary care, patients and patient organisations.
- *Principal stakeholders* include trainers, trainees and health authorities.

8 GOVERNANCE AND ADMINISTRATION

8.1 GOVERNANCE

Basic standard:

Training **must** be conducted in accordance with regulations concerning structure, content, process and outcome issued by competent authorities. Completion of training **must** be documented by degrees, diplomas, certificates or other evidence of formal qualifications conferred as the basis for formal recognition as a competent medical doctor in the chosen field of medicine by the designated authorities. The competent authority **must** continually assess training programmes, training institutions and trainers. The competent authority **must** be responsible for setting up a programme for quality training.

Quality development:

Procedures **should** be developed that can verify the documented completion of training for use by both national and international authorities.

Annotation:

- *Recognition as a competent medical doctor* would, depending on the level of training, include doctors with the right to independent practice, specialists, sub-specialists, experts etc.

8.2 PROFESSIONAL LEADERSHIP

Basic standard:

The responsibilities of the professional leadership for the postgraduate medical training programme **must** be clearly stated.

Quality development:

The professional leadership **should** be evaluated at defined intervals with respect to achievement of the mission and outcomes of postgraduate medical training.

8.3 FUNDING AND RESOURCE ALLOCATION

Basic standard:

There **must** be a clear line of responsibility and authority for budgeting of training resources.

Quality development:

The budget **should** be managed in a way that supports the mission and outcome objectives of the training programmes and of the service.

Annotation:

- *Budgeting of training resources* would depend on the budgetary practice in each institution and country.

8.4 ADMINISTRATION

Basic standard:

The administrative staff of the postgraduate medical training programmes and training institutions **must** be appropriate to support the implementation of the programme and to ensure good management and deployment of its resources.

Quality development:

The management **should** include a programme of quality assurance and the management **should** submit itself to regular review to achieve quality improvement.

8.5 REQUIREMENTS AND REGULATIONS

Basic standard:

A national body **must** be responsible for defining the number and types of recognised medical specialties and other medical expert functions for which approved training programmes are developed.

Quality development:

Definition of approved postgraduate medical training programmes **should** be made in collaboration with all relevant stakeholders.

Annotation:

- *Relevant stakeholders* would include national and local health authorities, universities, medical professional organisations, the public, etc.

9 QUALITY REVIEW AND CONTINUOUS RENEWAL

Basic standard:

In realising the dynamics of postgraduate medical training the relevant authorities **must** initiate procedures for regular review and updating of the structure, function and quality of the training programmes and **must** rectify identified deficiencies.

Quality development:

The process of renewal **should** be based on prospective studies and analyses and **should** lead to the revisions of the policies and practices of the postgraduate medical training programmes in accordance with past experience, present activities and future perspectives. In so doing it **should** address the following issues:

- *Adaptation of the mission and outcome objectives of postgraduate training to the scientific, socio-economic and cultural development of the society.*
- *Modification of the competencies required on completion of postgraduate training in the chosen field of medicine in accordance with the needs of the environment the newly trained doctor will enter.*
- *Adaptation of the learning approaches and training methods to ensure that these are appropriate and relevant.*
- *Adjustment of the structure, content and duration of training programmes in keeping with the developments in the basic biomedical sciences, the clinical sciences, the behavioural and social sciences, and changes in the demographic profile and health/disease pattern of the population, and in socio-economic and cultural conditions.*
- *Development of assessment principles and methods according to changes in training objectives and methods.*
- *Adaptation of recruitment policy and methods of selection of trainees to changing expectations and circumstances, human resource needs, changes in basic medical education and the requirements of the training programme.*
- *Adaptation of recruitment and policy of appointment of trainers, supervisors and teachers according to changing needs in postgraduate training.*
- *Updating of training settings and other educational resources to changing needs in postgraduate training, i.e. the number of trainees, number and profile of trainers, the training programme and contemporary training principles.*
- *Refinement of the process of programme monitoring and evaluation.*
- *Development of the organisational structure and management principles in order to cope with changing circumstances and needs in postgraduate training and, over time, accommodating to the interests of the different groups of stakeholders.*

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APPENDICES

1. MEMBERS OF THE WFME WORKING PARTY

Judith S. Armbruster, Ph.D.

Executive Director, Residency Review Committees
Accreditation Council for Graduate Medical Education (ACGME)
USA

Philip G. Bashook, EdD

Visiting Research Associate Professor
University of Illinois at Chicago
USA

Leif Christensen, MSc. Soc.

World Federation for Medical Education (WFME)
Denmark

Professor Ernst Goldschmidt

Denmark

Professor Janet Grant

The Open University Centre for Education in Medicine
UK

Dr. Hans Asbjørn Holm

The Norwegian Medical Association
Norway

Dr. Jens Winther Jensen

Permanent Working Group of European Junior Doctors (PWG)
Denmark

Dr. Hans Karle

President, World Federation for Medical Education (WFME)
Denmark

Professor Stefan Lindgren

Faculty of Medicine, University of Lund
Sweden

Professor J.P. d. V. van Niekerk

President, Association of Medical Schools in Africa (AMSA)
South Africa

Dr. Jørgen Nystrup

Past President, Association for Medical Education in Europe (AMEE)
Roskilde Amtssygehus Fjorden
Denmark

Dr. Cillian Twomey

President, Union Européenne des Médecins Spécialistes (UEMS)
Ireland

Theanne Walters

Deputy Executive Officer, Australian Medical Council (AMC)
Australia

2. INTERNATIONAL PANEL OF ADVISORS

Professor A. P. R. Aluwihare

University of Peradenya, Medical Faculty
Sri Lanka

Judith S. Armbruster, Ph.D.

Executive Director, Residency Review Committees
Accreditation Council for Graduate Medical Education (ACGME)
USA

Philip G. Bashook, EdD

Visiting Research Associate Professor
University of Illinois at Chicago
USA

Professor Cheng Boji

Peking University Health Science Center
P.R. China

Leif Christensen, MSc. Soc.

World Federation for Medical Education (WFME)
Denmark

Professor Florian Eitel

Chirurgische Klinik und Poliklinik Klinikum Innenstadt
Ludwig-Maximilians-Universität München
Germany

Professor Ernst Goldschmidt

Denmark

Professor Janet Grant

The Open University Centre for Education in Medicine
UK

Dr. James A. Hallock

President, Educational Commission for Foreign Medical Graduates (ECFMG)
USA

Dr. Hans Asbjørn Holm

The Norwegian Medical Association
Norway

Dr. Moufid Jokhadar

Secretary General, Arab Board of Medical Specializations
Syria

Dr. Hans Karle

President, World Federation for Medical Education (WFME)
Denmark

Dr. David Leach

Executive Director, Accreditation Council for Graduate
Medical Education (ACGME)
USA

Professor Stefan Lindgren

Faculty of Medicine, University of Lund
Sweden

Dr. Donald E. Melnick

President, National Board of Medical Examiners (NBME)
USA

Professor J.P. d. V. van Niekerk

President, Association of Medical Schools in Africa (AMSA)
South Africa

Dr. Jørgen Nystrup

Past President, Association for Medical Education in Europe (AMEE)
Roskilde Amtssygehus Fjorden
Denmark

Professor Albert Oriol-Bosch

Director, Institut d'Estudis de la Salut
Spain

Dr. John Parboosingh

Consultant to the CEO - Professional Development
The Royal College of Physicians and Surgeons of Canada
Canada

Dr. José Patinõ

Executive Director
Panamerican Federation of Associations of Medical Schools (PAFAMS)
Colombia

Dr. Cillian Twomey

President, Union Européenne des Médecins Spécialistes (UEMS)
Ireland

Professor Felix Vartanian

Vice Rector
The Russian Academy of Advanced Medical Studies
Russian Federation

Theanne Walters

Deputy Executive Officer, Australian Medical Council (AMC)
Australia

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