MALTA COLLEGE OF PATHOLOGISTS

CLINICAL / MEDICAL GENETICS

TRAINING PROGRAMME

2013

Contents

Objectives of Training	3
Definition	3
General objectives	3
Specific objectives	4
Medical Expert / Clinical Decision-Maker	4
Communicator	7
Collaborator	8
Manager	8
Health Advocate	9
Scholar	9
Professional	10
Specialty Training Requirements	10
Basic Clinical / Medical Genetics Training	10
Basic Clinical / Medical Genetics Training (BST1 and BST2):	11
Progression to Higher Clinical / Medical Genetics Training:	11
Exemptions:	11
Higher Clinical / Medical Genetics Training	12
Annual Review	12
Certification of Specialist Training	12
Training sites	13
Curriculum & Content of Programme for Basic Training	13
Paediatric programme	13
Medical programme	13
Obstetrics programme	14
Curriculum & Content of Programme for Higher Clinical / Medical Genetics Training	14
History, Examination, Investigations, Management & Record keeping Skills	14
Procedures (phlebotomy, hair root extraction, skin biopsy, clinical photography)	14
Communication skills and genetic counselling	155
Formal genetics and basic sciences	15
Common clinical / medical genetic referrals	15
Assessment procedure	177
Trainer Qualification and Supervision	188
Duties of Trainers	18
Completion of Training	18

THE MALTA COLLEGE OF PATHOLOGISTS



OUTLINE OF TRAINING PROGRAMME IN CLINICAL / MEDICAL GENETICS

Objectives of Training

Definition

Clinical / Medical Genetics is that branch of medicine concerned with the effect of hereditary variation on human development and health and also with the study, diagnosis, management, and prevention of disease in individuals, families and communities.

General objectives

The practice of Clinical / Medical Genetics is based on an in depth knowledge of basic genetic principles, a broad range of knowledge of genetic disease as it affects all body systems and individuals of all ages, including complex disease in which risk is due to genetic causes and a clear understanding of the principles of genetic counselling.

On completion of the specialist programme, the trainee physician will be competent to function as a specialist in Clinical / Medical Genetics. At the final assessment, the trainee must demonstrate the knowledge, skills and attitudes relating to gender, culture and ethnicity pertinent to Clinical / Medical Genetics. In addition, all trainees must demonstrate an ability to incorporate gender, cultural and ethnic perspectives in research methodology, data presentation and analysis. This requires the physician to:

- Perform a complete evaluation of physiological and pathological states relevant to the specific expertise of human Clinical / Medical Genetics, including, teratology, chromosomal abnormalities, disorders of morphogenesis, inborn errors of metabolism, and monogenic and complex genetic disorders;
- Provide scientifically based, comprehensive and effective diagnosis and management for patients;
- Provide effective genetic counselling for patients and their families;
- Advise the public and health care colleagues on public health aspects of genetics;
- Communicate effectively with medical colleagues, including referring physicians, and other health care professionals;
- Maintain complete and accurate medical records;
- Effectively coordinate or participate in the work of the health care team;
- Be an effective teacher of other physicians (including medical students and specialist trainees), other health care personnel, patients, and general public;
- Demonstrate personal and professional attitudes consistent with the role of consultant physician;

- Understand the principles and application of practice management and continuing management improvement;
- Be willing and able to appraise accurately his or her own professional performance;
- Be willing and able to keep his or her practice current through various modes of continuing medical education;
- Be able to critically assess the clinical / medical literature;
- Be able to participate in clinical or basic science studies as a leader or member of a research team;
- Understand and apply legal, ethical, and psychosocial dimensions of Clinical / Medical Genetics; and demonstrate the knowledge, skills and attitudes relating to gender, culture and ethnicity pertinent to Clinical / Medical Genetics.

The detailed objectives describe minimal standards and in no way exclude the necessity for mastery of additional knowledge, skills or attitudes necessary for the most effective management of patients with genetic disorders.

It is understood that medical trainees successfully completing the Clinical / Medical Genetics training programme are regarded as fully competent specialists in the clinic with a comprehensive understanding of the work and service provision of the diagnostic genetics laboratories.

Specific objectives

At the completion of training, the trainee will have acquired the following competencies and will function effectively as:

Medical Expert / Clinical Decision-Maker

General Requirements

- Demonstrate diagnostic and therapeutic skills for ethical and effective patient care.
- Access and apply relevant information to practice.
- Demonstrate effective consultation services with respect to patient care, education and legal opinions.

Specific Requirements

1. General knowledge

As a basis for clinical competence, the specialist trainee must be able to describe and discuss:

- The general structure of the human genome;
- What information can be obtained from an integrated assessment of genomic function at the RNA or protein level that cannot be obtained from the DNA sequence alone;
- How processes such as gene duplication and divergence, exon shuffling, and the activity of transposable elements help to explain genomic variability, redundancy, and plasticity;
- How gene expression is affected by differences in coding and non-coding regions, effects of trans-acting factors, and the structure of chromatin;
- How protein function is influenced by mRNA and polypeptide processing, targeting, and interactions.

The specialist trainee must also be able to describe and discuss:

- Normal and abnormal gene structure and function;
- Normal and abnormal cell division;
- Chromosome structure, morphology and nomenclature, including the principles and application of the various cytogenetic techniques;
- Principles and application of somatic cell genetics;
- Principles and application of molecular genetics techniques;
- Basic principles of biochemistry and principles and application of laboratory investigation relevant to inborn errors of metabolism;
- Monogenic and complex inheritance;
- Developmental biology as it relates to normal and abnormal human morphogenesis;
- Principles of epidemiology, including biostatistics, genetic epidemiology, and population genetics.

2. Clinical knowledge

The specialist trainee will be able to describe and discuss:

- Genetic and non-genetic (intrinsic and extrinsic) factors predisposing to foetal loss, infertility, and abnormalities of morphogenesis;
- Teratogenic agents and their effects;
- Phenotypic variation and specific methods of assessment;
- Methods of syndrome identification and diagnosis, including the use of computer diagnostic aids;
- Aetiology, diagnosis, management, natural history, and prognosis of welldefined genetic syndromes, monogenic and complex diseases;
- Indications, limitations and risks of techniques of foetal assessment and options for reproductive intervention;

- Indicators of normal and abnormal psychomotor development;
- The use and limitations of commonly used instruments for the assessment of behaviour and intelligence;
- Characteristic behavioural phenotypes of well-defined genetic syndromes and disorders;
- Community services and resources available to help patients and their families;
- Genetic screening and genetic testing;
- National and European laws related to genetic diseases, reproductive options and technology;
- National and European laws related to confidentiality, autonomy, disclosure, privacy, and issues of competence; and
- The distinction between genetic testing for the diagnosis of disease and predictive testing to assess risk for predisposition to monogenic or complex genetic diseases as well as their applications and limitations.

3. Clinical skills

The specialist trainee must demonstrate the ability to:

- Elicit a comprehensive medical history and an appropriate family history, and to construct and interpret a standardised pedigree;
- Carry out a comprehensive physical examination with special expertise in phenotypic variation;
- Formulate an appropriate differential diagnosis, and plan an appropriate course of investigation with respect to genetic disease;
- Perform special expertise in syndrome identification, including the use of diagnostic aids (e.g. computer assisted diagnosis);
- Recognize, describe, and interpret laboratory and imaging findings relevant to genetic disease with special expertise in cytogenetics, molecular genetics and biochemical genetics;
- Integrate these clinical, laboratory, and imaging data to achieve or validate a diagnosis;
- Evaluate the risk of recurrence in families;
- Plan and coordinate the care of individuals affected with genetic conditions; and
- Provide continuity in care and to periodically assess the appropriateness of the care plan.

Communicator

General Requirements

- Establish therapeutic relationships with patients and families.
- Obtain and integrate relevant history from patients and families and their communities.
- Listen effectively.
- Discuss appropriate information with patients and families and the health care team.

Specific Requirements

The specialist trainee will demonstrate the ability to:

- Provide genetic counselling: displaying empathy and compassion, especially in delivering bad news, remaining objective and impartial, remaining appropriately non-directive, but being prepared to advise in certain situations and to provide psychological support either personally or through referral employing active listening skills, delivering information to the patient and family in a manner that is understandable, encouraging discussion, and promoting patient and family participation in decision-making.
- Gather information not only about the disease but also about the patient's beliefs, concerns and expectations about the disorder, while considering the influence of factors such as the patient's age, gender, ethnic, cultural, and socioeconomic background, and spiritual values;
- Recognize one's own biases, including ethno-cultural differences, and their impact on communication and patient care;
- Understand how cultural background, age, gender, socioeconomic background and spiritual values influence communication;
- Use, appropriately, non-verbal communication;
- Communicate, at a level appropriate to the consultant or the referring physician, information concerning the medical implications and prognosis, the risks that apply, and the options available;
- Help the individual and family choose an appropriate course of action for themselves;
- Advise them regarding support agencies; and
- Summarize findings, consultation notes and counselling, for referring physicians, agencies and families.

Collaborator

General Requirements

- o Consult effectively with other physicians and health care professionals.
- Contribute effectively to other interdisciplinary team activities.

Specific Requirements

The trainee will:

- Demonstrate understanding of the roles of clinicians and research scientists cooperatively to advance knowledge of human genetics in genetics research endeavours.
- Describe how health care governance influences patient care, research and educational activities at a local, provincial, regional, and national level.
- Participate in an interdisciplinary team meeting, and demonstrate the ability to accept, consider and respect the opinions of other team members, while s/he contributes to clinical / medical genetics-specific expertise.
- Communicate effectively with the members of an interdisciplinary team in the resolution of conflicts, provision of feedback, and where appropriate, be able to assume a leadership role.

Manager

General Requirements

- Utilize resources effectively to balance patient care, learning needs, and outside activities.
- Allocate finite health care resources wisely.
- Work effectively and efficiently in a health care organization.
- Utilize information technology to optimize patient care, life-long learning and other activities.

Specific Requirements

The trainee will:

- Demonstrate understanding of the importance of quality assurance as it relates to clinical care, laboratory data, and education.
- Demonstrate the ability to balance personal and professional demands on activities of daily living.
- Demonstrate understanding of issues involving potential litigation.
- Demonstrate understanding of the following professional skills in time management: recognition that the effective use of time depends on punctuality, requires planning, depends on development of speed as well as accuracy in clinical skills, on reservation of time for reading and keeping current with the genetics literature and on the establishment of routines for carrying out regular activities and adhering to them.

- Demonstrate commitment to the maintenance of complete and accurate medical records.
- Demonstrate knowledge of how to identify employment policies and procedures.
- Demonstrate the ability to effectively coordinate the work of the health care team.
- Demonstrate knowledge of planning, evaluation, and assessment of outcome of a health care programme.

Health Advocate

General Requirements

- o Identify the important determinants of health affecting patients.
- o Contribute effectively to improved health of patients and communities.
- Recognise and respond to those issues where advocacy is appropriate.

Specific Requirements

The trainee will:

- Demonstrate an awareness of, and a willingness to refer patients to, community and national resources.
- Demonstrate understanding of the roles of national and international agencies in the promotion of genetic health and the prevention, detection, and treatment of genetic disorders.
- Demonstrate understanding of the importance of participating actively in public policy discussions and decision-making regarding the application of new genetic technologies.

Scholar

General Requirements

- Develop, implement and monitor a personal continuing education strategy.
- Critically appraise sources of medical information.
- Facilitate learning of patients, students and other health professionals.
- Contribute to development of new knowledge.

Specific Requirements

The trainee will:

- Demonstrate commitment to continuing professional development; and participation in clinical or basic science studies as a member of a research team.
- Demonstrate the ability to critically assess the genetics literature as it relates to patient diagnosis, investigation, and management.

- Demonstrate the willingness and ability to enhance and apply teaching skills in the education of colleagues, specialist trainees, and other health care professionals.
- Demonstrate the ability to pose a research question, and to conduct a research project and defend and disseminate the results of the research.

Professional

General Requirements

- Deliver highest quality care with integrity, honesty and compassion.
- Exhibit appropriate personal and interpersonal professional behaviour.
- Practice medicine ethically consistent with obligations of a physician.

Specific Requirements

The trainee will:

- Demonstrate understanding of the importance of confidentiality and the difficulties it poses in the rare instances where relatives are at risk for a serious and potentially preventable disease.
- Demonstrate the ability to recognize the limitations of their skills and expertise and seek consultation whenever indicated.
- Demonstrate the willingness and ability to appraise accurately their own professional performance.
- Display personal and professional attitudes consistent with a consulting physician role by: periodically reviewing their own personal and professional performance against national standards set for the specialty, showing willingness to include the patient in discussions concerning appropriate diagnostic and management procedures, showing appropriate respect for the opinions of fellow consultants and referring physicians in the management of patient problems and being willing to provide means whereby differences of opinion can be discussed and resolved.
- Demonstrate the ability to recognise and respond appropriately to abuse, gender bias, discrimination, intimidation, and disrespect.
- Demonstrate the knowledge of how to sustain career satisfaction.

Specialty Training Requirements

Basic Clinical / Medical Genetics Training

Entry Requirements

- Registerable degree in Medicine and Surgery from the University of Malta or equivalent recognised in the EU
- Full registration with the Medical Council of Malta

Duration

The training programme shall minimally consist of two years of Basic Clinical / Medical Genetics training and three years of Higher Clinical / Medical Genetics Training.

Basic Clinical / Medical Genetics Training (BST1 and BST2):

- 24 months (minimum) of full attachment, to a basic clinical training programme, of which
 - 8 months (minimum, 2 rotations) shall be in Internal Medicine
 - i. 4 months (minimum) in Neurology
 - ii. 4 months (minimum) in any other clinical specialty
 - 12 months (minimum, 3 rotations) shall be in Paediatrics
 - i. 4 months (minimum) in Neonatology
 - ii. 4 months (minimum) in Neurological Disease of Childhood
 - iii. 4 months in any other branch of Paediatrics, including Paediatric Endocrinology.
 - 4 months (minimum, 1 rotation) in Obstetrics (including infertility & miscarriage, high-risk obstetrics/fetal assessment and assisted reproduction procedures)

A programme of clinical rotations shall be established for each trainee.

Progression to Higher Clinical / Medical Genetics Training:

 completion of Basic Clinical / Medical Genetics Training Programme (as ascertained by completion of the Part1 MRCPath or equivalent qualification as deemed by the Malta College of Pathologists) AND a Certificate of Completion of Basic Specialist Training

Exemptions:

- If the trainee is already in possession of the MRCP (Medicine) or equivalent diploma/degree recognised by the EU, or is certified in General Professional Training in Internal Medicine, s/he will be exempted from 8 months in internal medicine training.
- If the trainee is already in possession of the MRCP (Paediatric) or MRCPCH or equivalent diploma/degree recognised by the EU, or is certified in General Professional Training in Paediatrics, s/he will be exempted from 8 months in Paediatric training.
- Trainees who are in possession of a postgraduate degree, at Masters level or above, in any relevant Pathology discipline (namely, molecular biology, human

genetics, clinical genetics,) will be exempted from **one** year of the proposed Higher Training Programme.

Higher Clinical / Medical Genetics Training

Entry Requirements

- Registerable degree in medicine and surgery from the University of Malta or equivalent recognised in the EU
- Full registration with the Medical Council of Malta
- Certificate of Completion of Basic Specialist Training
- 36 months (minimum) of approved attachments in genetic fields, which must include:
 - 4months (minimum) in a cytogenetics laboratory
 - 4months (minimum) in molecular genetics laboratories
 - 16 months (minimum) in a clinical / medical genetics unit.
 - completion of an educational programme at the advanced level (equivalent to a post graduate level degree) to cover the following areas:
 - i. cell biology / molecular genetics
 - ii. cytogenetics and congenital anomalies
 - iii. human genomics and genetic medicine
 - iv. genetic epidemiology / public health genomics
- At least 12 months have to be taken for post graduate research in areas relevant to Clinical / Medical Genetics or clinical training relevant to Clinical / Medical Genetics in a reference centre overseas as approved by the training committee subject to approval by the SAC. Up to 6 months credit may be given for a higher degree in Genetics or with Genetics as a major subject / area of study and up to 3 months may be awarded for a BSc in Genetics if approval is given in advance.

Annual Review

The trainee is to keep a record of training and experience, which must be endorsed annually by the Trainer. Trainees can only progress to the next year of the Training Programme following a successful assessment.

An annual review shall be carried out by a Board nominated by the Pathology Postgraduate Training Committee, composed of three members, including the Head of Training for Clinical / Medical Genetics, to identify any problems encountered by the trainee and any deficiencies of the training programme.

Certification of Specialist Training

Once the trainee has satisfactorily completed the Training Programme outlined above, and completion of the Part2 MRCPath or equivalent qualification as deemed by the Malta College of Pathologists) he/she will be entitled to obtain the Certificate of Completion of Specialist Training (CCST).

The CCST will be awarded by the Specialist Accreditation Committee, on the recommendation of the College, provided the College Council is satisfied of the trainee's proficiency in Clinical / Medical Genetics

 On fulfilling all the conditions of completion of Higher Clinical / Medical Genetics Training, the candidate shall inform the Post Graduate Training coordinator in writing and must submit all the necessary documentation in support of the claim, as determined by the Training Programme set by the Malta College of Pathologists. The Pathology Post Graduate Training Committee shall examine and verify the validity of the professional qualifications, work experience and clinical expertise attained by the candidate, and interview the candidate. The PPGTC shall then recommend, in writing to the Specialist Accreditation Committee, inclusion in the Specialist Register in Clinical / Medical Genetics.

Training sites

Training shall take place in a recognised teaching institution or group of institutions recognised by the SAC which offer the trainee practice in the full range of the specialty.

Curriculum & Content of Programme for Basic Training

The curriculum will aim to prepare candidates for the completion of the Basic Training in Clinical / Medical Genetics and to deepen and strengthen the skills in general medical specialties pertinent to Clinical / Medical Genetics to enable the candidate to manage simple and complex conditions independently or by working with other colleagues.

Paediatric programme

The training programme shall involve supervised responsibility for the care of children within the following subspecialties: neurology, endocrinology, neonatology and one other subspecialty, with exposure to:

- acute medical problems in the wards;
- emergency work on wards or sick babies in Neonatal Intensive Care Unit;
- cover of casualty cases; and
- review of children at outpatients.

Medical programme

The training programme shall involve supervised responsibility for the care of adult patients within the fields of neurology, endocrinology and one other clinical speciality with:

- exposure to neurovascular and neurodegenerative disease, inherited and congenital diseases, demyelinating disorders, extrapyramidal disorders, epilepsies, neuromuscular disorders and neoplasms of the nervous system;
- involvement in the care of Acute Medical Admissions;
- involvement in the care of Acute Endocrinological Emergencies;
- involvement in the care of ambulatory patients with endocrinological disease;
- involvement in the care of patients with lipid and other metabolic disorders; and

• acquisition of competence and knowledge with regard to the indications, supervision and interpretation of dynamic endocrinological tests.

Obstetrics programme

The training programme shall involve supervised responsibility for the care of cases in the field of obstetrics and foetal medicine with exposure to cases of normal pregnancy, abnormal pregnancy, infertility and assisted reproduction, and miscarriage to acquire:

- comprehensive knowledge of maternal and foetal physiology including placental function and materno-foetal interactions;
- comprehensive knowledge of all aspects of abnormality of pregnancy, labour and puerperium together with their management;
- knowledge of normal and abnormal anatomy of the foetus, placenta and amniotic fluid compartment, foetal biometry, estimation of gestational age, assessment of foetal growth and behaviour; and
- knowledge of invasive diagnostic and therapeutic procedures including assisted reproduction techniques.

Other tasks will include:

- ability to liaise with other health professionals
- participation in departmental academic activities.

Curriculum & Content of Programme for Higher Clinical / Medical Genetics Training

Formal lectures, seminars and hands on training shall form part of the programme for Higher Clinical / Medical Genetics training. The trainee is expected to gather sufficient knowledge in various fields related to genetics and counselling.

History, Examination, Investigations, Management & Record keeping Skills

The trainee is expected to:

- be able to establish genetic diagnoses by means of clinical history taking, physical examination and use of appropriate investigations and to provide clinical genetic management for patients and families
- have the knowledge, skills and attitudes to manage time and problems effectively.

Procedures (phlebotomy, hair root extraction, skin biopsy, clinical photography)

The trainee is expected to show ability

- to take blood samples from adults and children, hair root extraction and skin biopsy for the appropriate laboratory tests.
- to take photographs of sufficient quality for clinical use
- to use digital photography and storage of data
- to understand importance and confidentiality of photographic records

Communication skills and genetic counselling

The trainee is expected to show ability as follows:

 Acquire and demonstrate effective communication with patients, relatives and colleagues along with the habit of reflection on personal genetic counselling style and effectiveness. "Counselling" in this context means <u>the transmission of information about</u> genetic disease, risk and reproductive options

Formal genetics and basic sciences

The trainee is expected to show ability as follows:

- Understand cellular and molecular mechanisms that underpin inheritance in man
- · Identify the social and ethical implications of genetic knowledge
- Understand patterns of inheritance and undertake risk assessment
- Have knowledge of emerging genetic technologies and their application (including gene therapy)

Common clinical / medical genetic referrals

The general objective of this part of the curriculum is to provide the trainee with the skills and knowledge to be able to carry out specialist diagnosis, assessment and genetic counselling of genetic conditions in particular the following fields:

- Neurogenetics
 - o Genetic causes of central and peripheral nervous system dysfunction
- Paediatric genetics
 - To develop skills and knowledge to make syndrome diagnosis
 - \circ Ability to recognise the clinical features of common syndromic conditions in children
- Dysmorphology
 - Ability to perform dysmorphological assessment using correct terminology and measurements
 - Ability to provide a good differential diagnosis in dysmorphic individuals
- Prenatal diagnosis and foetal dysmorphology
 - To develop the skills and knowledge to assess foetal abnormality during pregnancy, to provide parents with information about prognosis, genetic investigations, including post-mortem examination and storage of foetal tissue
- Cancer genetics

- Ability to diagnose rare cancer syndromes and to recognise when common cancers are likely to have a single gene basis
- Ability to recommend targeted screening in individuals who are identified as having increased risk
- Coordination of appropriate molecular genetic testing

• Cardiac genetics

- Ability to diagnose inherited cardiac conditions (ICC)
- Ability to recommend targeted screening in individuals who are identified as having increased risk of an ICC
- Ability to coordinate appropriate molecular genetic testing

• Laboratory genetics

• To acquire skills and knowledge to authorise genetic laboratory results by completing an attachment in the genetics laboratories.

• Ethics and legal issues

- To know, understand and apply appropriately the principles, guidance and laws regarding medical ethics and confidentiality
- To ensure the trainee has the knowledge and skills to deal appropriately with ethical and legal issues that arise during the management of patients with genetic disorders.
- To identify practical, legal and ethical issues arising from operation of genetic registers
- To know the criteria against which screening programmes for genetic diseases and susceptibilities are judged.

• Patient education and disease

 Educating patients about disease, investigations and management - To ensure that the trainee has the knowledge, skills and attitudes to be able to educate patients effectively about genetic disease.

Research

- To be able to plan and analyse research Trainees who wish to acquire extensive research competencies, in addition to those specified in the generic element of the curriculum may undertake a research project as an ideal way of obtaining those competencies, all options can be considered including taking time out of the Training Programme to complete a specified project or research degree. Time out of the Training Programme needs prospective approval from the SAC. Funding will need to be identified for the duration of the research period. A maximum period of 3 years out of the Training Programme is allowed.
- Trainees are <u>encouraged to undertake research</u> and have a good knowledge of research methodology.
- There should be active involvement with research projects throughout the training period.

Assessment procedure

The overall purpose of the assessment is to reassure the individual, the profession and the public and service provider that a trainee is fit to practice. The assessment system will have clear educational purposes:

- To support learning and progression across the curriculum
- To assess the level of competence achieved at different stages and
- To guide the trainee and provide support remediation in case of difficulties.

A Programme Board nominated by the Pathology Postgraduate Training Committee, composed of at least three members, including the Head of Training for Clinical / Medical Genetics, shall be responsible for the day to day running of the training programme, identification of any problems encountered by the trainee and any deficiencies of the training programme.

The evaluation of the training programme will be undertaken by the Malta College of Pathologists. Emphasis will be given to evaluation during training rather than at the end.

The assessment procedures adopted will be developed by the Post Graduate Training Committee (and broadly based on the UEMS standards). A range of assessment procedures may be undertaken which will include both formal examinations and workplace performance.

All trainees will be formally evaluated on an annual basis by a Board nominated by the Pathology Postgraduate Training Committee, composed of at least three members, including the Head of Training for Clinical / Medical Genetics. Progress during training should be recorded in a log-book, listing procedures performed and participation in teaching programmes. The College provides a log-book for this purpose.

Assessment during training will be of three types:

1. Self-assessment

Trainees shall record in the log-book their confidence in performing recommended procedures, and their opinion of their interaction with their trainers.

2. Formative assessment

Trainers should, at regular intervals, record in the log-book their assessment of the trainee's competence in performing clinical tasks. The trainee's interactions with patients and colleagues shall also be noted.

3. Summative assessment

It is mandatory that an intermediate assessment by the tutor shall be carried out after one year in order to identify shortcomings needing corrective action or, if necessary, to recommend a change of specialty.

The trainee will be required to submit to assessment by examination, such as the MRCPath or equivalent as advised by the college. Such exam may be held at any stage during the training.

Trainer Qualification and Supervision

The Specialist Training Committee of the Malta College of Pathologists together with the Training Coordinator and Head of Department will be responsible for the implementation of the Training Programme as endorsed by the SAC.

A Post-graduate Coordinator appointed through a call for application by the Health Division will be responsible for implementation of the Pathology Training Programmes.

The Co-ordinator will set up and chair a single Pathology Postgraduate Training Committee for all pathology disciplines, including Clinical / Medical Genetics, which will be responsible for the management and administration of Training Programmes in Pathology. The Committee will be composed of Pathology trainers and will include the Chairman of Pathology.

The Post-Graduate Training Co-ordinator and the trainers shall be listed on the Specialist Register of Pathology (with Clinical / Medical Genetics as a subspecialty of the trainers) of the Medical Council of Malta and for a minimum period of 5 consecutive years.

Duties of Trainers

Trainees will be supervised directly by at least two trainers during their training period. The main responsibility of the trainers is to perform continuous assessment of progress of the trainee to ensure that trainee acquires adequate experience.

Trainers will have the following duties:

- To supervise all aspects of training
- To meet regularly with the trainee to discuss the programme, progress and shortcomings.
- Trainers shall provide yearly reports to the post-graduate training committee on the progress of the trainee, indicating the necessary changes to the individual's training.
- Reports should summarise observations of the trainees in practice, workplace assessments, log book review and progress with examinations.
- To provide feedback, regarding the training programme, from both trainee and trainers.

Completion of Training

The Malta College of Pathologists has the legal right and obligation to advise the SAC on

- all matters related to postgraduate training in Clinical / Medical Genetics
- on matters related to the training performance of every trainee
- whether a trainee has completed the full training programme i.e. leading to the issue of certification of completion of training by the SAC.