

**Subspecialist training programme in
Reproductive medicine .**

POSTGRADUATE TRAINING AND ASSESSMENT
WORKING PARTY

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In Europe approximately 14% of the couples have difficulties in conceiving. The demand for treatment is increasing probably because the couples are actually trying later to conceive and the fertility decrease with the age of the partners . The management of an infertile couples and the development of assisted reproductive technics (ART) need pluridisciplinary approach and require special training such as endocrinology , andrology , reproductive surgery ,reproductive biology , genetics , psychology of both partners .

EBCOG noted with approval the development of subspecialty practice in a number of countries and considered that reproductive medicine should be recognised as subspecialty in Europe .

Educational objective and requirements for training in these subspecialist areas have been defined with acknowledged experts from the European Society of Human Reproduction and Embryology (ESHRE) and are recognised in the syllabus (Annexe I) . The role of a subspecialist is complementary and not competitive with that of the specialist in Obstetrics and gynaecology .

Training the subspecialist in reproductive medicine:

1- Definition .

The reproductive medical subspecialist is a specialist in Obstetrics and gynaecology who has had theoretical and practical training in :

- a) medical and surgical management of infertility . This may involve treatment of the male if practised by the gynaecologists in the country . It will involve a range of assisted reproductive techniques (A RT)
- b) reproductive endocrinology

Comprehensive management of these problems includes diagnostic , therapeutic procedures and audit of outcome .

The practice of reproductive medicine exclude training and practice in another subspecialty .

2- Aim of the training .

To improve the care of patients with disorders of reproductive function in collaboration with other care providers .

3-Objectives of the training :

To train a subspecialist to be capable of :

- improving knowledge , practice , teaching , research and audit .
- co-ordinating and promoting collaboration in organising the service
- providing leadership in the development and in research within subspecialty .

4-Organisation of training :

- the number of training posts should be strictly regulated by the relevant national body in order to provide sufficient expertise.
- training programme should be in a multidisciplinary center and should be organised by a subspecialist or an accredited subspecialist .¹
- center should use guidelines and protocols finalised by national professional bodies reviewed at regular intervals .
- -training as a sub specialist in reproductive medicine does not imply an exclusive activity in that field .

¹ Initially there will be a transitional period when accreditation for training will be given by the national appointing authority to a Specialist in Obstetrics and gynaecology with proven scientific and clinical expertise in reproductive medicine . Subsequently only individuals with training in the subspecialty should hold such a position .

5-Means of training .

5.1 Entry requirements:

- a recognised specialist qualification in Obstetrics & Gynaecology or have completed a minimum of five years in an approved training programme .
- the availability of a recognised training post .

5.2 An adequately remunerated post in a recognised training programme is a basic condition. Each trainee must be allocated an appointed tutor for guidance and advice.

5.3 For each country, the number of training posts should reflect the national need for sub specialists in reproductive medicine as well as the facilities and finance available for training.

5.4 Trainees should participate in all hospital activities such as the care of out-patients and in-patients, on call duties , performing endoscopic surgery , assisted reproductive techniques such as ovulation induction , insemination , IVF and participating in educational activities, including the teaching of other health professionals. Participation in audit and clinical or basic research is essential.

5.5 Arrangements for postgraduate training must be compatible with national employment legislation in relation to remuneration, hours of work and rights of employees in such matters as sick leave, maternity and paternity leave and compulsory military service.

5.6 Duration of training

Duration of subspeciality training should include **a minimum of two years** in an approved programme and should cover the clinical and research aspects of the following areas :

Reproductive surgery
Endocrinology
Andrology
Ultrasound imaging
Reproductive Biology
Genetics
Counselling

5.7 Training should be structured throughout with clearly defined targets to be met after specified intervals.

An educational plan should be drawn up in consultation with the trainee at the beginning of each attachment and progress should be monitored regularly by mean of the log book.

5-8 A trainee may spent some training time an another(1 or 2) center(s) recognisedby EBCOG after aprouval by the national committee.

6-Assessment of training

6.1 In all European countries approval of training and trainers should be the responsibility of a national or regional authority which has the power to withdraw recognition if necessary.

6-2 Approval of institutions as training centres should be based on :

- Annual statistics .
- Internal quality control and audit
- Organised teaching sessions
- Availability of :
 - Clinical genetics unit
 - Reproductive biologist.
 - Ultrasound unit
 - Multidisciplinary team regularly involved in the management of reproductive medicine.
- Fulfilment of defined criteria for minimum activity :
 - 1000 out patient infertile couples a year /trainee
 - 100 ovulation induction cycles / trainee
 - 100 Insemination couples/ trainee
 - 100 reproductive surgery /trainee 60 more for a second .
 - 300 Ultrasound / trainee
 - 200 IVF a year /trainee

6-3-Assessment of the trainee should be carried out by a national or federal committee of experts and would take into consideration :

- Participation in reproductive medicine courses in particular those recognised by EBCOG advised by ESHRE.
- Completion log book of clinical experience in reproductive medicine
- Peer review publications in a nationally recognised journal

6-4 .A representative from the EBCOG post graduate training and assessment working party may be an observer on the national or federal assessment committee.

6.5 -EBCOG in conjunction with ESHRE is willing to organise an evaluation visit to a subspecialist unit if requested .

Annexe I.

Syllabus

Definitions :

- Knowledge : basic understanding of topics not commonly used in the clinical practice of reproductive medicine.
- Detailed knowledge : Understanding of important aspects of topics which may be more comprehensively understood by a specialist in other discipline (e.g. geneticist).
- Comprehensive knowledge : Complete understanding of topics which are important in the clinical practice of reproductive medicine.

1-BASIC SCIENCES

1-1 Anatomy.

- Comprehensive knowledge of the regional anatomy of the pelvis, abdomen of female and male reproductive organs .
- Detailed knowledge of gross anatomy of hypothalamus , pituitary and adrenal glands
- Comprehensive knowledge of the histology of the female and male genital tract and endocrine glands related to reproduction .
- Detailed knowledge of cell structure in relation to function .

1-2 Physiology

Comprehensive knowledge of human physiology with particular reference to the female and male reproductive system, fertilisation and implantation and early pregnancy .
Knowledge of regulation and influence of vascularisation and micro circulation in the reproductive organs .

1-3 Genetics and molecular biology.

Detailed knowledge of sexual differentiation .
Detailed knowledge of common inherited disorders.
Knowledge of the principles of inheritance of chromosomal and genetic disorders .
Detailed knowledge of chromosomal abnormalities involved in reproduction .

1-4 Embryology.

Knowledge of the common fetal malformations
Comprehensive knowledge of gametogenesis and fertilization, of organogenesis and the early embryo development.

Comprehensive knowledge of abnormalities of development of the reproductive organs

1-5 Pathology .

Detailed knowledge of the cytopathology and histology of the female and male reproductive tract

1-6 Biochemistry

Knowledge of the metabolism of neurotransmitters ,receptors , autocrine and paracrine factors .

1-7- Biophysics .

Knowledge of the physical principles and biological effects on reproductive organs of heat , sound and electromagnetic radiation. understanding of the principles of laser, isotopes, X rays, ultrasound and magnetic resonance imaging .

1-8 Immunology.

Detailed knowledge of immune mechanisms, and of the principles of reproductive immunology.

1-9 Pharmacology .

Comprehensive knowledge of the properties, pharmacodynamics, actions, interactions and hazards of pharmacological agents which are used in reproductive medicine and particularly the compounds which could have a deleterious effect on the reproductive tract

2-CLINICAL SCIENCES

2-1. Infertility

Comprehensive knowledge of epidemiology, causes, investigations and management of female and male infertility .

2-2 Endocrinology

Comprehensive knowledge of gynaecological and andrological endocrinology including its applications in reproductive medicine .

2-3. Reproductive Genetics.

Detailed knowledge of genetic disorders related to female and male reproduction (infertility, recurrent abortions, etc).

2-4- Paediatric and adolescent

Detailed knowledge of normal and abnormal sexual development and of specific disorders affecting young females and males and adolescents .

2-5. Disorders of menstruation

Comprehensive knowledge of normal menstruation and of the pathophysiology of menstrual disorders , their investigation and management .

2- 6-Andrology

Comprehensive knowledge of normal and abnormal spermatogenesis, as well as of testicular, epididymal and accessory sex glands physiopathology.

Comprehensive knowledge of erection and ejaculation, as well as their physiopathology.

Detailed knowledge of endocrine changes in the ageing male.

2-7. Climacteric problems

Detailed knowledge of pathophysiology, psychological disturbances in the climacteric and post climacteric including prevention, diagnosis and management.

2-8. Sexually transmitted disease .

Detailed knowledge of epidemiology, aetiology, pathology and implications of male and female sexually transmitted diseases.

2-9. Family planning

Comprehensive knowledge of all methods of female and male contraception and sterilization

2-10 Assisted reproductive technology (ART)

Comprehensive knowledge of endocrine therapy, especially ovarian stimulation and its complications.

Comprehensive knowledge of the ART: insemination, IVF, ICSI.

Comprehensive knowledge of gamete and embryo donation.

Comprehensive knowledge of preimplantation genetic diagnostic techniques.

2-11-Reproductive Surgery

Comprehensive knowledge and skill in endoscopic and microsurgery including the use of Laser

2-12. Ultrasound

Detailed knowledge of ultrasonic aspects of :

Normal pelvic anatomy in male and female

Gynaecological diseases

Andrological diseases

Infertility

Ultra sound guided invasive procedures.

2-13 Statistics and epidemiology

Detailed knowledge of statistical analysis and the collection of data in reproductive medicine, as well as of calculating effectiveness of infertility treatments.
Detailed knowledge of setting up and interpreting of clinical trials.
Detailed knowledge of environmental factors in relation to reproductive medicine.
Evidence based reproductive medicine.

2-14-Psychosomatic , psychosexual and stress related disorders

Detailed knowledge of the psychopathology and management of psychosexual disorders, and the influence of stress conditions such as:

- menstrual and ovarian dysfunction, chronic pelvic pain.
- anejaculation, impotence.

Detailed knowledge of the psychological implications of the different ART.

2-15 Ethics, law, resources.

Detailed knowledge of ethical and national legal issues involved in reproductive medicine and ART in Europe and the resources required to provide for adequate health care in the hospital and community .