Project for Achieving Consensus in Training

by

the European Board and College of Obstetrics and Gynaecology

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Preface

Over the last two decades changes in demographics, advances in science and health policies have had a major impact in health care delivery across the globe. These changes had a major influence in educating and training specialists and health care professionals.

The structure, content and delivery of postgraduate medical education continues to be refined as medicine improves, new challenges emerge, the science and art of teaching and learning are appreciated. Educators strive to create a responsive curriculum to equip specialist to respond to an ever-changing environment.

The European Board of Obstetrics and Gynaecology (EBCOG) had been in the forefront in improving standards of care women and their babies in Europe and beyond. It has streamlined standards of training in obstetrics and gynaecology through hospital visitations, introduction of logbook and more recently through introduction of the Fellowship exam (EFOG). Europe with its diversity poses a significant challenge in delivery of training in obstetrics and gynaecology. Whilst there is free movement of specialists across the borders it should be remembered there is free movement of patients with their varying health need. EBCOG is committed to define standards of training by defining level of competencies of certified specialists. Defining **core competencies** of specialists across a wide geographical area with varied socio-demographic factors is a huge yet challenging task. The Project for Achieving Consensus in Training (PACT) has been able to define core competencies to be acquired by all and **elective competencies** as optional within the main curriculum. This document should also help for development of **subspecialties** curriculum.

Notwithstanding some competencies may be easy to achieve in some countries, stratification of such competencies will help teaching program across Europe to customize the new curriculum to the need of their individual nation.

The great efforts and results provided by the PACT team should be considered as a tool for all to use. The PACT unites European specialists in obstetrics and gynaecology at a time when unity is mostly needed.

I take this opportunity to thank all PACT members and working groups.

Prof Jacky Nizard

President European Board and College of Obstetrics and Gynaecology

The EBCOG PACT training curriculum: the new standard of postgraduate training in Obstetrics and Gynaecology

With the realization of the EBCOG PACT training curriculum for Obstetrics and Gynaecology a longstanding wish has come true. EBCOG has always recognized the importance of training as the driving force behind realizing optimal health care for women and their babies in Europe. With the EBCOG PACT training curriculum we now take position as the medical specialty that implements state of the art training in Europe.

In succession of the Standards of Care for Women's Health in Europe published by EBCOG in 2014, the EBCOG PACT training curriculum defines standards for postgraduate training in Obstetrics and Gynaecology in Europe. These standards address endpoints in the medical and professional domains but also provide guidance in training methods, entrustment, faculty development and quality management of training. By the process of seeking consensus on the competencies at the level of independent practice for all trainees in Obstetrics and Gynaecology by the end of their training, EBCOG PACT has laid down the foundation for the implementation of the training standards throughout Europe.

This project is based on the spirit of collaboration within EBCOG. Funded by the European Union Erasmus+ programme, delegates, both medical specialists and trainees, from all over Europe have shared ideas and work. I would like to thank all who contributed to the EBCOG PACT, in particular:

Project chair Fedde Scheele and project manager Jessica van der Aa, both from the Netherlands;

Chair for medical curriculum content Chiara Benedetto, supported by her staff member Annalisa Tancredi, both from Italy, in close collaboration with Jaroslav Feyereisl and Petr Velebil from Czech Republic;

Chair for the framework for general competencies and soft skills Peter Hornnes, supported by his staff members Betina Ristorp Andersen and Annette Settnes from Denmark. They received input about stakeholders views from patient organisations, represented by Joyce Hoek-Pula and Britt Myren, European Nurses represented by Petra Kunkeler, European midwives represented by Noortje Jonker and Hospital administrators represented by Hans van der Schoot and Fedde Scheele;

Chair for gynaecological skills training and simulation Rudi Campo from Belgium and his collaborators Yves van Belle (Belgium) and Helder Ferreira (Portugal);

Chair for obstetric skills training and simulation Jette Led Sørensen from Denmark and her collaborators Ruta Nadisauskiene (Lithuania), Diogo-Ayres-de-Campos (Portugal);

Chair for communication and psychosocial skills training Sibil Tschudin from Switzerland;

Rolf Kirschner (Norway) for bridging EBCOG PACT and the EBCOG exam;

Portfolio and entrustment were described under supervision of Fedde Scheele, who is an internationally recognized expert in this particular field;

Chair for quality management and training recognition Juriy Wladimiroff (the Netherlands), who also chaired the group on Ultrasound skills training, with collaboration of Piotr Sieroszewski (Poland);

My collaborators Fedde Scheele and Živa Novak Antolič (Slovenia) in the project on faculty development;

Anna Aabakke (Denmark) and Laura Spinnewijn (the Netherlands), who on behalf of the European Network of Trainees in Obstetrics and Gynaecology (ENTOG) made valuable contributions to the entrustment and assessment project;

The members of the steering committee Jacky Nizard and Tahir Mahmood, Officers of the Executive Committee of EBCOG, and Anna Aabakke, past President of ENTOG for monitoring the process and giving constructive feedback throughout the project;

The members of the external advisory board for their support;

The members of the Standing Committee on Training and Assessment, including representatives from the European Association of Paediatric and Adolescent Gynaecology (EURAPAG), ISPOG, the European Society of Contraception and Reproductive Health (ESC), European Society of Gynaecological Endoscopy (ESGE), for the valuable discussions about various parts of the curriculum;

The members of the Executive committee of EBCOG and the national delegates in EBCOG Council for their trust and valuable feedback.

The EBCOG PACT curriculum is the result of an exemplary piece of collaboration. For the coming years it is our challenge to ensure that this curriculum on paper becomes the curriculum in action throughout Europe.

Dr Angelique J. Goverde

Chair EBCOG Standing Committee on Training and Assessment

EBCOG PACT: from vision to reality

EBCOG has made an important contribution to European health care by formulating the Standards of Care for Women's Health in Europe. As a result, there is now a common vision on the provision of optimal health care. However, the road from vision to reality may be challenging, and we should use all the available means to facilitate and implement optimal health care. To do this, it is desirable to increase the mobility of gynaecologists and trainees in Europe, as this will enable us to learn from each other's systems of health care delivery and exchange best practices. For this reason, a common approach to the training of Obstetrician-Gynaecologists is essential for those trainees who pursue the status of being trained according to the best European practice.

In EBCOG-PACT, the knowledge, skills and attitudes required of every European gynaecologist have been defined (the 'core'). Additionally, 'electives' have been described, which are positioned between the core and the subspecialties. Each trainee should be trained in at least one elective. The core and electives have been developed with the use of formal consensus techniques and discussions within EBCOG and its subspecialty organizations. In addition to the medical competencies, we have defined the required general competencies and soft skills. With the support of European patients, nurses, midwives, and hospital administrators, a competency framework was created that is tailored to the European Obstetrician-Gynaecologists. The general competencies and soft skills address issues that may be seen as universal human rights for women and they connect well to the EBCOG standards of care. This curriculum contains agreements about both medical and general competencies for new European Obstetrician-Gynaecologists.
These endterms are not set in stone. In the coming years, refinement of the core will likely become necessary, and it is expected that additional electives will be defined. Discussion already emerged around the question whether colposcopy should be part of core or an elective and whether sexology with diseases like vestibulodynia should have a more prominent place in the core. A curriculum is a dynamic document, but at this moment, PACT is state of the art for Europe.

Besides defining outcomes of training, PACT also delivers guidance for training at the tactical level, while leaving space for differences in operationalization, which may be dependent on local context and vision. At the tactical level, various items are addressed:

- Simulation training as an important pillar of the training system;
- Entrustment of professional activities based on a portfolio of learning experiences, assessments and evaluation by a competence committee;
- Quality management of the training institution and recognition by an external accreditor.

With the present document, EBCOG has delivered a curriculum that has been thoroughly discussed within the community and among its stakeholders. The word curriculum is derived from the Latin word for cart or trolley. Its function is to generate movement in the right direction. The next step is bring the curriculum into action in

all the training sites that desire to train the European way. To achieve this, we have to embrace the complexity of change processes. European Obstetrician-Gynaecologists may become leading in training and mobility throughout Europe, compared to other medical specialties. If we succeed in implementing PACT, it will facilitate the provision of optimal health care for European women. We need your leadership to accomplish this challenge!

Prof Dr Fedde Scheele
Project leader EBCOG-PACT

Curriculum content

Core curriculum

Authors: Fedde Scheele, Angelique Goverde, Jessica van der Aa, Chiara Benedetto, Annalisa Tancredi, Jaroslav Feyereisl, Petr Velebil, Anna Aabakke

Introduction

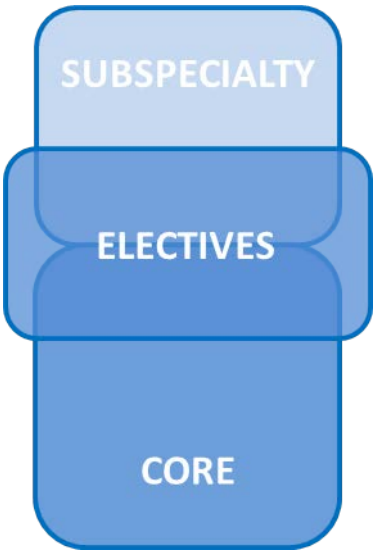
The postgraduate training in Obstetrics and Gynaecology follows a programme of at least five years. It consists of a core and an elective programme.

This document describes the medical core content of the pan-European postgraduate training curriculum in Obstetrics & Gynaecology. The content of the core has been determined through a consensus procedure amongst European gynaecologists and trainees [1,2]. It integrates the knowledge and skills that should be acquired during training to develop the core competencies of the European gynaecologist.

In the pan-European curriculum, a clear distinction is being made between core training and elective modules:

Core

- Common trunk being mandatory for all trainees in Obstetrics & Gynaecology.
- Minimum duration of three years, depending on national or local governance.
- Minimum standards of training.
- Content clearly defined by European consensus.
- Minimum numbers for several procedures are recommended for adequate training.
- Endterms refer to the level of independent practice, meaning that the trainee is able to perform without supervision.



Elective

- Minimum of at least one elective is mandatory for all trainees.
- Includes more intensified training than the core, with addition of new knowledge and skills, more in-depth analysis of pathology and further treatment.
- Determines a trainee's personal professional profile with areas of special interest.
- The content of an elective is a 'shifting window'; it is situated between core and subspecialty.
- An elective may be included in mandatory training in specific countries (e.g. for Breast Disease).

Subspecialty

- Subspecialty training is beyond the scope of the curriculum for postgraduate training in Obstetrics and Gynaecology.
- Content standardised and recognised by subspecialty societies.

Reading instructions

- The content (core and electives) of the pan-European curriculum must be reasonable and feasible for implementation in all European countries.
- The 'EBCOG standards of care' determine conditions under which care is delivered and procedures are performed; these were developed in concordance with the subspecialty societies. Trainees must adhere to these conditions.

- The content of the curriculum (core and electives) is in line with current standards of care and training. Since developments within the disciplines of Obstetrics & Gynaecology occur frequently, the content may not in all cases reflect the most recent recommendations, although the training standards will be updated intermittently.
- Training to the level of independent practice means that a trainee will have to be able to deliver care or perform a procedure without interference of supervision. National legislation determines whether supervision must be present (without interference) while a trainee delivers care or performs a procedure.
- For some procedures described (e.g. surgeries), consensus was reached for the number of performances that is needed for training. These numbers represent the minimal number of times that a trainee has to have performed a procedure as the first surgeon. The numbers are guidelines, since throughout Europe there will be variation in incidence as well as variation in best practices.
- The procedure abdominal hysterectomy is included in core training, according to European consensus. It is acknowledged that the incidence of this procedure may vary regionally, which renders it unrealistic to require *in vivo* training to the level of independent practice from all trainees. Therefore, the procedure may be trained in simulation to the level of independent practice when hysterectomy is imperative due to severe postpartum haemorrhage.

The knowledge and skills in the field of Obstetrics & Gynaecology have been grouped into ten major themes. For every theme this document describes what should be trained in the core part of the curriculum.

1. General Medical Knowledge & Skills
2. Prenatal Care
3. Intrapartum & Postpartum Care
4. Benign Gynaecology
5. Reproductive Medicine
6. Urogynaecology
7. Premalignancy
8. Gynaecological Oncology
9. Paediatric Gynaecology & Sexual Health
10. Breast Disease

Per theme, outcomes of training are described. They have been structured into the phases of the clinical process. Each phase requires a more advanced integration of knowledge and skills concerning an outcome than the previous phase. When the training is completed, the trainee will have acquired the knowledge and skills for all phases and for all the outcomes at the level of independent practice.

Problem identification; to determine the need for diagnostic evaluation or to recognise pathology.

Diagnosis; to diagnose without performance of a specific skill.

Diagnosis; to diagnose with performance of a specific skill.

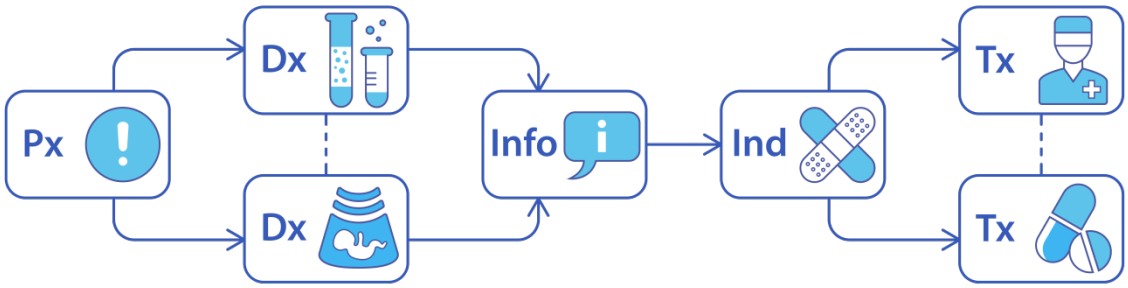
Information; to provide information and advice regarding the diagnosis and its implications.

Indication for treatment; to determine the indication for a specific treatment, taking all treatment options into consideration.

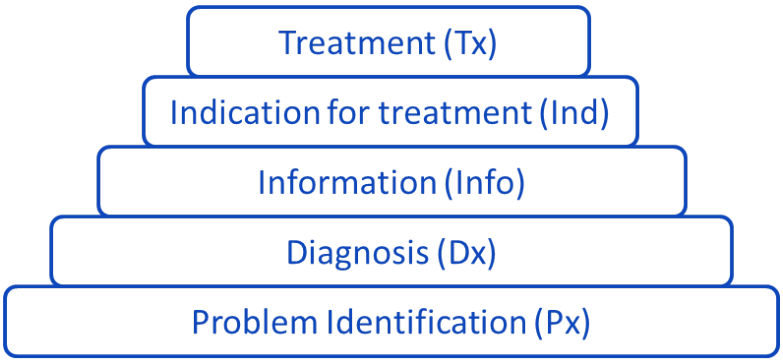
Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>without</u> performance of a specific skill (e.g. conservative treatment).

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>with</u> performance of a specific skill (e.g. surgical treatment).

The phases are integrated in the clinical process as follows:



If a trainee is able to provide a treatment (Tx) for a condition, it is assumed that the trainee is also able to determine the indications for the treatment (Ind), provide information regarding the diagnosis (Info), diagnose the condition (Dx) and identify a problem that requires diagnostic evaluation (Px).



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2. Van der Aa JE, Tancredi A, Goverde AJ, Velebil P, Feyereisl J, Benedetto C, Teunissen PW, Scheele F. What European gynaecologists need to master: Consensus on medical expertise outcomes of pan-European postgraduate training in obstetrics & gynaecology. Eur J Obstet Gynaecol Reprod Biol 2017;216:143-53.

1. General Medical Knowledge & Skills

The trainee is able to provide obstetrical and gynaecological care at the level of independent practice in the outpatient department, the delivery room and the admittance ward.

In all situations, the trainee:

- Has specific knowledge about embryology, anatomy and the physiology of female genital organs and breasts.
- Obtains patient and family history including social issues, performs accurate clinical examination of vital signs, the internal and external genitalia and the abdomen, and interprets the findings adequately.
- Is able to diagnose, assess, investigate, monitor and interpret data considering the most common obstetrical and gynaecological conditions (conditions to be clarified per theme).
- Undertakes timely and appropriate investigations, such as examining microbiological samples, laboratory investigations, and radiology imaging, and interprets results in liaison with colleagues (e.g. radiologists) in relation to clinical findings to form a differential diagnosis.
- Leads a ward round with a multidisciplinary view, manages the admittance and discharge of patients at the ward and the delivery room, and manages handover to another practice.
- Is able to provide basic therapeutic interventions, including safe and appropriate prescription and administration of oxygen, drugs and therapies, blood products, circulation support and urinary catheterisation.
- Manages the assessment, prevention and treatment of pain.
- Is able to recognise and triage acutely ill patients and initiate adequate management, including septic patients, patients with peripartum complications and patients requiring resuscitation.
- Maintains effective communication with patients and relatives, according to the principles of shared decision making and informed consent, documents this communication accurately and performs team work with effective communication within the health care team.
- Has specific knowledge about peri-operative care, including ASA classification, indications and contraindications of surgeries, risks of surgeries, indications for blood transfusion, postsurgical complications and indications for admittance to the Intensive Care.
- Understands how gynaecological conditions influence sexual function, enquires about sexual function and possible negative sexual experiences, and understands consequences of sexual violence on gynaecological conditions and behaviour.
- Understands bio-psychosocial aspects of obstetrical and gynaecological conditions.

2. Prenatal Care

Diagnosis; to diagnose <u>with</u> performance of a specific skill.

Diagnosis	Skill
o Embryonic & foetal viability	o Transvaginal & transabdominal ultrasound
o Pregnancy location (intra or extra uterine)	o Transvaginal & transabdominal ultrasound
o Pregnancy age	o Transvaginal & transabdominal ultrasound
o Singleton or multiple gestation pregnancy	o Transvaginal & transabdominal ultrasound
o Cervical length	o Transvaginal & transabdominal ultrasound
o Chorionicity	o Transvaginal & transabdominal ultrasound
o Foetal biometry	o Transvaginal & transabdominal ultrasound
o Foetal presentation	o Transvaginal & transabdominal ultrasound
o Placental site	o Transvaginal & transabdominal ultrasound
o Amniotic fluid volume	o Transvaginal & transabdominal ultrasound
o Flow of arteria umbilicalis	o Doppler flow measurement

Information; to provide information and advice regarding the diagnosis and its implications.

- o Breastfeeding
- o Teen pregnancy
- o Pregnancy and obesity
- o Pregnancy and diabetes
- o Advanced maternal age pregnancies
- o Pregnancy and pre-existing hypertension
- o Use of medication (e.g. for psychiatric problems)
- o Cervical incompetence
- o Multiple gestation pregnancy
- o Cholestasis of pregnancy
- o Consequences of complicated delivery for a following pregnancy and delivery
- o Chromosomal abnormalities by interpreting nuchal translucency / double test / triple test / amniocentesis / chorionic villus sampling / NIPT

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>without</u> performance of a specific skill (e.g. conservative treatment).

- o Pregnancy of unknown location
- o Hyperemesis
- o (Recurrent) miscarriage
- o Vaginal blood loss in first trimester
- o Vaginal blood loss in second and third trimester

- Second trimester pregnancy termination
- Blood group incompatibility
- Group B streptococcus carrier status
- Abdominal complaints
- (Minor) abdominal trauma in pregnancy
- Malpresentation
- Gestational diabetes
- Oligohydramnios
- Polyhydramnios
- Hypertensive disorders of pregnancy (pregnancy-induced hypertension, pre-eclampsia, eclampsia, HELLP)
- Reduced foetal activity
- Foetal growth restriction
- Premature rupture of membranes
- Intrauterine foetal death
- Postdate pregnancy
- Perinatal infections (Toxoplasmosis, syphilis, varicella-zoster, parvovirus B19, rubella, cytomegalovirus, herpes)

3. Intrapartum & Postpartum Care

Diagnosis; to diagnose <u>with</u> performance of a specific skill.

Diagnosis	Skill
o Feasibility of labour	o Physical examination

Indication for treatment; to determine the indication for a specific treatment, taking all treatment options into consideration.

- o Post-partum haemorrhage; arterial embolization

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>without</u> performance of a specific skill (e.g. conservative treatment).

- o Induction of pulmonary maturation
- o Premature contractions
- o Failure of progression of labour
- o Intrapartum fever
- o Meconium-stained amniotic fluid
- o Medical history of caesarean section
- o Peripartum pain
- o Postpartum mastitis (with abscess)
- o Postpartum urinary retention
- o Thrombo-embolic process
- o Postpartum haemorrhage

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>with</u> performance of a specific skill (e.g. surgical treatment).

Diagnosis	Skill	Numbers
o Uncomplicated delivery	o Assistance of uncomplicated delivery	50
o Complicated delivery	o Assistance of preterm delivery	
	o Vacuum-assisted vaginal delivery	10-20
	o Forceps-assisted delivery*	0-10
	o Breech delivery*	5
	o Assistance of vaginal delivery of multiple pregnancy	
	o Caesarean section	20
	o Repeat caesarean section	10-15
	o Caesarean section in obese patient	0-10

o Foetal distress	o CTG monitoring o Foetal scalp blood sampling* o Episiotomy o Emergency caesarean section	10-15
o Placental abruption	o Emergency caesarean section	
o Uterine rupture	o Emergency caesarean section	
o Shoulder dystocia	o All dystocia management manoeuvres*	
o Post-partum haemorrhage	o Intrauterine balloon tamponade o Surgical compression of atonic uterus (B-Lynch suturing)* o Abdominal hysterectomy*	
o Retained placenta	o Manual and surgical removal of placenta	
o Uterine inversion	o Manual uterine reversion*	
o Genital tract trauma	o Repair of genital tract trauma	
o Vulvar hematoma	o Evacuation of vulvar hematoma	
o Episiotomy wound	o Suturing of episiotomy wound	
o $1^{st}/2^{nd}/3^{rd}$ degree perineal tear	o Suturing of $1^{st}/2^{nd}/3^{rd}$ degree perineal tear	
o 4th degree perineal tear	o Suturing of 4^{th} degree perineal tear*	
o Neonatal support	o Supporting the initial care of the healthy/preterm new-born (with low Apgar scores) o Accurate resuscitation of the new-born in the first 10 minutes after delivery (when awaiting the arrival of the paediatrician)*	

**= performance of skill at least in simulation setting*

4. Benign Gynaecology

Diagnosis; to diagnose <u>with</u> performance of a specific skill.

<u>Diagnosis</u>

- Vulvar abnormalities
- Intrauterine abnormalities
- Abnormalities of uterus and adnexa
- Abnormalities of the ovary

<u>Skill</u>

- Punch biopsy under local anaesthesia
- Diagnostic hysteroscopy & ultrasound (2D or 3D)
- Diagnostic laparoscopy & ultrasound (2D or 3D)
- Diagnostic ultrasound (2D or 3D)

Indication for treatment; to determine the indication for a specific treatment, taking all treatment options into consideration.

- Contraception in a healthy adult
- Contraception in a patient with a health problem or concomitant disease
- Endometriosis
- Tubo-ovarian abscess
- Hypermenorrhoea
- Uterine myoma
- Vaginal septum

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>without</u> performance of a specific skill (e.g. conservative treatment).

- Sexually transmitted diseases
- Pelvic inflammatory disease/salpingitis
- Abdominal/pelvic pain
- Premenstrual syndrome
- Dysmenorrhoea
- Hypermenorrhoea
- Abnormal uterine bleeding
- Menopausal complaints
- Abnormal vaginal discharge
- Vulvovaginitis
- Uterine fibroids
- Adnexal pathology
- Endometriosis
- Vulvar condylomas
- Bartholin's cyst
- Vulvar abscess

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>with</u> performance of a specific skill (e.g. surgical treatment).

Diagnosis	Skill	Numbers
o Contraception	o Placement of diaphragm / cervical cap	
	o Placement of Intra Uterine Device	20
	o Placement of subcutaneous implants	
	o Laparoscopic sterilisation	
o Ectopic pregnancy	o Laparoscopic removal of ectopic pregnancy (salpingostomy) or salpingectomy	10
o Early miscarriage	Dilatation and curettage by suction or blunt curette*	15
o First trimester termination of pregnancy	o Dilatation and curettage by suction or blunt curette*	10
o Bartholin's cyst	o Surgical marsupialisation of cyst	5
o Vulvar abscess	o Surgical excision of abscess	
o Ovarian cyst	o Laparoscopic needle aspiration of simple cyst	
	o Laparoscopic electrocoagulation of the ovary	
	o Simple laparoscopic ovarian cystectomy	
o Adnexal pathology	o Laparoscopic salpingo-oophorectomy	
	o Salpingo-oophorectomy via laparotomy	
o Intracavitary polyp	o Hysteroscopic polyp resection	
o Uterine myoma	o Hysteroscopic myoma resection type 0-1 (< 4cm)	
	Myomectomy of subserous myoma via laparotomy	
o Pelvic adhesions	o Simple laparoscopic adhesiolysis	
	o Laparotomy with minimal adhesiolysis	
	Laparoscopies in total	30

**=according to local and national protocols and legislation*

5. Reproductive Medicine

Problem identification; to determine the need for diagnostic evaluation or to recognise pathology.

- Male and female subfertility and fertility assessment
- Basic reproductive endocrinology and endocrine abnormalities that could lead to cycle disorders (primary amenorrhoea, secondary amenorrhoea, oligomenorrhoea, galactorrhoea, hyperprolactinemia, and hirsutism)
- Fertility preservation techniques

Diagnosis; to diagnose <u>without</u> performance of a specific skill.

- Primary amenorrhoea
- Galactorrhoea

Diagnosis; to diagnose <u>with</u> performance of a specific skill.

<u>Diagnosis</u>	<u>Skill</u>	<u>Numbers</u>
o Subfertility; tubal patency	o Diagnostic laparoscopy with tubal testing o Diagnostic hysteroscopy with tubal testing	
o Response to fertility treatment	o Transvaginal ultrasound with follicle count and follicle measurements	50
o Ovarian Hyper Stimulation Syndrome	o Transvaginal ultrasound with evaluation of follicles and intraperitoneal fluid	

Information; to provide information and advice regarding the diagnosis and its implications.

- Prognostic factors for pregnancy in general
- Probability of on-going pregnancy, spontaneous abortion and ectopic pregnancy associated with different fertility treatments

Indication for treatment; to determine the indication for a specific treatment, taking all treatment options into consideration.

- Assisted reproduction techniques (IUI, IVF, ICSI)

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>without</u> performance of a specific skill (e.g. conservative treatment).

- WHO-II cycle disorders; ovulation induction with clomiphene citrate
- OHSS initial / emergency treatment

6. Urogynaecology & Pelvic Floor

Problem identification; to determine the need for diagnostic evaluation or to recognise pathology.

- Recognise need for referral to pelvic floor physiotherapist or other medical specialist for stress and/or urge incontinence.

Diagnosis; to diagnose <u>with</u> performance of a specific skill.

Diagnosis	Skill
o Apical compartment prolapse	o POP-Q score
o Anterior compartment prolapse	
o Posterior compartment prolapse	
o Rectovaginal fistula	

Indication for treatment; to determine the indication for a specific treatment, taking all treatment options into consideration.

- Anterior/posterior vaginal repair
- Apical vaginal repair

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>with</u> performance of a specific skill (e.g. surgical treatment).

Diagnosis	Skill	Numbers
o Descensus uteri	o Pessary fitting and on-going care	10
	o Colpocleisis*	
o Cystocele / urethrocele	o Simple anterior vaginal repair	10
o Enterocele / rectocele	o Simple posterior vaginal repair	10

***** *= performance of skill at least in simulation setting*

7. Premalignancy

Problem identification; to determine the need for diagnostic evaluation or to recognise pathology.

- Frail elderly women with multiple co-morbidities and poly-pharmacy
- Premalignant conditions of the vulva

Diagnosis; to diagnose <u>with</u> performance of a specific skill.

Diagnosis	Skill	Numbers
o Cervical screening	o PAP smear	
o Premalignant conditions of the cervix	o Colposcopy (with biopsy)	20

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>without</u> performance of a specific skill (e.g. conservative treatment).

- Premalignant gynaecological conditions

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>with</u> performance of a specific skill (e.g. surgical treatment).

Diagnosis	Skill	Numbers
o Premalignant conditions of the cervix	o LLETZ of the cervix	20

8. Gynaecological Oncology

Problem identification; to determine the need for diagnostic evaluation or to recognise pathology.

- High stage gynaecological malignancies
- Atypical grief reactions

Diagnosis; to diagnose <u>without</u> performance of a specific skill.

- Vulvar and cervical carcinoma by means of evaluation of pathology results

Diagnosis; to diagnose <u>with</u> performance of a specific skill.

<u>Diagnosis</u>

- Gestational trophoblastic disease
- Malignant or premalignant conditions of the endometrium

<u>Skill</u>

- Transvaginal ultrasound
- Endometrial biopsy

Information; to provide information and advice regarding the diagnosis and its implications.

- Ovarian carcinoma
- Cervical carcinoma
- Recurrence or progression of gynaecological oncological conditions

9. Paediatric Gynaecology & Sexual Health

Problem identification; to determine the need for diagnostic evaluation or to recognise pathology.

- Sexual dysfunction
- Sexual abuse
- Genital mutilation
- Vaginal discharge in the child
- Acute abdominal pain in the child
- Sexually transmitted disease in the child
- Trauma of the vulva, vagina, perineum and/or rectum in the child
- Suspicion of domestic violence or child abuse

Diagnosis; to diagnose <u>with</u> performance of a specific skill.

<u>Diagnosis</u>
- Gynaecological conditions in the child*

<u>Skill</u>
- Adapting communication to the level of the child
- Accurate gynaecological examination of the child*

Indication for treatment; to determine the indication for a specific treatment, taking all treatment options into consideration.

- Contraception in the healthy adolescent

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>without</u> performance of a specific skill (e.g. conservative treatment).

- Sexually transmitted diseases in adults, adolescents and prepubertal and peripubertal children

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>with</u> performance of a specific skill (e.g. surgical treatment).

<u>Diagnosis</u>
- Trauma of the vulva/vagina/perineum/rectum in a child*

<u>Skill</u>
- Emergency care of vulva/vagina/perineum/rectum

**= prepubertal and peripubertal children*

10. Breast disease

Problem identification; to determine the need for diagnostic evaluation or to recognise pathology.

- Malignant breast disease
- Genetic risks in malignant breast disease
- Screening methods for breast disease

Diagnosis; to diagnose with performance of a specific skill.

Diagnosis
- Galactorrhoea
- Mastalgia

Skill
- Accurate examination of the breasts

Curriculum content
Electives curriculum

Authors: Fedde Scheele, Angelique Goverde, Jessica van der Aa, Chiara Benedetto, Annalisa Tancredi, Jaroslav Feyereisl, Petr Velebil, Anna Aabakke

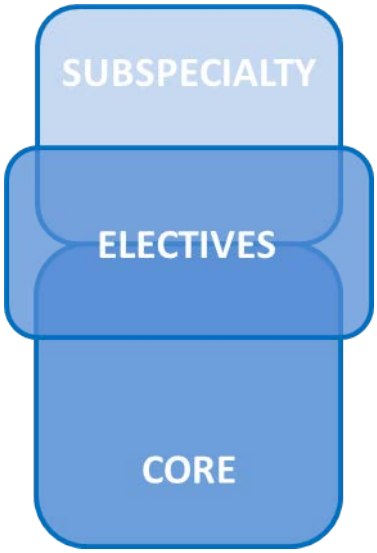
Introduction

The postgraduate training in Obstetrics and Gynaecology follows a programme of at least five years. It consists of a core and an elective programme.
This document describes the medical content of the elective modules of the pan-European postgraduate training curriculum in Obstetrics & Gynaecology. The content of the elective modules has been determined through a consensus procedure amongst European gynaecologists and trainees [1,2]. It integrates the knowledge and skills that should be acquired to develop the competencies of the European gynaecologist in additional training.

In the pan-European curriculum, a clear distinction is being made between core training and elective modules:

Core

- Common trunk being mandatory for all trainees in Obstetrics & Gynaecology.
- Minimum duration of three years, depending on national or local governance.
- Minimum standards of training.
- Content clearly defined by European consensus.
- Minimum numbers for several procedures are recommended for adequate training.
- Endterms refer to the level of independent practice, meaning that the trainee is able to perform without supervision.



Elective

- Minimum of at least one elective is mandatory for all trainees.
- Includes more intensified training than the core, with addition of new knowledge and skills, more in-depth analysis of pathology and further treatment.
- Determines a trainee's personal professional profile with areas of special interest.
- The content of an elective is a 'shifting window'; it is situated between core and subspecialty .
- An elective may be included in mandatory training in specific countries (e.g. for Breast Disease).

Subspecialty

- Subspecialty training is beyond the scope of the curriculum for postgraduate training in Obstetrics and Gynaecology.
- Content standardised and recognised by subspecialty societies.

Reading instructions

- The content (core and electives) of the pan-European curriculum must be reasonable and feasible for implementation in all European countries.
- The 'EBCOG standards of care' determine conditions under which care is delivered and procedures are performed; these were developed in concordance with the subspecialty societies. Trainees must adhere to these conditions.

- The content of the curriculum (core and electives) is in line with current standards of care and training. Since developments within the disciplines of Obstetrics & Gynaecology occur frequently, the content may not in all cases reflect the most recent recommendations, although the training standards will be updated intermittently.
- Training to the level of independent practice means that a trainee will have to be able to deliver care or perform a procedure without interference of supervision. National legislation determines whether supervision must be present (without interference) while a trainee delivers care or performs a procedure.

Eight electives have been identified, covering:

1. Advanced Obstetrics & Foeto-maternal Medicine
2. Benign Gynaecology
3. Reproductive Medicine
4. Urogynaecology & Pelvic Floor
5. Low Genital Tract Disease & Sexology
6. Paediatric & Adolescent Gynaecology
7. Gynaecological Oncology
8. Breast Disease

Per elective, outcomes of training are described. They have been structured into the phases of the clinical process. Each phase requires a more advanced integration of knowledge and skills concerning an outcome than the previous phase. When training is completed, the trainee will have acquired the knowledge and skills for all phases and for all the outcomes at the level of independent practice.

Phases:

Problem identification; to determine the need for diagnostic evaluation or to recognise pathology.

Diagnosis; to diagnose <u>without</u> performance of a specific skill.

Diagnosis; to diagnose <u>with</u> performance of a specific skill.

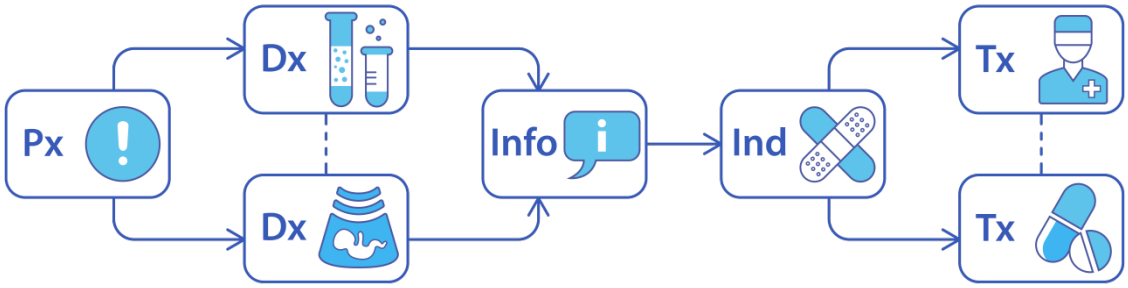
Information; to provide information and advice regarding the diagnosis and its implications.

Indication for treatment; to determine the indication for a specific treatment, taking all treatment options into consideration.

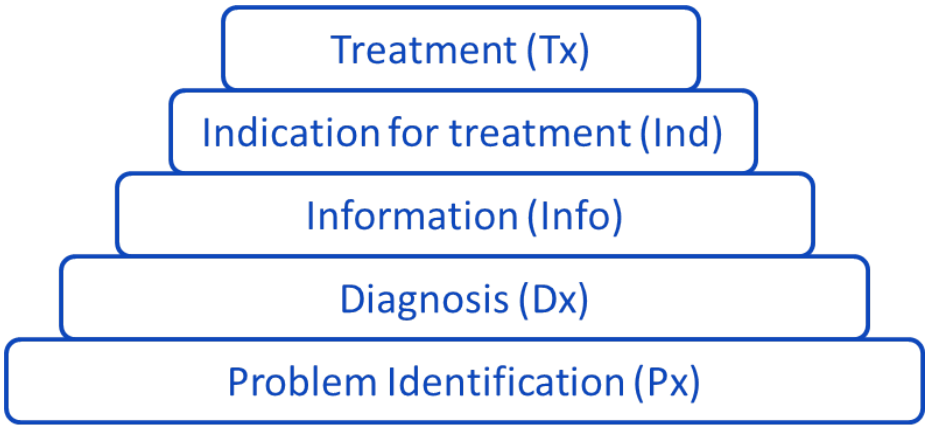
Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>without</u> performance of a specific skill (e.g. conservative treatment).

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>with</u> performance of a specific skill (e.g. surgical treatment).

The phases are integrated in the clinical process as follows:



If a trainee is able to provide a treatment (Tx) for a condition, it is assumed that the trainee is also able to determine the indications for the treatment (Ind), provide information regarding the diagnosis (Info), diagnose the condition (Dx) and identify a problem that requires diagnostic evaluation (Px).



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1. Advanced Obstetrics & Foeto-maternal Medicine

Problem identification; to determine the need for diagnostic evaluation or to recognise pathology.

- Psychiatric problems requiring referral to a mental health specialist, social worker or addiction centre.

Diagnosis; to diagnose without performance of a specific skill.

- Psychiatric disorders in pregnancy and postpartum
- Fear of childbirth and posttraumatic stress disorder following childbirth
- Complex psychosocial problems during pregnancy
- Substance abuse
- Management of grief

Diagnosis; to diagnose with performance of a specific skill.

Diagnosis	Skill
o Abnormal flow of the arteria uterina	o Doppler flow ultrasound arteria uterina
o Abnormal flow of the arteria cerebri media	o Doppler flow ultrasound arteria cerebri media
o Abnormal flow of the ductus venosus	o Doppler flow ultrasound ductus venosus
o Congenital anomalies	o Advanced ultrasound screening
o Chromosomal abnormalities	o Amniocentesis

Information; to provide information and advice regarding the diagnosis and its implications.

- Risk communication in all obstetric procedures.
- Leading an interdisciplinary meeting on complex psychosocial problems during pregnancy.

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment without performance of a specific skill (e.g. conservative treatment).

- Hypertensive disorders of pregnancy
- Pre-existent diabetes
- Multiple gestation pregnancy
- Cholestasis of pregnancy
- Postpartum depression

2. Benign Gynaecology

Indication for treatment; to determine the indication for a specific treatment, taking all treatment options into consideration.

- Psychosocial aspects of chronic pelvic pain.

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>with</u> performance of a specific skill (e.g. surgical treatment).

Diagnosis	Skill
o Contraception	o Hysteroscopic sterilisation
o Uterine myoma type 2 (<3cm)	o Hysteroscopic myoma resection type 2 (<3cm)
o Uterine myoma (which is unresponsive to conservative treatment)	o Laparoscopic hysterectomy
o Hypermenorrhoea	o Hysteroscopic endometrial ablation or resection o Laparoscopic hysterectomy
o Endometriosis (< stage 2)	o Laparoscopic treatment of endometriosis
o Tubo-ovarian abscess	o Laparoscopic management of tubo-ovarian abscess
o Pelvic adhesions	o Laparoscopic adhesiolysis

3. Reproductive Medicine

Problem identification; to determine the need for diagnostic evaluation or to recognise pathology.

- Micro/percutaneous semen aspiration
- Testicular semen extraction
- Genetic disorders
- Pre-implantation diagnosis

Indication for treatment; to determine the indication for a specific treatment, taking all treatment options into consideration.

- Psychosocial situation of couples in fertility treatments (shared decision making)

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>without</u> performance of a specific skill (e.g. conservative treatment).

- Advanced ovulation-induction techniques
- IUI stimulation
- Galactorrhoea
- Hyperprolactinemia
- Pituitary adenoma

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>with</u> performance of a specific skill (e.g. surgical treatment).

<u>Diagnosis</u>

- Subfertility
- Ovarian Hyper Stimulation Syndrome

<u>Skill</u>

- Intra Uterine Insemination
- Paracentesis

4. Urogynaecology & Pelvic Floor

Problem identification; to determine the need for diagnostic evaluation or to recognise pathology.

- Neurological disorders (spina bifida, multiple sclerosis, Parkinson's, spinal damage, neuropathy)

Diagnosis; to diagnose <u>with</u> performance of a specific skill.

<u>Diagnosis</u>

- Abnormalities in strength and motility of the pelvic floor and levator ani

<u>Skill</u>

- Manual palpation measurement of strength and motility of the pelvic floor and levator ani muscle
- Transperineal & endo-anal ultrasound

Indication for treatment; to determine the indication for a specific treatment, taking all treatment options into consideration.

- Psychosocial aspects of prolapse and incontinence

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>with</u> performance of a specific skill (e.g. surgical treatment).

<u>Diagnosis</u>

- Stress and urge incontinence
- Descensus uteri

<u>Skill</u>

- Placement of midurethral sling
- Manchester-Fothergill
- Vaginal hysterectomy
- Colpocleisis

5. Low Genital Tract Disease & Sexology

Diagnosis; to diagnose <u>with</u> performance of a specific skill.

<u>Diagnosis</u>

- Premalignant and malignant vulvar conditions
- Sexual problems
- Genito Pelvic Pain and Penetration Disorder
- Primary vaginismus

<u>Skill</u>

- Vulvoscopy with biopsy
- PLISSIT model of sexological counselling
- Educational Gynaecological Examination

Indication for treatment; to determine the indication for a specific treatment, taking all treatment options into consideration.

- Psychosocial aspects of vulvovaginal disease
- Psychosocial aspects of genital mutilation
- Psychosocial aspects of sexual assault

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>without</u> performance of a specific skill (e.g. conservative treatment).

- Vulvar dermatosis
- Lack of sexual desire
- Medical aspects of sexual assault

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>with</u> performance of a specific skill (e.g. surgical treatment).

<u>Diagnosis</u>

- Genital condylomata
- Genital mutilation type III

<u>Skill</u>

- Laser evaporisation
- Surgical excision of lesions
- Reconstructive surgery of infibulated scar

6. Paediatric & Adolescent Gynaecology

Diagnosis; to diagnose <u>with</u> performance of a specific skill.

Diagnosis	Skill
o Persistence of vulvar and/or urinary problems	o Cystoscopy / vaginoscopy

Information; to provide information and advice regarding the diagnosis and its implications.

- o Prepubertal vaginal bleeding
- o Adnexal mass

Indication for treatment; to determine the indication for a specific treatment, taking all treatment options into consideration.

- o Trauma of vulva / vagina / perineum / rectum

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>without</u> performance of a specific skill (e.g. conservative treatment).

- o Contraception in adolescents with health problems
- o Vulvovaginal pain
- o Vaginal discharge
- o Acute abdominal pain
- o Chronic abdominal pain
- o Premature puberty
- o Pubertal delay
- o Menstrual abnormalities (e.g. primary amenorrhoea)
- o Developmental disorders of the genital tract
- o Vulvovaginal pathology (e.g. lichen sclerosus)

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>with</u> performance of a specific skill (e.g. surgical treatment).

Diagnosis	Skill
o Vulvar or vaginal foreign body	o Vaginoscopy with removal of foreign body

All accounts for the prepubertal and peripubertal child and the adolescent.

7. Gynaecological Oncology

Diagnosis; to diagnose <u>with</u> performance of a specific skill.

Diagnosis	Skill
o Premalignant and malignant vulvar conditions	o Vulvoscopy with biopsy
o Ovarian malignancy	o Malignancy Risk Index (RMI) calculation

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>with</u> performance of a specific skill (e.g. surgical treatment).

Diagnosis	Skill
o Premalignant conditions of the cervix	o Conisation of the cervix
o Stage I, low-grade endometrial carcinoma	o Laparoscopic hysterectomy
	o Abdominal hysterectomy
o Genetic mutation with indication for risk-reducing salpingo-oophorectomy	o Laparoscopic salpingo-oophorectomy
	o Salpingo-oophorectomy via laparotomy

8. Breast Disease

Diagnosis; to diagnose <u>with</u> performance of a specific skill.

<u>Diagnosis</u>
- o Breast (pre)malignancy

<u>Skill</u>
- o Fine needle aspiration*
- o Breast biopsy[3]

This does not apply to countries where this is performed by radiologists.

Information; to provide information and advice regarding the diagnosis and its implications.

- o Recurrence or progression of breast malignancy
- o Borderline breast pathology
- o Genetics in breast malignancy

Indication for treatment; to determine the indication for a specific treatment, taking all treatment options into consideration.

- o Breast premalignancy
- o Breast malignancy

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>without</u> performance of a specific skill (e.g. conservative treatment).

- o Galactorrhoea
- o Mastalgia
- o Postpartum mastitis

Treatment; to discuss all treatment options, determine the indication for a specific treatment, counsel about the treatment, as well as provide the treatment <u>with</u> performance of a specific skill (e.g. surgical treatment).

<u>Diagnosis</u>
- o Borderline lesions of the breast
- o Postpartum breast abscess

<u>Skill</u>
- o Surgical excision of breast lesion
- o Puncture and drainage of abscess

General competencies and soft skills

Authors: Betina Ristorp Andersen, Annette Settnes, Peter Hornnes, Anna Aabakke, Joyce Hoek-Pula, Britt Myren, Noortje Jonker, Petra Kunkeler, Fedde Scheele, Chiara Benedetto, Jessica van der Aa

Introduction

This document describes the general competencies and soft skills to be trained in the pan-European postgraduate training curriculum in Obstetrics & Gynaecology. These skills should be acquired during training, additional to the medical expertise outcomes, to answer to the needs of society and of the stakeholders of the gynaecologist. The general competencies and soft skills are organized in four areas of competency: *'Patient-centred care', 'Teamwork', 'System-based practice'* and *'Personal and professional development'*. Each area describes specific competencies to be developed and skills to be trained. The competencies and skills have been determined through scientific research amongst societal stakeholders from all over Europe.
Suggestions for the assessment of these skills are provided in the 'Entrustment and Portfolio' section of the curriculum.. The assessment forms address the general competencies and soft skills.
The general competences described below connect well to the Universal Declaration of Human Rights drawn up by the United Nations. Furthermore, confidentiality and benefit for scientific progress are specified.

General competencies and soft skills to be trained

Patient-centred care

- See the patient in a holistic perspective, respect diversity and give individualized care
- Communicate respectfully and empathetically, active listening fostering mutual confidence and trust
- Ensure patient empowerment and informed consent facilitating the balance between evidence-based recommendations and patient´s preferences in the shared decision making process
- Demonstrate leadership to provide safety and continuity in patient care
- Work according to ethical standards and the universal human rights of women

Teamwork

- Collaborate respectfully with other professionals, such as nurses and midwives, and contribute to a safe and constructive working environment
- Facilitate inter-professional shared decision making, recognizing and relying on the expertise of others
- Focus on team performance while acknowledging standards of care and legal aspects
- Display leadership, particularly in critical situations

System-based practice

- Understand and work effectively in the healthcare organization, including its legal system
- Understand and adapt to diversity, development, and innovation
- Work according to guidelines and standards of care and apply patient safety systems
- Balance patient-related outcomes and costs
- Perform triage and prioritize tasks considering the available resources
- Ensure privacy and patient comfort in care provision, setting, and context

Personal and professional development

- Be a lifelong learner and a good role model
- Balance work and life
- Recognize personal competencies and limitations
- Give, seek and accept feedback, reflect upon it and use it for improvement
- Continuously improve empathetic listening as well as effective and clear communication
- Contribute to the progress of health care via research, education and facilitating the implementation of innovations

Communication & Psycho-Social Skills Training

Authors: Sibil Tschudin, Marieke Paarlberg, Heather Rowe, Angelique Goverde

Introduction

Effective communication is an essential skill in the patient-doctor interaction as stipulated in the general competencies of the core curriculum. It has been shown to improve health outcomes as well as patient satisfaction. Also teamwork performance depends on communication skills. Finally, skills in written communication are important in keeping medical records and reporting health care information. Albeit communicative competency is in part a personal quality, communicative skills can be (further) developed by focused training, feedback and assessment.

This document presents a tentative guideline for training in communication and psycho-social skills which allow the trainee to develop an effective personal communication style with respect of patient's autonomy, to cover bio-psycho-social aspects adequately and to consider sexuality in the context of obstetrical and gynecological conditions.

Communication & Psycho-Social Skills

Communication is the very core of every doctor interaction with patients and their relatives. It is the doctor's responsibility to create a secure setting in which both patient and doctor feel comfortable to talk. Training in communication skills will enable the trainee and patient to exchange information effectively and to establish a therapeutic doctor-patient relationship in various clinical situations. Effective communication is based on the principles of biomedical ethics (beneficence, non-maleficence, respect and autonomy) [1], aims at informed decision-making and applies a patient-centred approach. The patient-centred approach is characterised by an authentic, congruent and transparent attitude, consists of active-listening [2] i.e. waiting, checking, mirroring and summarizing and of adapted individualized information-giving based on the elicit – provide – elicit method [3].

For particularly demanding situations, such as breaking bad news, addressing sexual (dys)function (including enquiring about sexual abuse)and chronic pelvic or vulvar pain syndromes, more specific skills are recommended, such as

- The 6 steps SPIKES (Setting / Perception / Invitation / Knowledge / Emotions / Strategy) protocol [4].
- NURSE (Naming / Understanding / Respecting / Supporting / Exploring) [5].
- PEARLS (Partnership / Empathy / Apology / Respect / Legitimation / Support) [6].

Another aspect of communication concerns the role of the doctor within the health care team. Collaboration and shared responsibility for health care delivery pose additional demands on doctors, especially in the domain of sharing (medical) information. Documentation of medical information at various instances, such as the patient's clinical file, operation report, discharge or consultation letter, does not only serve the purpose of health care delivery but also is a medico-legal requirement.

It is necessary that the trainee develops:

- Skills for effective patient handover, e.g. with use of the SBAR (Situation / Background / Assessment / Recommendation) method [7]).
- Skills for record keeping and writing medical reports.

Training and assessment of communication and Psycho-social skills

Like other skills in Obstetrics and Gynaecology, learning and improving communication skills is a continuous process based on combining theoretical knowledge, experience from simulation situations and practice on the job under direct (and later indirect) supervision. Use of a structured communication skills framework or model is recommended. This framework describes the various elements of the doctor-patient encounter and specific skills to be trained. Feedback and stimulation of self-reflection are the cornerstones of formative assessment to direct further training.

Training verbal communication and bio-psycho-social skills

Theoretical knowledge is learned from textbooks (e.g. Bio-Psycho-Social Obstetrics and Gynecology; a competency-oriented approach by Paarlberg KM and Van de Wiel HB) and/or e-learning either on an individual basis or in specifically designed courses on a local, national or international level (for instance, by the International Society of Psychosomatic Obstetrics and Gynaecology (ISPOG).

Role-playing or simulation patients offer a "dry lab" practice for both doctor-patient situations and team training and may complement practicing under live conditions with direct and indirect (case discussion) supervision. In these trainings the different aspects of communication, such as empathy, structure, verbal and non-verbal expression as well as the overall impression should be considered. It is essential that feedback is provided in a structured way and considers the personality of the trainee.

Assessment of communication and bio-psycho-social skills

Direct observation is the best method for teaching and assessing communication skills. Both verbal and non-verbal communication can be addressed. Also other (para-)medical staff and even patients may provide input for assessment through multisource feedback. If direct observation is not possible, videotaping trainee-patient encounters may be helpful.

A portfolio should be kept with multi-source feedback and OSCE assessments, but may also include brief written reflections by the trainee.

Training communication skills in teamwork setting

Specific simulation courses for patient handover and complex situations are organised locally, nationally or internationally. For communication in teams, the SBAR method is recommended.

Training and assessment of written communication

Depending on the specific document and the local and/or national setting, criteria for medical documentation should be clearly stated and passed on to the trainee. Discussion of the medical documents prepared by the trainees will demonstrate in how far the trainee is fulfilling these criteria.

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Simulation Training of Gynaecological Skills

Authors: Rudi Campo, Helder Ferreira, Yves van Belle, Vasilios Tanos, Benoit Rabischong, Grigoris Grimbizis, Attilio Di Spiezio Sardo

Introduction

Today it is generally accepted that the traditional apprentice-tutor model is no longer valid for training all skills necessary in Gynaecological surgery and, more specifically endoscopic surgery [1]. This agreement is based on the recognition that, in contrast to open surgery, endoscopic surgery demands surgical skills and psychomotor skills that should not necessarily be trained simultanously. Indeed, increasing evidence strongly suggests that psychomotor skills must be trained earlier and outside the operating room, and several models have been proposed for this aim [2-7].
Consequently, six leading professional organisations in gynaecology, the ESGE, EBCOG, EAGS, ENTOG, ACOG and AAGL, have issued a joint recommendation regarding endoscopic surgical training and quality assurance. This recommendation states that each hospital teaching endoscopic surgery should provide an endoscopic dry lab for training and improving the physician's proficiency in endoscopic surgery skills.
The rationale behind this recommendation is that endoscopy demands both psychomotor and surgical skills. It is vital that these psychomotor skills are trained and tested in a safe environment prior to training in the operating room, as it reduces patients' morbidity and mortality rates, it reduces the patients' exposure to unskilled trainees and it greatly increases educational efficiency.

In this section, examples of training simulators are provided, some of which are mentioned by commercial name or brand. Please note that many different training tools are available and that the field of simulation is continuously developing. Recommendations and advice on specific training simulators or tools may be found at ESGE.

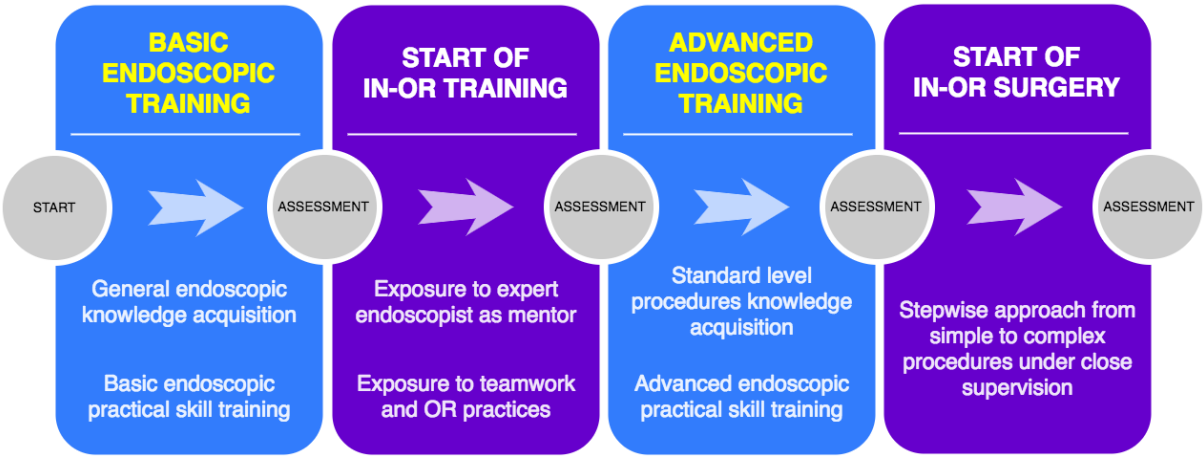
Knowledge acquisition and psychomotor skills training need to happen via a structured approach, which only allows trainees to progress in the programme when clearly defined and measurable goals have been attained and assessed. A recent study shows that training of basic laparoscopic psychomotor skills (hand-eye coordination) prior to training of suturing skills improves both the acquisition and the retention of more advanced laparoscopic tasks, such as laparoscopic intra-corporeal knot tying [8], which further indicates the need for a structured approach in which basic psychomotor skills are trained prior to more advanced laparoscopic skills.

Training curriculum

Training trainees to become proficient gynaecological surgeons should not start with training in the OR, but instead in a simulation setting [8,9]. A structured gynaecological training programme should fully embrace this approach and encompass a series of well-defined steps, combining dry lab training with in-OR training. At each phase, an assessment should take place to validate whether the trainee can proceed to the next level.
The following steps can be defined in this approach:

- Basic endoscopic training (dry lab): Knowledge acquisition of general endoscopic principles and techniques combined with basic practical endoscopic skill training.
- Start of in-OR training: After the trainee has proven to be in possession of the necessary basic endoscopic knowledge and practical skills, the in-OR training can be started. In this phase the trainee can assist an expert endoscopic surgeon, who acts as a mentor, and is exposed to basic OR practices and teamwork.

- Advanced endoscopic training (dry lab): Knowledge acquisition of standard level procedures and training of advanced practical skills.
- Start of in-OR surgery: Once the skills laboratory phase is past, live surgery may be undertaken, according to a stepwise approach starting with close supervision and simple procedures and step by step expanding to less supervision for simple procedures and moving on to more complex ones.



This approach aims to train and assess the necessary endoscopic skills as much as possible in a dry lab setting, before moving on to live patients in the OR. The benefit of this is threefold:

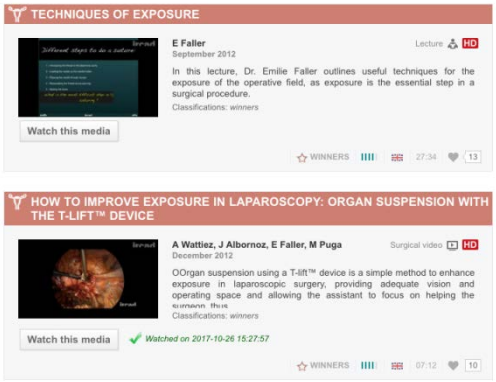
1. Trainees are much more self-assured when they enter the OR as they are more confident that they have acquired the necessary knowledge and skills;
2. Expert mentors do not loose time teaching basic skills, can receive proper assistance from trainees and can focus more on the procedures at hand;
3. The patient receives better care due to properly trained trainees and is much less exposed to unskilled trainees.

Endoscopic training should happen both at the level of theory and at the level of practical skills. The acquisition of the correct knowledge regarding general laparoscopy and standard level procedures is as important as learning the necessary psychomotor skills for successfully performing endoscopic manipulations. Training in the operating room can only start when it has been proven that knowledge and skills are present.

Knowledge acquisition

The acquisition of general endoscopic knowledge and, at a later stage, of standard level procedures can happen prior to or in parallel with practical skills training. To make this type of training as affordable as possible, it can be offered as an easily accessible structured e-learning programme in combination with self-evaluation modules, which the trainee can completes at his or her own pace.

This knowledge acquisition can be further supported by one or more group-based sessions and should always be followed by an official assessment of the trainee.



Lectures on "Exposure Techniques" on the Winners Project E-Learning Programme

Example: The **Winners Project e-learning programme** offers free of charge online tutorials and theoretical assessment of laparoscopic and hysteroscopic knowledge.

Practical skills training

As it is widely accepted that dry lab training prior to training in the OR reduces patients' morbidity and mortality in all endoscopic surgical disciplines, it is critical that practical skills can be trained in-house by using a structured approach with validated methods and training tools. Furthermore, a management platform is required to facilitate this structured approach regarding data collection and report generation.

Management platform

To achieve a structured programme, it is vital that the necessary support software is available that can manage all data collection. This collection of data occurs at two levels: the profiles and experience of the trainees, and the results of the training and test sessions that are carried out. Ideally, such a system should offer the possibility to view the progress of the trainees over time, to compare the training results with peers by means of a benchmark according to exposure level, and to automatically issue all relevant reports and potential certificates.

Examples & equipment

Laparotomy and basic surgical skills

For basic surgical skills very simple models are described:

Example of foam rubber tube, which can be used to train suturing skills or to manufacture a simple vaginal cuff model.

Example of tubular balloons that can replicate the ureters (simulate ureter anastomosis, etc) and the tubes (tubal surgery)

Cloths for suturing and knotting training

Balloons to replicate ovarian cystectomy

To learn and train total abdominal hysterectomy by means of laparotomy, there are simple, inexpensive models that can easily be reproduced [10, 11]. When combined with a didactic lecture and real instruments for instruction, these models may be valuable simulator tools in trainee education. The total abdominal hysterectomy model was constructed to include the uterus, uterine arteries, ovaries, bladder, supporting ligaments, triple pedicle, vagina, and ureters (below).

Vaginal hysterectomy (VH), posterior and anterior compartments repair

The development, construction, cost, and utility of an inexpensive and anatomically representative VH simulator has been described. After multiple materials and solutions were evaluated and tested, a hysterectomy simulator was constructed that incorporated the strengths of each tested concept (below).

Laparoscopy

The advised dry lab setup for training laparoscopic skills includes the following:

- Pelvic trainer:

  The pelvic trainer simulates the ports that are used when performing a laparoscopic procedure on a patient. The ports' main goal is to restrict the movement of the instruments and to necessitate the use of an endoscopic camera. Together with training models, they form an ideal combination to train skills like camera navigation and proper hand-eye coordination.

Example: SZABO-BERCI-SACKIER Laparoscopic Trainer

Example: Academy Pelvic Trainer

- Training models for laparoscopic psychomotor skills:

  The training model is placed inside a pelvic trainer and provides a number of exercises which will train the basic laparoscopic instrument handling skills, such as camera navigation and hand-eye coordination, including bimanual coordination.

Example: LASTT Model placed inside a pelvic trainer

LASTT (Laparoscopic Skills Training and Testing Method) Training Model The LASTT model is a validated training model that represents the spatial distribution and orientation of the different planes and angles of a female pelvis. It provides validated laparoscopic exercises to train and test the individual on their laparoscopic psychomotor skills [1, 14-39].

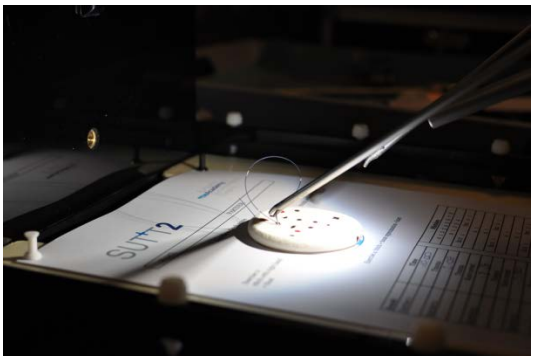
The exercises are performed with standard laparoscopic instruments: 10 mm 0º optic, 10 mm 30º optic, 5 mm dissection forceps, 5 mm grasping forceps.

The first exercise trains the ability of a trainee to navigate the camera and to handle the 30° optic; 14 targets have to be identified in a specific order.

The second exercise trains the trainee's hand-eye coordination while the trainee positions 6 small rings over a nail, and the last exercise trains the trainee's bimanual coordination while the trainee transports 6 pin-objects from one grip to the other and then to the corresponding target.

- Training models for laparoscopic suturing skills:

  The laparoscopic suturing skills model is placed inside a pelvic trainer and allows the trainee to perform stitching and knotting exercises at various levels of difficulty.



Example: SUTT2 Model placed inside a pelvic trainer

SUTT (Suturing and Knot Tying Training and Testing Method) Training Model The SUTT model consists of two levels, SUTT1 and SUTT2, and trains laparoscopic suturing and knot tying at various levels of increasing difficulty.

The exercises are performed with standard laparoscopic instruments: 10 mm 0º optic and needle holders.

SUTT1 consists of one exercise where stitching and knot tying is trained.

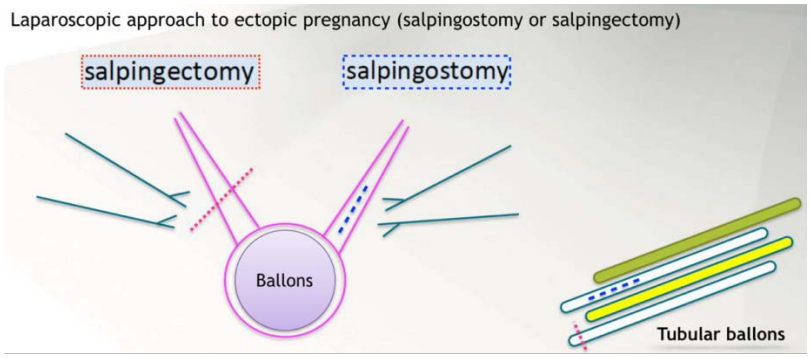
SUTT2 consists of four exercises that address Greek suturing, stitching with both hands, knot tying and tissue approximation.

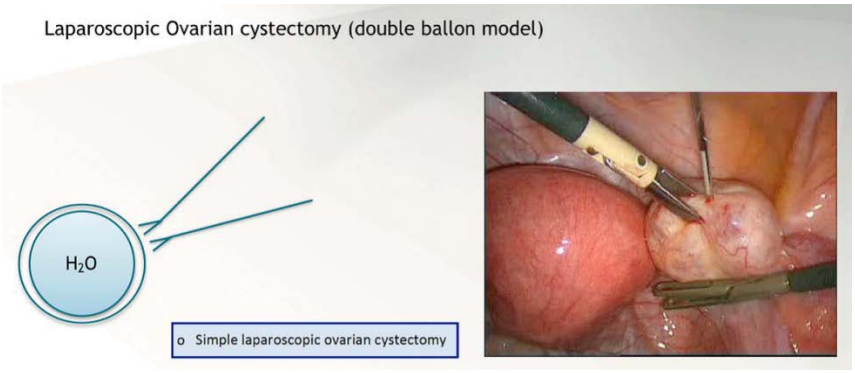
- All-in training model for laparoscopic psychomotor and suturing skills

Example: Encilap all-in training model

- Simulation models for laparoscopic procedures

Using a tubular balloon, it is possible to make a longitudinal incision to replicate a salpingostomy, and a complete cut for salpingectomy.





A balloon filled with water surrounded by a second balloon, may be used to simulate an ovarian cystectomy, by removing the external balloon while avoiding the rupture of the internal one.

Hysteroscopy

The advised dry lab setup for training hysteroscopic skills includes the following:

- Female genital model

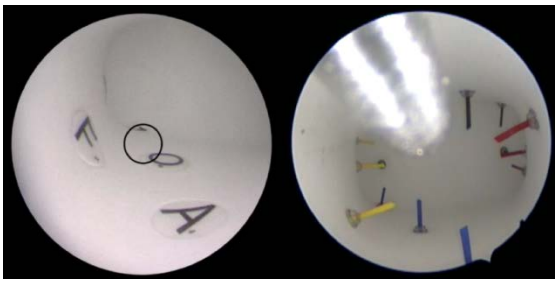
  To make the simulation as close to real life as possible, it is advisable to use female genital models into which the training models can be placed.

Example: Academy Table Holder with Genital Model

Example: STORZ EVE Hysteroscopic Trainer

- Training models for hysteroscopic psychomotor skills

  The training model is placed inside the female genital model and provides relevant exercises which simulate all possible movements during a hysteroscopic procedure. Example:



Inside view of HYSTT Exercise 1 and 2

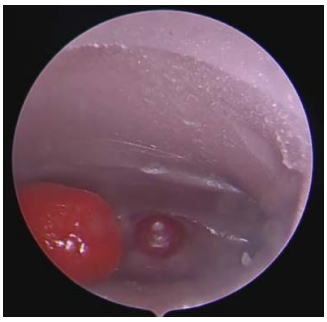
HYSTT (Hysteroscopic Skills Training and Testing Method) Training Model The HYSTT model tests and trains hysteroscopic camera navigation and instrument handling. The model is made in a shape similar to a human uterus and is installed in a female genital model. It has two levels of difficulty, HYSTT1 and HYSTT2, and each levels consists of two exercises.

Exercise 1 evaluates the skills of an individual to handle the camera and work with a 30° optic in a hysteroscopic environment. Various sets of modules are used in order to eliminate the memory effect for the participants.

Exercise 2 evaluates the skills of simultaneous camera and instrument handling and hand-eye coordination skills, as its goal is to pick up and extract 14 pins.

- Training models for diagnosis

  Training of diagnostic cases is typically done by means of lectures and videos. However, using simulated models offers a significant benefit over traditional methods as they teach the trainee how to enter the cavity and proceed with caution, to identify the anatomical position of the abnormalities, to properly formulate what can be seen, to present this to their peers and to formulate a resulting diagnosis. The diagnostic training models are placed inside a female genital model. Example:



Inside view of a training model with polyp and early pregnancy

Gynaecological skills to be trained (core curriculum)

Skills in outpatient clinic:

- Placement of Intra Uterine Device
- Placement of subcutaneous implants
- Endometrial biopsy
- Colposcopy (with biopsy)
- LLETZ of the cervix

Basic (core) conventional surgical skills:

- Punch biopsy under local anaesthesia
- Surgical marsupialization of cyst
- Surgical excision of abscess

More advanced (core) conventional surgical skills

- Laparotomy with minimal adhesiolysis
- Salpingo-oophorectomy via laparotomy
- Simple anterior vaginal repair
- Simple posterior vaginal repair
- Myomectomy of subserous myoma via laparotomy
- Colpocleisis (at least in simulation setting)

Basic (core) endoscopic skills:

Laparoscopy:

- Diagnostic laparoscopy
- Diagnostic laparoscopy with tubal testing
- Simple laparoscopic adhesiolysis
- Laparoscopic sterilization
- Laparoscopic removal of ectopic pregnancy (salpingostomy) or salpingectomy
- Laparoscopic needle aspiration of simple cysts
- Laparoscopic electrocoagulation of the ovary
- Simple laparoscopic ovarian cystectomy
- Laparoscopic salpingo-oophorectomy

Hysteroscopy:

- Diagnostic hysteroscopy
- Diagnostic hysteroscopy with tubal testing
- Hysteroscopic polyp resection
- Hysteroscopic myoma resection type 0-1 (< 4cm)

Integrating simulation training into the curriculum

According to Harden *et al*. and Kern *et al [40, 41]*.

- Needs: implement gynaecological skills training prior to clinical activities
- Aims and objectives: develop uniform and structured educational and training programmes in Europe
- Content: structured educational, training and assessment programme in gynaecology
- Organisation of content: Free access to peer reviewed tutorials with self-evaluated models; Acquiring psychomotor skills with dry lab inanimate models; Standardized validated evaluation of the above skills; Entering the clinical teaching programme when appropriate.
- Educational strategies: Structuring from knowledge to skills, and then to clinical activity; Objective evaluation module for each of the above; Objective evaluation method used by all tutors.

- Teaching methods: Accessible, validated and affordable; Standardized dry lab training exercises; Internet access; Apprentice-tutor model after acquisition of theoretical knowledge and psychomotor skills.
- Assessment: objective structural exercises evaluation, certification, preferably external assessors, reports by tutors or supervisors, scales of self-assessment, continuous and end-of course assessment, exams for theoretical knowledge evaluation.
- Communication: local scientific societies, teaching hospitals committees, trainees tutors/supervisors.
- Educational environment: Local infrastructure with access to knowledge (online video tutorials, structured learning programmes) and dry labs; Larger skills labs for surgical competences with a dedicated training environment where trainees acquire inter-professional team skills, dedicated endoscopic clinical teaching facilities (animal lab, life surgery, virtual reality).
- Process: Inform national societies about the content of the programme. Provide them with different tools needed for applying the programme: - Free access to peer reviewed tutorials with self-evaluated models (like GESEA programme); - Acquiring psychomotor skills with dry lab inanimate models (pelvic trainers, boxes suitable for performing simple exercises with pins/rings using a webcam);
- Acquiring surgical competences using accessible and inexpensive models (e.g. abdominal and vaginal hysterectomy, ovarian cystectomy, ectopic pregnancy, anterior and posterior compartments defects correction) following a “step by step” simulation programme.
- Providing standardized validated evaluation of the above skills (online score platforms); When appropriate entering into the clinical teaching programme.

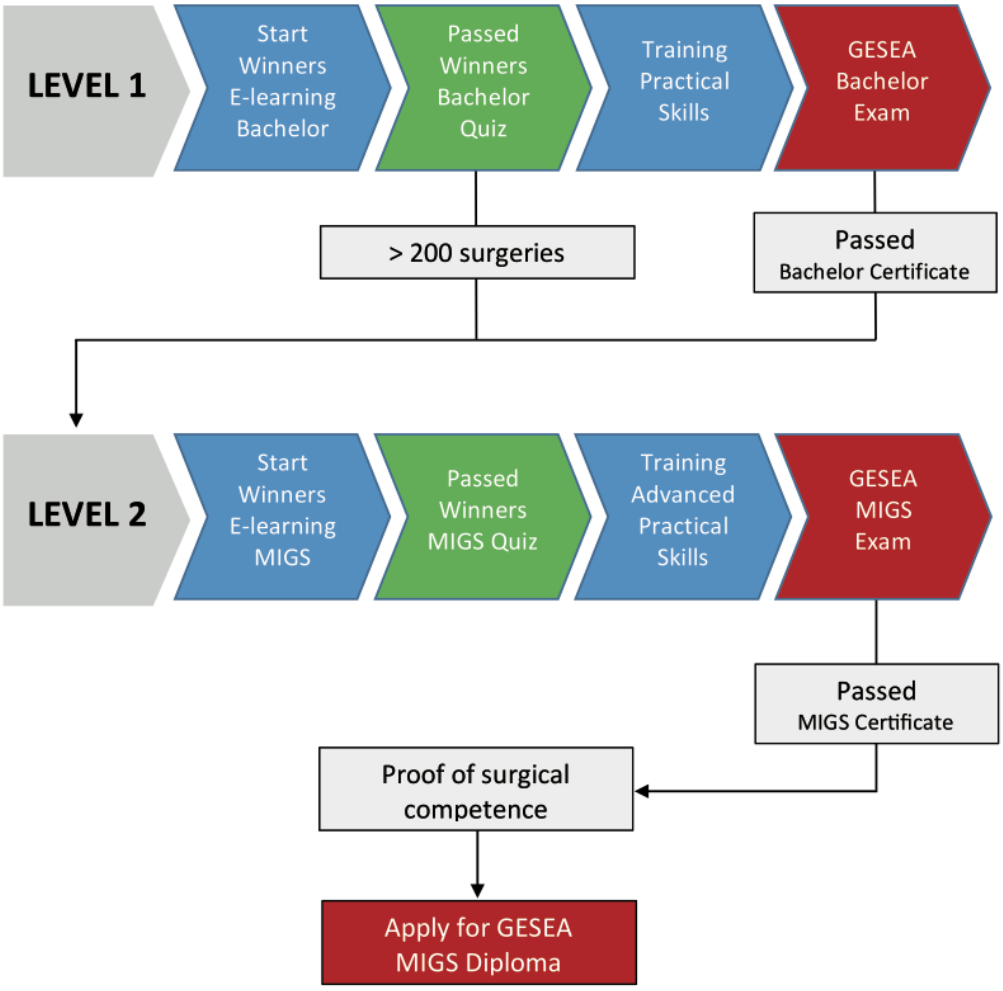
Example of a simulation training programme in endoscopic skills

The European Academy of Gynaecological Surgery, together with the ESGE, has elaborated a well-balanced diploma curriculum: the *Gynaecological Endoscopic Surgical Education and Assessment* (GESEA) programme, which is based on a structured approach similar to what is proposed in this document [18].
The GESEA Diploma Programme currently consists of two active levels, a *Bachelor* level and a *Minimal Invasive Gynaecological Surgeon* (MIGS) level.

- The GESEA Bachelor (level 1) is open to all endoscopists and is specifically aimed at trainees. It starts with the bachelor tutorials on the Winners E-learning platform and is followed by practical psychomotor skill exercises for laparoscopy (LASTT and SUTT1) and hysteroscopy (HYSTT1). The exam consists of a theoretical test and practical tests, and the obtained certificate serves as a license to enter the OR, as the programme provides the necessary skills needed to start in-OR training.
- The GESEA MIGS (level 2) is open to both gynaecologists and reproductive surgeons and starts with more in-depth tutorials on the Winners E-learning platform. The training exercises feature advanced practical psychomotor skills (LASTT, SUTT2 and HYSTT2), and the obtained certificate serves as a license for conventional gynaecological laparoscopic and hysteroscopic surgical interventions.

To follow this programme, access is required to (at least) the following:

1. Inanimate models for open surgical skills
2. Endoscopic GESEA programme
3. Infrastructure
   Core: Dry Skill lab installed with computer access for online video tutorials, endoscopic hardware and training tools preferably accessible to all surgical disciplines. Virtual reality trainers are acceptable but do not have an advantage above the low-cost inanimate models.
   Electives: Virtual reality trainer, inter-professional team skills, cadaver training and animal training courses. Live surgical sessions or streaming learning sessions. To profit from a professional training environment, training should be organised in regional or even supra-national training centres.



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Simulation Training of Obstetrical Skills

Authors: Jette Led Sørensen, Ruta Nadisauskiene, Tim Draycott, Diogo Ayres-de-Campos, Guid Oei, Fedde Scheele, Jessica van der Aa

Introduction

This section of the pan-European curriculum in Obstetrics & Gynaecology describes the importance of simulation training in acquiring obstetrical skills and gives examples of how this may be set up locally.
Simulation training is recommended as a key part in the Obstetrics & Gynaecology curriculum to acquire the necessary skills, such as delivery by vacuum extractor or forceps, before these skills are used in clinical practice. Obstetric emergencies are rare and therefore it may be difficult to train them in a clinical setting. Therefore, simulation training of obstetric emergency situations is also essential [1-6]. Additionally, simulation training ensures development in individual skills and team performance.
Simulation training involves *'devices, trained persons, lifelike virtual environments, and contrived social situations that mimic problems, events, or conditions that arise in professional encounters'* and can be performed in all kinds of settings [7,8].
Some experts may argue that involvement of official simulation centres is essential, while others suggest that simulation training is most effective when conducted locally at the unit or hospital [2, 3, 9, 10]. However, none of these experts dispute that recurrent training is necessary, as the effect of training decreases after some months [11, 12]. As the pan-European curriculum states, simulation training of obstetrical skills should be reasonable and feasible for execution in all European countries. Countries or institutions may pursue more ambitious programmes than described in this curriculum.

Equipment

Potential equipment for training may be very diverse and can definitely be inexpensive. Some examples of equipment, tools, models, trainers or mannequins are given below, ranging from inexpensive to expensive (and thus more advanced) options:

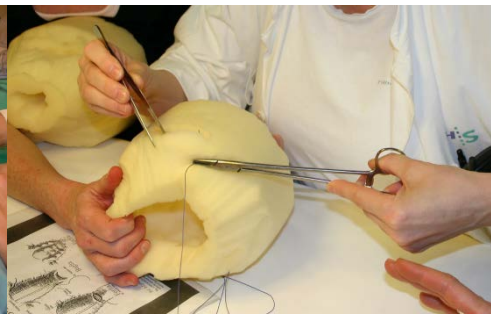
- Basic birthing mannequins

Courtesy of Jette Led Sørensen, Denmark

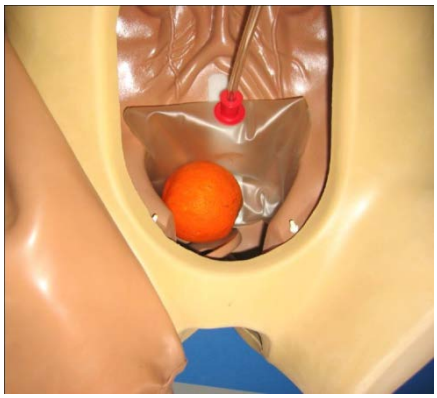
- Basic gynaecological training models modified for vacuum extractor / ventouse, Kiwi, forceps, CTG monitoring, foetal blood sampling, B-Lynch (foam rubber) etc.



Courtesy of Jette Led Sørensen, Denmark


Courtesy of Diogo Ayres-de-Campos, Portugal

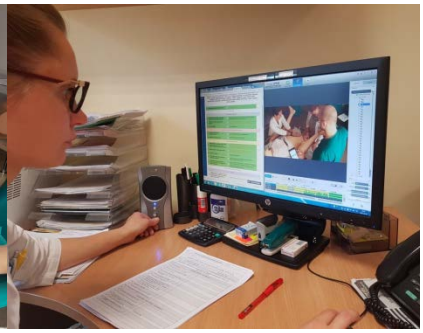
- Neonatal mannequins for basic resuscitation
- Adult mannequins for basic resuscitation
- Advanced birth mannequins (i.e. with measurement of force)
- Perineal repair trainer
- Animal models for perineal repair
- Caesarean section skills trainer
- Emergency hysterectomy / intra partum hysterectomy trainer
- Advanced full-scale birthing simulator



Courtesy of Diogo Ayres-de-Campos, Portugal

- Hybrid simulator: can be a combination of a patient (actor) and a simulator, or a combination of several different simulators [13]. For instance, this may involve a patient (actor) with a birthing mannequin between the legs, or an adult mannequin for basic resuscitation combined with a basic birthing mannequin.




Hydralab® courtesy of Ruta Nadisauakiene, Lithuania

- Gaming technologies: All sorts of computer-based simulators and serious games are available for medical training.
- Presentations, videos and implementation tools, including management algorithms.

All departments of obstetrics and gynaecology are required to provide basic birthing mannequins for individual technical skills training and hybrid simulators for interprofessional team training.

Types of simulation training and examples

Individual technical skills training

- Basic level with basic skills training (basic birth mannequins)
- Complex level of skills training (more advanced mannequins)

Interprofessional team training

- Basic team training with hybrid simulator
- High fidelity simulation with advanced full-scale birthing simulator

Simulation in obstetrics (minimal requirements)

- Basic birthing mannequins
- Basic gynaecological training models modified for vacuum extractor / ventouse, Kiwi, forceps, CTG monitoring, foetal blood sampling, B-Lynch (foam rubber) etc.

Interprofessional team training

- Hybrid simulators
- Patients (actors)

Courtesy of Tim Draycott & Cathy Winter, PROMPT, UK

Courtesy of Jette Led Sørensen, Denmark

Simulation Setting

There is no recommendation for a specific setting or location.

There are three types of simulation settings, all of which have advantages and disadvantages [8]:

- Simulation centre (off-site simulation); away from the actual patient care unit.
- In-house elsewhere in the department (off-site simulation); training room(s) specifically set up for simulation training away from the patient care unit, but within the hospital. In-house training facilities may be part of hospital departments.

- In situ simulation; a blend of simulation and actual working environments, for training under working conditions. These situations may be announced (staff is informed beforehand about the simulation event) or unannounced (staff is not informed beforehand).

Neither of these settings has a stonger impact on individual or team learning [8]. However, gains in organisational learning may be achieved with department-based local simulation, such as simulation in-house and especially with in situ simulation [2, 3, 8, 12]. To determine the preferred simulation setting for a particular institution, it may be helpful to consider the overall objectives of simulation-based education as well as specific local factors, such as feasibility [8, 14, 15].

Obstetrical skills to be trained (core curriculum)

General Medical Knowledge & Skills

These team skills in the EBCOG-PACT programme may be trained via simulation using hybrid training strategies. Instead of simulation, one might also use learning strategies with interactive mixed reality technology / microsimulation and videos, slides, photos, drawings and books.

- *Lead a ward round with a multidisciplinary view, manages admittance and discharge of patients at the ward and the delivery room and manages handover to another practice*
- *Recognise and triage acutely ill patients, septic patients, patients with peripartum complications and patients requiring resuscitation, and initiate adequate management.*

Basic obstetric skills

These obstetric skills in the EBCOG-PACT programme shall be trained by simulation in all countries, using basic birthing mannequins or other basic models.

- Assistance of uncomplicated delivery
- Vacuum-assisted vaginal delivery
- Forceps-assisted delivery
- Breech delivery
- Assistance during vaginal delivery of multiple pregnancy
- Foetal blood sampling
- All dystocia management manoeuvres (including shoulder dystocia, trained at least in simulation)
- Intrauterine balloon tamponade (including management of postpartum bleeding)
- Surgical compression of atonic uterus (includingn management of postpartum bleeding)
- B-Lynch suturing (including management of postpartum bleeding, trained at least in simulation)

Skills in perineal repair

Perineal repair trainers will be available in some countries, but they are not expected to be available in all of Europe. Instead of simulation, it is also possible to use learning strategies with interactive mixed reality technology / microsimulation and videos, slides, photos, drawings and books.

- Episiotomy
- Repair of genital tract trauma
- Suturing of episiotomy wound
- Suturing of 1st/2nd/3rd degree perineal tears
- Suturing of 4th degree perineal tear

Advanced obstetric surgery

More advanced models, such as Caesarean section skills trainers and Emergency hysterectomy / intra partum hysterectomy trainers, will be available in some countries, but not in all of Europe.

Instead of simulation, it is also possible to use learning strategies with interactive mixed reality technology / microsimulation and videos, slides, photos, drawings and books.

- Caesarean section
- Repeat caesarean section
- Caesarean section in obese patient
- Emergency caesarean section
- Abdominal hysterectomy (at least in simulation or through alternative learning strategies)
- Manual and surgical removal of placenta
- Manual uterine reversion (at least in simulation or through alternative learning strategies)
- Evacuation of vulvar hematoma

Neonatal mannequins for basic resuscitation

These skills in the EBCOG-PACT programme shall be trained via simulation in all countries.

Neonatal mannequins for basic resuscitation can be used:

- Support the initial care of the healthy/preterm new-born (with low Apgar scores)
- Resuscitate the new-born accurately in the first 10 minutes after delivery (while awaiting the
- arrival of the paediatrician)

Integrating simulation training in the curriculum

In general, it is not likely that there is a lack of simulation equipment for basic simulation. However, many training simulators are underutilised due to lack of educational programmes and lack of technical support.

There also is a lack of simulation instructors who can conduct the team training.

A study on flight simulation concluded that “The key is the programme, not the hardware”. In medical simulation, this has also been highlighted: “Simulators do not make a curriculum, they are merely tools for a curriculum” [8].

It can be helpful to apply curriculum models, such as the classic article “Ten questions to ask when planning a course or curriculum” by Harden [14] or the six step approach of Kern et al [15].

As an example, here is a list of Hardens ten questions to ask when planning a course or curriculum:

1. Needs
2. Aims and objectives
3. Content
4. Organisation of content
5. Educational strategies
6. Teaching methods
7. Assessment
8. Communication
9. Educational environment
10. Process

Simulation and simulation equipment are elements of questions number 5 and 6: Educational strategies and Teaching methods. All other steps of planning a course or curriculum need be taken into consideration as well.

The simulation literature describes three phases of skill development, from 1) cognitive (where learning is achieved via instruction and demonstration) to 2) associative (where skills learned previously are integrated and patterns are built) to 3) autonomous (where performance becomes more automatic and routines are put into practice). For the initial phases of learning, i.e. for users in the cognitive phase, less realistic simulators are adequate, whereas more realistic simulators are appropriate for users in the associative phase and in the autonomous phase [16].

Team training

The occurrence of medical errors in emergency situations is often related to team performance and communication within a team. Therefore, the development of Team Training in the medical field has been an important innovation over the past years, aiming to improve team performance, especially in emergency situations. Many good examples of Team Training programmes specifically for obstetric emergencies have been established in different institutions and have been proven to be effective in reducing the risk of medical errors.
Team interventions in health care teams have proven to improve team performance as well as patient outcomes [17].
In this section, some recommendations are provided regarding the setup of Team Training in obstetric emergencies.
Some keys to Team Training have been identified:

1. Decision making is done by the team, using the available information effectively.
2. Speaking up is expected, meaning that each team member has the right to speak up and is encouraged to do so.
3. Mission analysis should take place; does the team use the available resources effectively?
4. Communication is key; listening carefully and checking whether information has reached the entire team.
    a. Use check – double check.
    b. Use ISBAR for phone calls (Identify of yourself – Situation that occurred – Background data of the case – Assessment you made – Recommendation for following steps.
    c. Use Time-Out procedures to take a moment to reflect and report by each team member.
5. Recognize leadership and use the capacities of all team members.
6. Adapt to new information; is the team capable of changing policy?
7. Maintain situational awareness, which may be improved by time-out procedures.

Several item lists have been developed for Team Training and you may choose the one that suits your context best.

Team training with an actor as a patient can create very realistic settings and can therefore be very effective. However, there are some prerequisites for Team Training simulation when having an actor as a patient.

- Checklists should be based on health care protocols.
- Scenarios should match the emergency situations you want to train.
- There should be instructions for each instructor, patient (actor) and participant for each scenario.
- The team should be trained in resuscitation and basic obstetric emergencies.
- The actor should be capable of playing the role of the patient.
- Basic training simulators may be used.
- There should be a team (consisting of an obstetrician, a midwife and/or a nurse) to prepare scenarios, brief all participants, provide information during the training, and debrief participants after the training.
- There should be an atmosphere of urgency at the level of the work floor as well as the management level. The implementation should follow change management rules [17].

Example of a Team Training simulation

Scenario: After the briefing concerning the case of a woman in the 40th week of her first pregnancy, who is admitted with severe headache and hypertension of 160/100 mmHg, the team arrives to see the patient (actor), who shows signs and symptoms of an eclamptic seizure.
The patient (actor) should receive MgSO4 treatment to end the seizure and medication to reduce the blood pressure. Medication is actually prepared, although it will not be administered to the patient. Also, 2 iv. drips are prepared, no needles stung, but the iv is attached with plasters and bandage. A urinal catheter is placed within a mannequin.
During all the activities, one of the team members reads checklists out loud, and time-out procedures are used to enhance situational awareness.

The third photo shows an observer in the background who is preparing items for the debriefing.



Courtesy of Fedde Scheele, the Netherlands

After the patient was stabilized, she was brought to the operation theatre for a caesarean section because of suboptimal foetal hart rate tracing. This suboptimal tracing was mentioned by the drill instructor. The team in the operation theatre is informed after the arrival of the patient that this is a drill and that the patient should not be actually treated. In the meantime, all possible team issues and logistic flaws are noted by the observer. In the fifth photo, the paediatrician observes the resuscitation of the neonate by team members, and the final photo is made during the debriefing.



Courtesy of Fedde Scheele, the Netherlands

During the debriefing, the team members are asked to reflect on strong points of their performance, e.g. effective check-double check during communication, use of ISBAR at the telephone, use of checklists.
Subsequently, points of improvement are discussed, e.g. insufficient leadership or the suggestion to take more time during time-out procedures to divide roles, the suggestion for the nurse to speak up more, and more attention to giving information to the patient. Also, infrastructural flaws are fed back to the administration.
Fedde Scheele, OLVG teaching hospital, Amsterdam, The Netherlands

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Ultrasound Skills Training

Authors: Juriy Wladimiroff, Piotr Sieroszewski, Angelique Goverde

Introduction

Ultrasonography has been established as an important diagnostic tool in the daily practice of obstetrics and gynaecology. It is of paramount importance that trainees receive a structured and supervised training in ultrasonography because ultimately it is the skill of the ultrasonographer, i.e. the gynaecologist, that determines the quality of the images and thus the added clinical value of this form of investigation.
The curriculum for the core and electives in postgraduate training in obstetrics and gynaecology relies on independent practice of ultrasonography skills by the gynaecologist. This section provides a concise description of the training curriculum for ultrasonography skills in terms of

- The knowledge and skills in ultrasonography that the trainee will have reached at the endpoint of training to the level of competence as described in the EBCOG Core curriculum;
- Methods for learning these skills;
- Tools for quality assessment of these skills.

The specific items were extracted from the core curriculum and grouped according to their common denominator or subject heading. Suggestions for training and assessment were derived from the ISUOG Education Committee recommendations for basic training in obstetric and gynaecological ultrasound [1].

General outlay of ultrasonography training

A three step programme is recommended:

1. theoretical training: technical aspects of equipment, imaging and reporting.
2. practical training: under supervision in a real-patient setting until the level of independence has been reached.
3. assessment of the trainee's performance: logbook or collection of pictures as an illustration of the trainee's ability to produce quality images and to recognize pathologies.

Ultrasonography Training Curriculum

A. General principles of ultrasound scanning

1. Basic physical principles of ultrasound, including safety;
2. Transducer, image production, knobs, scanning planes (TA & TV) , measurements;
3. Basic principles of Doppler ultrasound and umbilical artery Doppler;
4. Infusion scanning (gel or saline infusion): safety and indication;
5. Documentation of findings.

The general principles will be learnt via textbook and/or e-learning modules and will be discussed with a dedicated supervisor.
Practical skills of handling the transducers and scanning apparatus as well as infusion scanning will be practiced under direct supervision of a trained ultrasonographer until full proficiency has been achieved.
Assessment: knowledge-based assessment (exam), direct clinical observation

B. Ultrasonography in gynaecology

Assessing normal and abnormal appearances of the endometrium, myometrium, and adnexae; application of ultrasound criteria to discriminate between normal and abnormal findings (e.g. RMI [2], IOTA [3]).

This part will be learnt in a stepwise process:

1. Orientation via textbook and/or e-learning modules

2. Practical experience under direct supervision; supervision will diminish while experience is building up

Assessment: knowledge-based assessment (exam), direct clinical observation, portfolio of at least 50 cases (variety of uterine (myometrium and endometrium) and adnexal pathology)

C. Ultrasonography of pregnancy

a. First trimester

1. Assessing normal and abnormal findings between 4 and 10 weeks in singleton and twin pregnancies (including ectopic pregnancy);
2. Assessing normal and abnormal findings between 10 and 14 weeks in singleton and twin pregnancies (chorionicity);
3. Dating of pregnancy

b. Second trimester and third trimester

1. Foetal presentation
2. Foetal biometry: dating, assessing size and estimating foetal weight
3. Assessing the placenta and amniotic volume
4. Distinguish between normal and abnormal foetal size and growth patterns, use of Doppler flow of umbilical artery
5. Assessing cervical length

This part will be learnt in a stepwise process:

1. orientation via textbook and/or e-learning modules

2. practical experience under direct supervision; with increased experience, less supervision will be needed.

Assessment: knowledge-based assessment (exam), direct clinical observation, portfolio of at least 50 cases (variety of first, second and third trimester cases).

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Entrustment and Portfolio

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Introduction

This section describes the means within the pan-European postgraduate training curriculum in Obstetrics & Gynaecology through which a trainee's progress in competence is determined. The curriculum consists of 10 themes that comprise various professional activities. Once a trainee has reached full competence in the performance of a specific professional activity, i.e. at the level of independent practice, the trainee will be granted entrustment for that specific professional activity and eventually for the entire theme. When training according entrustment decisions, trainee's should always be aware of the possibility of requesting supervision, even if entrustment for independent practice was granted for a specific activity. This demands reflective practice of the trainee. In high-risk situations, it is expected that the trainee recognises this risk and demands supervision if patient safety is at stake. In some countries independent practice is restricted by law, therefore the execution of entrustment may be tailored to local or regional legislation.
Throughout the years, the trainee will collect entrustment for the various professional activities; entrustment is therefore not limited to the last day of training. The actual scheme of entrustment will be determined by and adapted to local or regional infrastructure.
Entrustment, as will be described below, entails more than assessment, and is documented in the personal portfolio of the trainee. This document describes the steps to be taken in the process of training in order to reach entrustment. It provides the guidelines for portfolio evaluation and entrustment decisions, including tools of assessment.

Entrustment of Professional Activities

A professional activity includes all the tasks and aspects needed to execute such an activity in the context of patient care. For example, the professional activity 'caesarean section' entails not only the technical skill to perform the surgery but also the decision making process prior to the operation, patient communication, team work in the operating theatre etcetera. Entrustment of a professional activity to the trainee means that the trainee is considered competent on all aspects of the professional activity in such a way that he/she can perform the activity independently.
The learning process of a trainee, aimed at reaching the level of independent practice, is based on active engagement in delivery of care, provision of formative feedback by clinical supervisors and reflection on the progress by the trainee. In time, these clinical activities will lead to increasing competence, and supervision is adapted accordingly. In the initial stages of training, supervision will be strict and clinical supervisors will need to be present while the trainee is performing a specific activity in order to talk the trainee through the process or to intervene when necessary. As the trainee gradually gains experience and competence, supervision will evolve towards a more guiding and supporting role with decreasing need of intervention. This allows the trainee to experience a higher degree of autonomy. When the trainee has achieved competence, the activity can be delegated to the trainee, and supervision may occur indirectly (not being present in the same room) and at the discretion of the trainee. Once clinical supervisors, informed by both the portfolio and their own judgement, are convinced that the trainee can perform the activity without interference of a supervisor, the trainee will be granted ***entrustment*** for this specific activity following the process described below. The strategy of entrustment is based on international literature [1-4].
Development of competence moves through five levels: from the trainee observing the supervisor performing the activity (level 1), to the trainee performing the activity fully independently ('*supervisor does not need to be present'*). This is shown in table 1.

Table 1: Five levels of competence in achieving entrustment of an activity.

Levels of competence:	1 Supervisor performs the activity, the trainee observes	2 Supervisor talks trainee through activity	3 Supervisor intervenes incidentally	4 Supervisor may be present just in case	5 Supervisor does not need to be present
Trainee:	→ Development of trainee's competence				**Entrustment** (to be achieved after formal decision)

Portfolio

In the portfolio, the trainee keeps a record of all the activities and perspectives related to his/her development to support the request for a higher level of competence and, finally, for entrustment. For the decisions on level of competence and achievement of entrustment, data are collected from three sources (triple source entrustment):

A) Learning experiences: *depicting the learning achievements of the trainee*
- Logbook summarizing clinical experience, including specific diagnoses and treatments.
- Courses; e.g. laparoscopic skills training course, management course etc.
- Academic experience, scholarly work, presentations, scientific articles.
- Personal development plan, with regular updates of progress in training, reflective reports and reports of discussions with the tutor.

B) Assessment for entrustment: *depicting the assessment achievements of the trainee*
- Structured feedback from supervisors, colleagues and patients; e.g. 360 degree feedback (see addendum 1)
- Workplace-based assessments; e.g. mini-CEX, OSATS[1]
- Knowledge and skills assessments; e.g. exam results

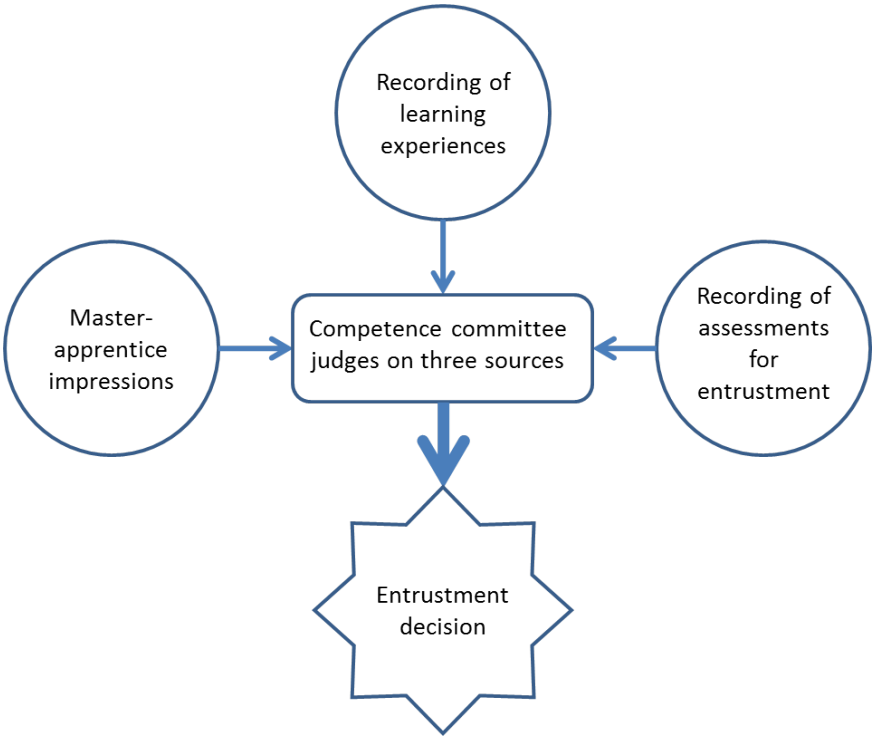
C) The competence committee adds professional impressions: *depicting the 'master-apprentice' image*
- Brief minutes of the competence committee meeting describing the professional impressions, which are added to the portfolio.

Entrustment process and decision

In the formalisation of entrustment, the trainee should play an active role in the initiation of entrustment decisions. However, the actual decision on entrustment for an activity lies with the competence committee. It is recommended that the competence committee is comprised of at least 2 members that know the trainee's performance well and preferably at least 2 other clinical faculty members.
Once every 3 to 6 months, the trainee is expected to write a clear and concise request to the competence committee in which he/she suggests to move up to a higher level of competence for a particular activity. The request should be supported by information in the portfolio. Based on the three sources information, the competence committee determines the level of competence and thus the degree of supervision required for the professional activities specified in the request. This process may be particularly important in the transition from level of competence 3 to 4, as well as the transition from level 4 to 5 (entrustment decision). For the

transitions in the lower levels, the competence committee may mandate the decision to clinical supervisors, to prevent excessive administrative processes.

Figure 1: Triple source entrustment



There are two possible outcomes of this process:

1. If the competence committee is indecisive about the level of competence that is achieved, more information about the trainee's performance is gathered and the decision is postponed.
2. If the competence committee has reached agreement on the level of competence, the decision is briefly motivated in writing (to be recorded in the portfolio) and the activity is signed off.

Once the trainee has reached the highest level of competence, the competence committee grants entrustment for this particular professional activity.

In some jurisdictions, it is legally impossible for a trainee to perform a clinical activity completely without supervision. In these cases, when the competence committee judges that the trainee is competent for independent practice but is not allowed to act accordingly for formal reasons, the trainee can be granted entrustment on paper, with the provision that this entrustment will be effectuated by the end of training.

The competence and entrustment decisions by the competence committee are recorded in the portfolio, so that the trainee, the clinical faculty and the competence committee may verify at any time which level of competence has been reached and whether entrustment has been granted.

The assessment image

It is vital to stress that assessment for entrustment is only one of the sources to base the entrustment decision upon.

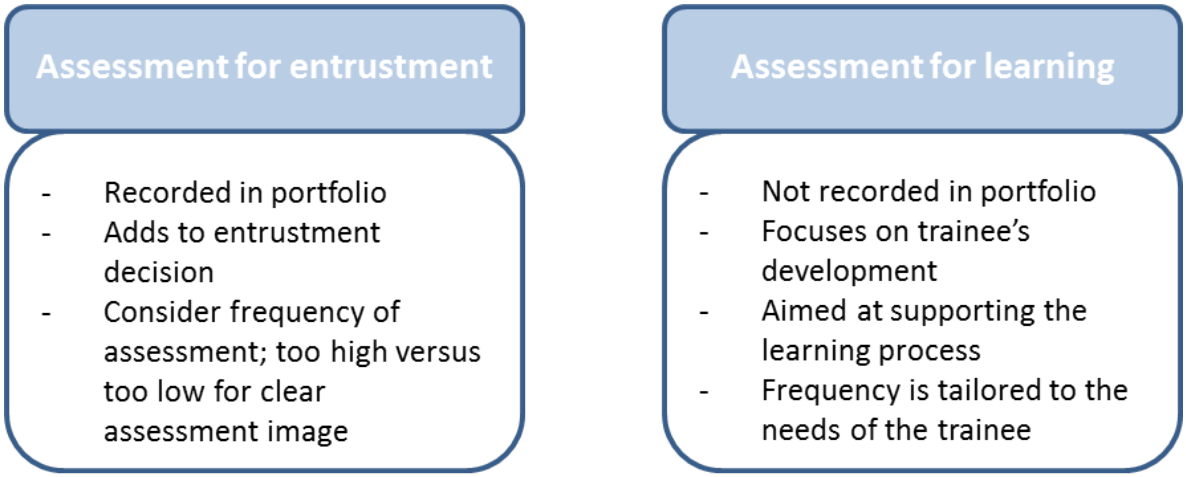
Regarding assessment for entrustment, please consider:

- The higher the number of assessments, the more pixels are present in the assessment image.
- Diversity of assessment tools (see addendum 1 for examples) creates diversity in the colour scheme of the assessment image and, therefore, a clearer picture.

- Taking many assessments for entrustment requires great investments of time, effort, and finances. Assessment for entrustment should be useful, and resources for assessment should be used economically. Only when necessary, e.g. in case of doubt about trainee performance, the number of assessments for entrustment may be increased to get a more detailed picture of the trainee's performance (sequential assessment).
- Throughout training, assessment may shift from more knowledge-based assessment to more skills-based assessment in the clinical setting with observations in the workplace, as independence in practice is increasing.

Assessment and feedback may be used for entrustment, as well as for learning. Regarding assessment and feedback for learning, please consider:
In the learning process, it is necessary for clinical faculty to have information about the trainee's level of professional performance to provide optimal feedback to the trainee and to coach the trainee to improve his/her competence. The trainee will perceive feedback for learning differently than assessment for entrustment, since it is low-stake. Assessment and feedback for learning are extremely important for optimal 'master-apprentice' learning and tutoring of the trainee. It is therefore recommended to create a learning environment that is as safe as possible and to leave low-stake assessment and feedback for learning unrecorded in the portfolio. The portfolio is directed at high-stake information for entrustment.
Low-stake assessment and feedback for learning should be given separately from high-stake assessment for entrustment; since if the two are combined, trainees may experience assessment and feedback for learning as high-stake (a hurdle to pass instead of something to learn from).

Figure 2: Assessment for entrustment versus assessment for learning



Determining the training time schedule and the trainee's progress

Each training institution may determine the targets for entrusting their trainees over time in a training time schedule (see table 2 for an example). The trainee and the competence committee should repeatedly evaluate the trainee's progress over time, aiming to comply with the schedule. In the table, X indicates the year in which full entrustment of the professional activity should be awarded.

Table 2: Example of training time schedule of entrustments over time.

Nested EPA's within one theme (overarching EPA)	Year 1	Year 2	Year 3	Year 4
Treat premature contractions and induce pulmonary maturation	x			
Assist preterm delivery	x			
Assist uncomplicated delivery	x			
Handle a delivery with a medical history of caesarean section or peri-partum pain	x			
Assist breech delivery at least in simulation			x	
Assist vaginal delivery of multiple pregnancy			x	
All dystocia management manoeuvres including shoulder dystocia		x		
Perform vacuum assisted vaginal delivery		x		
Perform forceps assisted delivery at least in simulation		x		
Perform elective caesarean section		x		
Perform emergency caesarean section		x		
Perform repeat caesarean section or caesarean section in obese patient			x	
Perform manual removal of placenta			x	

Diploma

When all EPAs have been signed off and thus training has been completed, the well-documented portfolio may be presented to the Standard Committee for Training and Assessment (SCTA) of EBCOG to receive a diploma issued by EBCOG. The diploma will state that the gynaecologist has been trained and entrusted according to European standards and will be signed by the chair of the SCTA and president of EBCOG.

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Addendum 1: examples of formal assessment tools in the clinical workplace

The assessment forms presented are suggestions, other forms with comparable items may also serve the purpose.

1. Direct observation in clinical practice form

2. Multisource feedback / 360 degree observation form

3. OSAT form

4. Mini-CEX

Direct observation in clinical practice

Name trainee: **Date:**
Name supervisor: **Signature supervisor:**
Professional activity: **Signature trainee:**

The trainee showed <u>medical expertise</u> in such a way that:

1 ***Supervisor performs the activity, the trainee observes***	***2*** ***Supervisor talks trainee through activity***	***3*** ***Supervisor intervenes incidentally***	***4*** ***Supervisor may be present just in case***	***5*** ***Supervisor does not need to be present***

Strengths:	
Points of improvement:	

Focusing on one or two items per observation is sufficient

<u>Patient-centred care</u>

The performance | ***did <u>not</u> meet*** | ***did meet*** | ***exceeded*** | expectations

Strengths:	
Points of improvement:	

<u>Teamwork</u>

The performance | ***did <u>not</u> meet*** | ***did meet*** | ***exceeded*** | expectations

Strengths:	
Points of improvement:	

System-based practice

The performance | ***did <u>not</u> meet*** | ***did meet*** | ***exceeded*** | expectations

Strengths:	
Points of improvement:	

Personal and professional development

The performance | ***did <u>not</u> meet*** | ***did meet*** | ***exceeded*** | expectations

Strengths:	
Points of improvement:	

<u>Reference to the 'General Competencies and Soft Skills' of the curriculum for specific feedback:</u>

<u>Patient-centred care</u>

- See the patient in a holistic perspective, respect diversity and give individualized care
- Communicate respectfully and empathetically, active listening fostering mutual confidence and trust
- Ensure patient empowerment and informed consent facilitating the balance between evidence-based recommendations and patient´s preferences in the shared decision making process
- Demonstrate leadership to provide safety and continuity in patient care
- Work according to ethical standards and the universal human rights of women

<u>Teamwork</u>

- Collaborate respectfully with other professionals, such as nurses and midwives, and contribute to a safe and constructive working environment
- Facilitate inter-professional shared decision making, recognizing and relying on the expertise of others
- Focus on team performance while acknowledging standards of care and legal aspects
- Display leadership, particularly in critical situations

<u>System-based practice</u>

- Understand and work effectively in the healthcare organization, including its legal system
- Understand and adapt to diversity, development, and innovation
- Work according to guidelines and standards of care and apply patient safety systems
- Balance patient-related outcomes and costs
- Perform triage and prioritize tasks considering the available resources
- Ensure privacy and patient comfort in care provider, setting, and context

<u>Personal and professional development</u>

- Be a lifelong learner and a good role model
- Balance work and life
- Recognize personal competencies and limitations
- Give, seek and accept feedback, reflect upon it and use it for improvement
- Continuously improve empathetic listening as well as effective and clear communication
- Contribute to the progress of health care via research, education and facilitating the implementation of innovation

**As described in the section General Competencies and Soft Skills' of the curriculum*

360 degree observation (multisource feedback)

Gather under the supervision of the competence committee at least 10 forms from medical staff, midwives, nurses and administrative staff and integrate the information.

Name trainee: **Date:**
Name supervisor: **Signature supervisor:**
Professional activity: **Signature trainee:**

Please, give your opinion about this trainee. Don't answer an item if you don't know the answer. Feel free to add explanations.

The trainee shows medical expertise:

The performance | ***did not meet*** | ***did meet*** | ***exceeded*** | expectations

Strengths:	
Points of improvement:	

The trainee's performance of 'Patient-centered care' was observed

The performance | ***did not meet*** | ***did meet*** | ***exceeded*** | expectations

Strengths:	
Points of improvement:	

This trainees 'Teamwork' was observed

The performance | ***did not meet*** | ***did meet*** | ***exceeded*** | expectations

Strengths:	
Points of improvement:	

The trainee's 'System-based practice' was observed

The performance | ***did not meet*** | ***did meet*** | ***exceeded*** | expectations

Strengths:	
Points of improvement:	

This trainee's 'Personal and professional development' were observed

The performance | ***did not meet*** | ***did meet*** | ***exceeded*** | expectations

Strengths:	
Points of improvement:	

Reference to the 'General Competencies and Soft Skills' of the curriculum for specific feedback:

Patient-centred care

- See the patient in a holistic perspective, respect diversity and give individualized care
- Communicate respectfully and empathetically, active listening fostering mutual confidence and trust
- Ensure patient empowerment and informed consent facilitating the balance between evidence-based recommendations and patient´s preferences in the shared decision making process
- Demonstrate leadership to provide safety and continuity in patient care
- Work according to ethical standards and the universal human rights of women

Teamwork

- Collaborate respectfully with other professionals, such as nurses and midwives, and contribute to a safe and constructive working environment
- Facilitate inter-professional shared decision making, recognizing and relying on the expertise of others
- Focus on team performance while acknowledging standards of care and legal aspects
- Display leadership, particularly in critical situations

System-based practice

- Understand and work effectively in the healthcare organization, including its legal system
- Understand and adapt to diversity, development, and innovation
- Work according to guidelines and standards of care and apply patient safety systems
- Balance patient-related outcomes and costs
- Perform triage and prioritize tasks considering the available resources
- Ensure privacy and patient comfort in care provider, setting, and context

Personal and professional development

- Be a lifelong learner and a good role model
- Balance work and life
- Recognize personal competencies and limitations
- Give, seek and accept feedback, reflect upon it and use it for improvement
- Continuously improve empathetic listening as well as effective and clear communication
- Contribute to the progress of health care via research, education and facilitating the implementation of innovation

OSAT of surgical procedure

Name trainee: **Date:**
Name supervisor: **Signature supervisor:**
Professional activity: **Signature trainee:**

Objective Structured Assessment of Technical Skills (OSATS): global rating scale of surgical performance[1]
Please circle the number that matches the trainee's performance in each category, irrespective of training level

	1	2	3	4	5
Respect for tissue	Frequently used unnecessary force on tissue or caused damage by inappropriate use of instruments		Careful handling of tissue but occasionally caused inadvertent damage		Consistently handled tissues appropriately with minimal damage
	1	2	3	4	5
Time and motion	Many unnecessary movements		Efficient use of time/motion but some unnecessary movements		Clear economy of movement and maximum efficiency
	1	2	3	4	5
Knowledge and handling of instruments	Lack of knowledge of instruments		Competent use of instruments but occasionally appeared stiff or awkward		Obvious familiarity with instruments
	1	2	3	4	5
Flow of operation	Frequently stopped procedure and seemed unsure of next move		Demonstrated some forward planning with reasonable progression of procedure		Obviously planned course of procedure and seemed to flow effortlessly from one movement to the next
	1	2	3	4	5
Use of assistants	Consistently placed assistants poorly or failed to use assistants		Appropriate use of assistants most of the time		Strategically used assistants to the best advantage at all times
	1	2	3	4	5
Knowledge of specific procedure	Deficient knowledge. Needed specific instructions at most steps		Knew all the important steps of the procedure		Demonstrated familiarity with all aspects of the operation

The performance | ***did not meet*** | ***did meet*** | ***exceeded*** | expectations

Strengths:	
Points of improvement:	

[1] *adapted from Hiemstra et al. J Can Chir 201*

Mini clinical evaluation exercise of a patient consultation (mini-CEX)

Name trainee: **Date:**
Name supervisor: **Signature supervisor:**
Professional activity: **Signature trainee:**

The mini-CEX reports on a Clinical Evaluation Exercise, in which the supervisor observes the trainee in a situation with direct patient contact. The supervisor gives feedback on the trainee's interaction with the patient, gives a global assessment of the trainee's functioning in several domains (a subset of domains can be chosen) and describes the adjustments that are necessary for an adequate execution of the task.
Feedback is only provided for the observed domains. The supervisor and trainee discuss beforehand on which domains feedback will be given in that particular situation.

History taking/medical interviewing

The performance	***did not meet***	***did meet***	***exceeded***	expectations

Pay attention to general competencies and soft skills:*

- *See the patient from a holistic perspective, respect diversity and give individualized care.*
- *Communicate respectfully and empathetically, listening actively while fostering mutual confidence and trust.*

Strengths:	
Points of improvement:	

Physical examination

The performance	***did not meet***	***did meet***	***exceeded***	expectations

Pay attention to general competencies and soft skills:*

- *Communicate respectfully and empathetically*
- *Ensure privacy and patient comfort in provision of care, regarding the care provider, the setting, and the context.*

Strengths:	
Points of improvement:	

Informed decision making/counselling

The performance	***did not meet***	***did meet***	***exceeded***	expectations

Pay attention to general competencies and soft skills:*

- *Communicate respectfully and empathetically, listening actively while fostering mutual confidence and trust.*
- *Ensure patient empowerment and informed consent facilitating the balance between evidence-based recommendations and patient´s preferences in the shared decision making process.*

Strengths:	
Points of improvement:	

Clinical judgement / reasoning

The performance | ***did not meet*** | ***did meet*** | ***exceeded*** | expectations

Pay attention to general competencies and soft skills:*

- *See the patient from a holistic perspective, respect diversity and give individualized care.*
- *Facilitate inter-professional shared decision making, recognizing and relying on the expertise of others.*
- *Work according to guidelines and standards of care and apply patient safety systems.*

Strengths:	
Points of improvement:	

Professionalism

The performance | ***did not meet*** | ***did meet*** | ***exceeded*** | expectations

Pay attention to general competencies and soft skills:*

- *Demonstrate leadership to provide safety and continuity in patient care, also in criticasl situations.*
- *Work according to ethical standards and the universal human rights of women.*
- *Ensure privacy and patient comfort in provision of care, regarding the care provider, the setting, and the context.*
- *Recognize personal competencies and limitations.*
- *Balance patient-related outcomes and costs.*

Strengths:	
Points of improvement:	

Organisation / efficiency

The performance | ***did not meet*** | ***did meet*** | ***exceeded*** | expectations

Pay attention to general competencies and soft skills:*

- *Collaborate respectfully with other professionals such as nurses and midwives, and contribute to a safe and constructive working environment.*
- *Perform triage and prioritize tasks considering the available resources.*

Strengths:	
Points of improvement:	

**As described in the section General Competencies and Soft Skills' of the curriculum*

Addendum 2: example of a portfolio

The portfolio mainly serves to record the process of entrustment of professional activities for each trainee. It provides accountability of the trainee's achievements, both for the institution that provides the training and for other institutions, possibly in other countries, that might consider hiring the trainee later on. Hence the portfolio should be a globally recognized document.

Entrustment decisions in the portfolio

While the portfolio is compiled by the trainee, the entrustment decisions are made by the competence committee. For each Entrustment of a Professional Activity (EPA), the portfolio should reflect three sources that lead to the entrustment decision:

A. Learning experiences
B. Assessment for entrustment
C. Competence committee's professional impressions

These three sources are explained more extensively in the entrustment section of the EBCOG-PACT curriculum.

Themes

The core curriculum consists of ten themes. Each theme represents one overarching EPA and consists of multiple smaller professional activities, called 'nested EPAs'.

1. General Medical Knowledge & Skills
2. Prenatal Care
3. Intrapartum & Postpartum Care
4. Benign Gynaecology
5. Reproductive Medicine
6. Urogynaecology & Pelvic Floor
7. Premalignancy
8. Gynaecological Oncology
9. Paediatric Gynaecology & Sexual Health
10. Breast Disease

For each theme, changes in all three sources should be recorded in the portfolio, as well as changes in the levels of competence. The portfolio is owned by the trainee, and the trainee should keep it up to date. However, the competence committee may keep track of each trainee's progress in competence in a training time schedule for that particular trainee. The programme director and clinical faculty are responsible for optimal facilitation of training opportunities, assessments, discussion and evaluation of the personal development plan, and finally entrustment decisions.

How to achieve entrustment based on the portfolio:

1. The trainee applies for entrustment of a specific activity and prepares the portfolio.
2. The application of the trainee is discussed by the competence committee
3. a. If the competence committee is indecisive about the level of competence that is achieved, more information about the trainee's performance is gathered and the decision is postponed.
   b. If the competence committee has reached agreement, the decision is briefly motivated in writing (to be recorded in the portfolio) and the activity is signed off.

On the following pages, an example of a portfolio is presented, describing the three training sources per theme (thus EPA). The example complies with the minimum requirements for a portfolio; actual portfolios may be expanded as desired or as local circumstances require.

1. General Medical Knowledge & Skills – portfolio example

A. Learning experiences
- Wards
- Outpatient clinics
- Courses
- Simulations, e.g. for communication skills
- Reflection on progress of training
- Personal development plan

B. Assessment for entrustment
- Knowledge tests: European Exam (or National exam)
- Simulation exam
- Direct observation in practice
- Multisource feedback
- OSATS

C. Competence committee
- The competence committee includes their workplace-based master-apprentice impressions of the trainee in the entrustment decision process.
- The competence committee determines the level of competence that has been achieved by the trainee.
- The competence committee determines whether the trainee's progress is as expected, in relation to the training schedule (see table 2).
- The competence committee writes a brief response to the trainee's entrustment request combined with the trainee's reflection, which is recorded in the trainee's portfolio.
- When a trainee has achieved the highest level of competence for all nested EPA's in one theme-EPA, the competence committee may grant entrustment for the entire theme-EPA.

Step in achievement of EPA:	In progress	In progress	In progress	Achieved	Achieved
Level of competence: **Activity (core curriculum)**	***1 Supervisor performs the activity, the trainee observes***	***2 Supervisor talks trainee through activity***	***3 Supervisor intervenes incidentally***	***4 Supervisor may be present just in case***	***5 Supervisor does not need to be present***
Perform history taking and physical examination					
Order appropriate additional tests					
Lead a ward round					
Provide basic therapeutic interventions					
Perform pain management					
Recognise and triage acutely ill patient					
Communicate appropriately and use shared decision making and informed consent					
Document patient data appropriately					
Handle basic perioperative care					
Show understanding of sexology					
Show understanding of biopsychosocial aspects of obstetrics and gynaecology					
Show understanding of the frail elderly woman with multiple co-morbidities and poly-pharmacy					

Sign off EPA

Name	
Hospital	
Address	
Telephone number	
E-mail address	
Signature	

2. Prenatal Care – portfolio example

A. Learning experiences
- Wards
- Outpatient clinics
- Courses
- Simulations, e.g. for communication skills
- Reflection on progress of training
- Personal development plan

B. Assessment for entrustment
- Knowledge tests: European Exam (or National exam)
- Simulation exam
- Direct observation in practice
- Multisource feedback
- OSATS

C. Competence committee
- The competence committee includes their workplace-based master-apprentice impressions of the trainee in the entrustment decision process.
- The competence committee determines the level of competence that has been achieved by the trainee.
- The competence committee determines whether the trainee's progress is as expected, in relation to the training schedule (see table 2).
- The competence committee writes a brief response to the trainee's entrustment request combined with the trainee's reflection, which is recorded in the trainee's portfolio.
- When a trainee has achieved the highest level of competence for all nested EPA's in one theme-EPA, the competence committee may grant entrustment for the entire theme-EPA.

Step in achievement of EPA:	**In progress**	**In progress**	**In progress**	**Achieved**	**Achieved**
Level of competence: **Activity (core curriculum)**	***1 Supervisor performs the activity, the trainee observes***	***2 Supervisor talks trainee through activity***	***3 Supervisor intervenes incidentally***	***4 Supervisor may be present just in case***	***5 Supervisor does not need to be present***
Perform vaginal ultrasound to determine embryonic/foetal viability, age and location of the pregnancy					
Perform vaginal ultrasound to determine singleton or multiple pregnancy and chorionicity					
Perform vaginal ultrasound for cervical length					
Perform ultrasound to diagnose malpresentation					
Perform foetal biometry and amniotic fluid measurement					
Perform doppler examination of arteria umbilicalis					
Provide information and advice regarding the diagnosis and its implications regarding the most important problems around pregnancy					
Treat most problems of early pregnancy conservatively					
Treat most problems of mid and late pregnancy conservatively					

Sign off EPA

Name	
Hospital	
Address	
Telephone number	
E-mail address	
Signature	

3. Intrapartum & Postpartum Care – portfolio example

A. Learning experiences
- Wards
- Outpatient clinics
- Courses
- Simulations, e.g. for communication skills
- Reflection on progress of training
- Personal development plan

B. Assessment for entrustment
- Knowledge tests: European Exam (or National exam)
- Simulation exam
- Direct observation in practice
- Multisource feedback
- OSATS

C. Competence committee
- The competence committee includes their workplace-based master-apprentice impressions of the trainee in the entrustment decision process.
- The competence committee determines the level of competence that has been achieved by the trainee.
- The competence committee determines whether the trainee's progress is as expected, in relation to the training schedule (see table 2).
- The competence committee writes a brief response to the trainee's entrustment request combined with the trainee's reflection, which is recorded in the trainee's portfolio.
- When a trainee has achieved the highest level of competence for all nested EPA's in one theme-EPA, the competence committee may grant entrustment for the entire theme-EPA.

Step in achievement of EPA:	**In progress**	**In progress**	**In progress**	**Achieved**	**Achieved**
Level of competence: **Activity (core curriculum)**	***1 Supervisor performs the activity, the trainee observes***	***2 Supervisor talks trainee through activity***	***3 Supervisor intervenes incidentally***	***4 Supervisor may be present just in case***	***5 Supervisor does not need to be present***
Treat premature contractions and induction of pulmonary maturation					
Assist preterm delivery					
Assist uncomplicated delivery					
Determine feasibility of labour					
Perform CTG monitoring					
Perform fetal scalp sampling at least in simulation					
Handle failure of progression of labour					
Handle a case with meconium-stained amniotic fluid					
Handle a case with intrapartum fever					
Handle a delivery with a medical history of caesarean section or peri-partum pain					
Assist breech delivery at least in simulation					
Assist vaginal delivery of multiple pregnancy					
All dystocia management manoeuvres including shoulder dystocia					
Perform vacuum-assisted vaginal delivery					
Perform forceps-assisted delivery at least in					

simulation					
Perform elective caesarean section					
Perform emergency caesarean section					
Perform repeat caesarean section or caesarean section in obese patient					
Treat post-partum mastitis (with abscess), urinary retention and thrombo-embolic process					
Treat haemorrhage post-partum (HPP) with medication					
Perform manual removal of placenta					
Perform intrauterine balloon tamponade and, at least in simulation, surgical compression of atonic uterus (B-Lynch suturing), uterine reversion and abdominal hysterectomy					
Set indication for arterial embolization for HPP					
Suturing of episiotomy wound and 1st and 2nd degree perineal tear					
Suturing of 3rd degree perineal tear and, at least in simulation, 4th degree perineal tear					
Perform evacuation of vulvar hematoma					
Resuscitate the new-born accurately in the first 10 minutes after delivery (while awaiting the arrival of the paediatrician), at least in simulation					

Sign off EPA

Name	
Hospital	
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Telephone number	
E-mail address	
Signature	

4. Benign Gynaecology – portfolio example

A. Learning experiences
- Wards
- Outpatient clinics
- Courses
- Simulations, e.g. for communication skills
- Reflection on progress of training
- Personal development plan

B. Assessment for entrustment
- Knowledge tests: European Exam (or National exam)
- Simulation exam
- Direct observation in practice
- Multisource feedback
- OSATS

C. Competence committee
- The competence committee includes their workplace-based master-apprentice impressions of the trainee in the entrustment decision process.
- The competence committee determines the level of competence that has been achieved by the trainee.
- The competence committee determines whether the trainee's progress is as expected, in relation to the training schedule (see table 2).
- The competence committee writes a brief response to the trainee's entrustment request combined with the trainee's reflection, which is recorded in the trainee's portfolio.
- When a trainee has achieved the highest level of competence for all nested EPA's in one theme-EPA, the competence committee may grant entrustment for the entire theme-EPA.

Step in achievement of EPA:	**In progress**	**In progress**	**In progress**	**Achieved**	**Achieved**
Level of competence: **Activity (core curriculum)**	***1 Supervisor performs the activity, the trainee observes***	***2 Supervisor talks trainee through activity***	***3 Supervisor intervenes incidentally***	***4 Supervisor may be present just in case***	***5 Supervisor does not need to be present***
Perform punch biopsy under local anaesthesia					
Perform vaginal ultrasound for general picture of uterus and adnexa					
Perform vaginal ultrasound to diagnose intrauterine abnormalities					
Perform vaginal ultrasound to diagnose adnexal abnormalities					
Provide contraception in healthy adult, including IUD insertion					
Provide contraception in patient with a health problem or concomitant disease					
Counsel condylomas					
Counsel and treat endometriosis					
Counsel and treat fibroids					
Counsel and treat adnexal pathology					
Counsel tubo-ovarian abscess					
Counsel and treat hypermenorrhoea and dysmenorrhea with medication					
Counsel and treat abnormal uterine bleeding					

Counsel and treat sexually transmitted disease and pelvic inflammatory disease					
Counsel and treat vaginal discharge and vulvovaginitis					
Counsel and treat abdominal/pelvic pain					
Counsel and treat menopausal complaints					
Counsel and treat premenstrual syndrome					
Counsel and treat Bartholin cyst and vulvar abscess					
Perform laparoscopic sterilisation					
Perform dilatation and curettage by suction or blunt curette for miscarriage and know how to evacuate a midterm pregnancy					
Perform laparoscopic needle aspiration of simple cyst					
Perform laparoscopic electrocoagulation of the ovary					
Perform simple laparoscopic ovarian cystectomy					
Perform laparoscopic salpingo-oophorectomy					
Perform simple laparoscopic adhesiolysis					
Perform hysteroscopic polyp resection					
Perform hysteroscopic myoma resection type 0-1 (< 4cm)					
Perform salpingo-oophorectomy via laparotomy					
Perform myomectomy of subserous myoma via laparotomy					
Perform laparotomy with minimal adhesiolysis					

Sign off EPA

Name	
Hospital	
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Telephone number	
E-mail address	
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5. Reproductive Medicine – portfolio example

A. Learning experiences
- Wards
- Outpatient clinics
- Courses
- Simulations, e.g. for communication skills
- Reflection on progress of training
- Personal development plan

B. Assessment for entrustment
- Knowledge tests: European Exam (or National exam)
- Simulation exam
- Direct observation in practice
- Multisource feedback
- OSATS

C. Competence committee
- The competence committee includes their workplace-based master-apprentice impressions of the trainee in the entrustment decision process.
- The competence committee determines the level of competence that has been achieved by the trainee.
- The competence committee determines whether the trainee's progress is as expected, in relation to the training schedule (see table 2).
- The competence committee writes a brief response to the trainee's entrustment request combined with the trainee's reflection, which is recorded in the trainee's portfolio.
- When a trainee has achieved the highest level of competence for all nested EPA's in one theme-EPA, the competence committee may grant entrustment for the entire theme-EPA.

Step in achievement of EPA:	**In progress**	**In progress**	**In progress**	**Achieved**	**Achieved**
Level of competence: **Activity (core curriculum)**	***1 Supervisor performs the activity, the trainee observes***	***2 Supervisor talks trainee through activity***	***3 Supervisor intervenes incidentally***	***4 Supervisor may be present just in case***	***5 Supervisor does not need to be present***
Assess male and female (sub)fertility					
Counsel prognostic factors for pregnancy in general					
Counsel probability of on-going pregnancy, spontaneous abortion and ectopic pregnancy with the different fertility treatments					
Counsel assisted reproduction techniques (IUI, IVF, ICSI)					
Treat WHO-II cycle disorders / ovulation induction					
Treat OHSS initial (emergency treatment)					
Perform diagnostic laparoscopy with tubal testing					
Perform diagnostic hysteroscopy with tubal testing					
Perform transvaginal ultrasound with follicle count and follicle measurements					
Perform transvaginal ultrasound with evaluation of follicles and intraperitoneal fluid					

Sign off EPA

Name	
Hospital	
Address	
Telephone number	
E-mail address	
Signature	

6. Urogynaecology & Pelvic Floor – portfolio example

A. Learning experiences
- Wards
- Outpatient clinics
- Courses
- Simulations, e.g. for communication skills
- Reflection on progress of training
- Personal development plan

B. Assessment for entrustment
- Knowledge tests: European Exam (or National exam)
- Simulation exam
- Direct observation in practice
- Multisource feedback
- OSATS

C. Competence committee
- The competence committee includes their workplace-based master-apprentice impressions of the trainee in the entrustment decision process.
- The competence committee determines the level of competence that has been achieved by the trainee.
- The competence committee determines whether the trainee's progress is as expected, in relation to the training schedule (see table 2).
- The competence committee writes a brief response to the trainee's entrustment request combined with the trainee's reflection, which is recorded in the trainee's portfolio.
- When a trainee has achieved the highest level of competence for all nested EPA's in one theme-EPA, the competence committee may grant entrustment for the entire theme-EPA.

Step in achievement of EPA:	**In progress**	**In progress**	**In progress**	**Achieved**	**Achieved**
Level of competence: **Activity (core curriculum)**	***1 Supervisor performs the activity, the trainee observes***	***2 Supervisor talks trainee through activity***	***3 Supervisor intervenes incidentally***	***4 Supervisor may be present just in case***	***5 Supervisor does not need to be present***
Refer patients with stress and/or urge incontinence to pelvic floor physiotherapist or other medical specialist					
Diagnose rectovaginal fistula					
Counsel apical, anterior and posterior vaginal repair					
Perform pessary fitting and on-going care					
Perform colpocleisis[1]					
Perform simple anterior and posterior vaginal repair					

Sign off EPA

Name	
Hospital	
Address	
Telephone number	
E-mail address	
Signature	

7. Premalignancy – portfolio example

A. Learning experiences
- Wards
- Outpatient clinics
- Courses
- Simulations, e.g. for communication skills
- Reflection on progress of training
- Personal development plan

B. Formal assessments
- Knowledge tests: European Exam (or National exam)
- Simulation exam
- Direct observation in practice
- Multisource feedback
- OSATS

C. Competence committee
- The competence committee includes their workplace-based master-apprentice impressions of the trainee in the entrustment decision process.
- The competence committee determines the level of competence that has been achieved by the trainee.
- The competence committee determines whether the trainee's progress is as expected, in relation to the training schedule (see table 2).
- The competence committee writes a brief response to the trainee's entrustment request combined with the trainee's reflection, which is recorded in the trainee's portfolio.
- When a trainee has achieved the highest level of competence for all nested EPA's in one theme-EPA, the competence committee may grant entrustment for the entire theme-EPA.

Step in achievement of EPA:	**In progress**	**In progress**	**In progress**	**Achieved**	**Achieved**
Level of competence: **Activity (core curriculum)**	***1 Supervisor performs the activity, the trainee observes***	***2 Supervisor talks trainee through activity***	***3 Supervisor intervenes incidentally***	***4 Supervisor may be present just in case***	***5 Supervisor does not need to be present***
Perform cervical screening (PAP smear)					
Perform colposcopy					
Perform large-loop excision of the cervical transformation zone					

Sign off EPA

Name	
Hospital	
Address	
Telephone number	
E-mail address	
Signature	

8. Gynaecological Oncology – portfolio example

A. Learning experiences
- Wards
- Outpatient clinics
- Courses
- Simulations, e.g. for communication skills
- Reflection on progress of training
- Personal development plan

B. Assessment for entrustment
- Knowledge tests: European Exam (or National exam)
- Simulation exam
- Direct observation in practice
- Multisource feedback
- OSATS

C. Competence committee
- The competence committee includes their workplace-based master-apprentice impressions of the trainee in the entrustment decision process.
- The competence committee determines the level of competence that has been achieved by the trainee.
- The competence committee determines whether the trainee's progress is as expected, in relation to the training schedule (see table 2).
- The competence committee writes a brief response to the trainee's entrustment request combined with the trainee's reflection, which is recorded in the trainee's portfolio.
- When a trainee has achieved the highest level of competence for all nested EPA's in one theme-EPA, the competence committee may grant entrustment for the entire theme-EPA.

Step in achievement of EPA:	**In progress**	**In progress**	**In progress**	**Achieved**	**Achieved**
Level of competence: **Activity (core curriculum)**	***1 Supervisor performs the activity, the trainee observes***	***2 Supervisor talks trainee through activity***	***3 Supervisor intervenes incidentally***	***4 Supervisor may be present just in case***	***5 Supervisor does not need to be present***
Perform transvaginal ultrasound to diagnose gestational trophoblastic disease					
Perform endometrial biopsy					
Counsel for gynaecological malignancy diagnoses and their implications					

Sign off EPA

Name	
Hospital	
Address	
Telephone number	
E-mail address	
Signature	

9. Paediatric Gynaecology & Sexual Health – portfolio example

A. Learning experiences
- Wards
- Outpatient clinics
- Courses
- Simulations, e.g. for communication skills
- Reflection on progress of training
- Personal development plan

B. Assessment for entrustment
- Knowledge tests: European Exam (or National exam)
- Simulation exam
- Direct observation in practice
- Multisource feedback
- OSATS

C. Competence committee
- The competence committee includes their workplace-based master-apprentice impressions of the trainee in the entrustment decision process.
- The competence committee determines the level of competence that has been achieved by the trainee.
- The competence committee determines whether the trainee's progress is as expected, in relation to the training schedule (see table 2).
- The competence committee writes a brief response to the trainee's entrustment request combined with the trainee's reflection, which is recorded in the trainee's portfolio.
- When a trainee has achieved the highest level of competence for all nested EPA's in one theme-EPA, the competence committee may grant entrustment for the entire theme-EPA.

Step in achievement of EPA:	**In progress**	**In progress**	**In progress**	**Achieved**	**Achieved**
Level of competence: **Activity (core curriculum)**	***1 Supervisor performs the activity, the trainee observes***	***2 Supervisor talks trainee through activity***	***3 Supervisor intervenes incidentally***	***4 Supervisor may be present just in case***	***5 Supervisor does not need to be present***
Adapt communication to the level of the child					
Perform accurate gynaecological examination of the child[2]					
Perform emergency care of vulva/vagina/perineum/rectum in the child[2]					

Sign off EPA

Name	
Hospital	
Address	
Telephone number	
E-mail address	
Signature	

10. Breast disease – portfolio example

A. Learning experiences
- Wards
- Outpatient clinics
- Courses
- Simulations, e.g. for communication skills
- Reflection on progress of training
- Personal development plan

B. Assessment for entrustment
- Knowledge tests: European Exam (or National exam)
- Simulation exam
- Direct observation in practice
- Multisource feedback
- OSATS

C. Competence committee
- The competence committee includes their workplace-based master-apprentice impressions of the trainee in the entrustment decision process.
- The competence committee determines the level of competence that has been achieved by the trainee.
- The competence committee determines whether the trainee's progress is as expected, in relation to the training schedule (see table 2).
- The competence committee writes a brief response to the trainee's entrustment request combined with the trainee's reflection, which is recorded in the trainee's portfolio.
- When a trainee has achieved the highest level of competence for all nested EPA's in one theme-EPA, the competence committee may grant entrustment for the entire theme-EPA.

Step in achievement of EPA:	**In progress**	**In progress**	**In progress**	**Achieved**	**Achieved**
Level of competence: **Activity (core curriculum)**	***1 Supervisor performs the activity, the trainee observes***	***2 Supervisor talks trainee through activity***	***3 Supervisor intervenes incidentally***	***4 Supervisor may be present just in case***	***5 Supervisor does not need to be present***
Perform accurate examination of the breasts					

Sign off EPA

Name	
Hospital	
Address	
Telephone number	
E-mail address	
Signature	

Quality management and training recognition

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Introduction

To ensure optimal training in general obstetrics and gynaecology, a robust internal quality management system and external training recognition are needed. Both systems should be closely related.
The combination of internal quality management and external training recognition pairs continuous quality improvement within a short cycle with checks for meeting the standards, which should be repeated every 5 years.

Internal quality management

For internal quality management a clear governance structure with properly defined responsibilities for the training programme is mandatory. Internal quality management regards the measures taken from within the training institute and is aimed at continuous improvement of training, according to a plan-do-check-act cycle. This internal quality cycle addresses several aspects:

- Description of a local training plan based on PACT, which is tailored to the local context: the local curriculum.
- Monitoring of how the local training plan is translated into daily work: the curriculum in action. Interviews with trainees who are finalising their rotation, may provide useful information for this purpose as well.
- Monitoring of the educational climate, which can be measured with the D-RECT questionnaire [1].
- Monitoring and discussion of didactic performance of staff, which can be measured with the EFFECT system [2].
- Developing plans for improvement and follow-up of the training issues that have come up.

The internal quality management system is adaptable and may operate on a short term basis. It provides useful information for an external accrediting body, which makes it a transparent system.

External Training Recognition

External training recognition is performed either by national accrediting bodies or by the accreditation & visitation committee of EBCOG.
This external training recognition aims at:

- Harmonisation of training throughout Europe.
- Quality assurance: every new gynaecologist in Europe is adequately trained for the core and the field of interest and is able to practice safely and independently.
- An advising authority: In case of issues to be solved, advice will be formulated.

The external training recognition uses:

- Documentation as required by the National system or by EBCOG. The documentation should give insight into:
    - Number of trainees in relation to number of supervising staff
    - Number of procedures in relation to number of trainees
    - Training facilities
    - Organisation of simulation training
    - Faculty development, training the trainers
    - Individual training programmes for trainees; core as well as elective subjects
    - Position of general competencies and soft skills in the training
    - Organisation and quality of assessment in order to sign off entrusted professional activities

  - Trainees' portfolios
  - Participation of trainees in research programmes and clinical audits
  - trainees' responsibilities and roles in teaching within the health care team
- Reports of a system aimed at continuous improvement of the training programme.
- Recognition visits in a 5-year cycle (or by approximation), in which trainees play an active role.

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Faculty Development

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Introduction

Faculty development is regarded as an essential instrument for providing high quality postgraduate training. Development of knowledge, skills and attitudes in adult education will allow medical specialists to become clinical trainers who will be able to deliver effective and efficient postgraduate training.

Roles and responsibilities of clinical trainers

Since postgraduate training is primarily a "training on the job", clinical trainers face several challenges. The clinical trainer has the following responsibilities and roles:

- safe patient care
- creating a stimulating learning environment
- applying educational tools, such as feedback, to enhance reflective practice by the trainee
- monitoring and assessment of the trainee's learning process
- continuing professional development as an educator

Continuing professional development for trainers

Trainers should receive formal training in postgraduate teaching and assessment. As a minimum, this should include the following information or training:

- How to teach on the job (e.g. in the clinic, on wards)
- How to teach individuals, in small groups and in didactic lecture formats
- How to give effective feedback
- How to use formative assessment methods to support trainees
- How to identify and support trainees in difficulty
- How to use and document workplace-based assessments

Clinical trainers should update their clinical competencies as well as their training competencies. Depending on the specific role of the medical specialist in the educational team, a minimum of two days training once every five years is advised.

In those countries that have a system of summative assessment during or at the end of training (e.g. local or national examination), clinical trainers who participate in the examination committee should be trained in how to write examination questions and how to design a validated exam.

For 'programme directors', specific courses are warranted that focus on the management of postgraduate medical education.

EBCOG may provide support for all kinds of Faculty Development courses.

Glossary

Assessment

The process of making a judgment of a trainee's performance of a professional activity. A distinction should be made between 'assessment for learning' (also known as formative assessment, i.e. guiding future learning, providing reassurance and promoting reflection) and assessment for entrustment (also known as summative assessment, i.e. making a judgment about competence or ability for advancement to higher levels of responsibility).
Forms of assessment include clinical assessments (such as OSATS, direct observation in clinical practice), exams, simulation, multisource (360-degree) assessments and reflective self-assessments.

Assessor

The person who makes a judgment of a trainee's performance of a professional activity.

Clinical faculty, clinical supervisor, clinical trainer

The group of medical specialists (or medical specialist) who guide the clinical work of a trainee. A member of the clinical faculty may take the role of tutor.

Common trunk

The part of a curriculum which is mandatory in the training programme of all trainees.

Competency

The ability to integrate knowledge, skills, attitudes and behaviours for application in specific situations (professional activities) in the workplace.

Competence committee

Group of persons within a training institution or department that determines the level of competence of a trainee for a specific professional activity and that grants entrustment for professional activities. A competence committee is comprised of at least two members of the faculty that know the trainee's performance well and at least two other clinical faculty members.

Core curriculum

The core curriculum is the common trunk of the EBCOG-PACT curriculum that is mandatory for all trainees. It describes the endterms of training, which have been determined by European consensus.
See also curriculum and Elective/Elective curriculum.

Curriculum

Educational programme.

Elective curriculum

The elective curriculum describes training outcomes for specific areas of interest within the specialty of Obstetrics and Gynaecology; these training outcomes are at a more in depth level than those in the core curriculum. Therefore, training in an elective is aiming to a higher level of competence in that specific area of interest.
See also curriculum, and Core/Core curriculum.

Educational supervisor

See: tutor

Educator
Professional role aiming at training and education, or a person with a special interest in training and education, who has developed knowledge and insights in education through specific training.

Entrusted professional activity, EPA
The professional activity (either stand alone or overarching) for which the trainee may reach the competence level of independent practice, formalised by the competence committee.
See also entrustment, nested entrusted professional activity and professional activity.

Entrustment
The formal approval that the trainee has reached the competence level of independent practice, and is allowed to perform an activity without supervision.
In some countries the formal entrustment is only granted at the end of training for legislative reasons.

Faculty
The group of medical specialists of a department involved in training.
See also clinical faculty.

Faculty development
Structured training in the educational domain of the clinical staff/supervisors/trainers involved in delivering medical training. Also known as training the trainers.

Feedback
Reflection on performance, identifying strengths and weaknesses.

Formative assessment
See: assessment

Independent practice
Execution of medical care in its specific context without (direct or indirect) supervision, where the person delivering the care carries main responsibility.

Logbook
The document in which the trainee keeps record of his/her activities during training, such as number of procedures *et cetera*.
See also portfolio.

Master-apprentice model
Working situation in which an unexperienced medical doctor (apprentice, *i.e.* trainee) is working and gaining experience under close scrutiny and supervision of an experienced medical (sub)specialist (master, *i.e.* trainer, tutor, clinical supervisor), based on the concepts of learning by imitation and mentoring.

Medical specialist
A medical specialist is a medical doctor who has completed a postgraduate training programme in a specific medical specialty.

Mentor
Person who provides support, direction and an objective view on how the trainee can develop and progress in his/her working environment, often using questioning to help the trainee to find his/her own solution. Mentors do not need to have specialist knowledge of the doctor's area of practice.

Multisource (360-degree) assessment/feedback:
Tool used to collect colleagues' opinions on a person's clinical performance and professional behaviour. Trainees are encouraged to get opinions from as many different colleagues as possible (*e.g.* specialists, trainees, nurses, midwives, secretaries *et cetera*).

Nested professional activity, nested EPA
A specific, well defined activity, described by tasks and aspects needed for its execution in the context of patient care, as part of an overarching (entrusted) professional activity.
See also theme.

Portfolio
The document in which the trainee keeps record of his/her development and progress through training. The portfolio contains documentation of learning experience (amongst which the logbook and personal development plan), assessment forms, minutes of the competence committee describing the professional impressions, and the entrustment decisions.
See also logbook.

Professional activity
A specific activity, described by medical tasks and general competencies needed for its execution in the context of patient care. The professional activity as an overarching theme describes a group of smaller specific professional activities, so called 'nested professional activity'.
See also entrusted professional activity, nested professional activity.

Programme director
The program director is responsible for the co-ordination, monitoring and evaluation of the training programme delivered within his/her department.
Also known as programme co-ordinator.

Simulation
Any educational activity that utilises aids to replicate/imitate a clinical scenario. Examples include laparoscopic simulators, pelvic or abdominal mannequins and obstetric skills drills.

Subspeciality
A specific area within the medical specialty for which a standardised training programme in a centre officially accredited for these purposes is defined. The professional activities of a subspecialty represent the most complex and in depth activities within the specialty. Medical doctors who have satisfactorily completed such a standardised training programme are called subspecialists.

Summative assessment
See: assessment

Supervisor, or clinical supervisor
Medical specialist overseeing the work of a trainee.

Supervision
Overseeing the work of a trainee.

Theme
The name for an overarching entrusted professional activity (EPA), describing specific subjects related to patient care in the field of a medical specialty.

Trainee

A trainee is a medical doctor who is enrolled in an official postgraduate training program to obtain a specialist qualification.
Also called resident.

Trainer

Person, not necessarily a medical specialist, supervising a specific teaching moment for the trainee.

Training recognition

The outcome of the process of external audit of the quality of a medical training programme of a department.

Tutor

Medical specialist guiding the learning process of individual trainees. A tutor is responsible for the overall supervision and management of a trainee's educational progress. A tutor offers educational supervision and career advice, undertakes appraisal and provides regular, ongoing feedback (every 3 - 6 months).
Also called educational supervisor.

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