



الهيئة السعودية للتخصصات الصحية
Saudi Commission for Health Specialties

Reproductive Medicine and Surgery Fellowship Program



سَبِّحْ لِلَّهِ عَمَّا يُشْرِكُونَ

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FOREWORD

The CanMEDS Framework was adopted in this curriculum, as it is an innovative, competency-based framework that describes the core knowledge, skills, and attitudes of physicians. This curriculum seeks to provide a broad framework for residents and faculty members to focus on teaching and learning as well as acquiring clinical experience and professional development during the training program. It is not meant to serve as the sole determiner of what must be taught and learned during residency training. Residents are expected to acquire knowledge and skills as well as an awareness of the proper attitudes and behaviors throughout their training and take personal responsibility for learning. Every patient encounter must be a learning opportunity, regardless of whether that particular condition or disease is mentioned in this curriculum.

This curriculum is part of the strategic plan of the Saudi Commission for Health Specialties (SCFHS) to review and update the curricula of the training programs. It was developed and reviewed by the Scientific Council of Saudi Reproductive Medicine and Surgery Fellowship Program Board and International and Local Advisors.

The Saudi Commission for Health Specialties as it is represented by the Scientific Board, Reproductive Medicine and Surgery Fellowship Program Committee, and Central Accreditation Committee—is committed to completely supporting the implementation of the curriculum through ensuring the allocation of necessary resources, the promotion of faculty development, and the establishment of a monitoring system. Additionally, the Central Accreditation Committee and the Reproductive Medicine and Surgery Fellowship Program Scientific Board will be carrying out further reinforcement and regular quality improvement through site visits and feedback from fellows, trainers, and program directors.

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INTRODUCTION

1. Context of Practice

The health services in Saudi Arabia initially had limited medical resources and only gradually expanded to specialized modern hospitals, medical centers, and medical cities. Moreover, the rapid growth of health services has been accompanied by the necessary human resources planning to run these services. This is evident in the implementation of structured training programs for the local program as well as the investments in overseas scholarships, especially after the establishment of the Saudi Commission for Health Specialties.

Reproductive healthcare is a cornerstone in the healthcare services provided in communities with young populations. In Saudi Arabia, the predominance of a young population lead to high demand on all obstetrics and gynecology (OB/GYN) services including reproductive medicine, which helps young populations build their own families and reduce the risk of genetic diseases of this high-risk population.

A Reproductive Medicine and Reproductive Surgery fellowship program could enable fully trained obstetricians and gynecologists to become subspecialists in this field. In vitro fertilization (IVF) is a procedure designed to overcome infertility and induce a pregnancy as a direct result of intervention. In general, the ovaries are stimulated through a combination of fertility medications; then, one or more oocytes are aspirated from the ovarian follicles. These are later fertilized in a laboratory ("in vitro"); afterward, one or more embryos are transferred into the uterine cavity. These steps occur over approximately a two-week period, which is called an IVF cycle.

The first pregnancy after the fertilization of a human egg in vitro and the the first baby to be conceived via IVF were reported in 1976 and 1978, respectively. Since then, more than five million pregnancies have been achieved worldwide by IVF and its modifications, collectively referred to as assisted reproductive technologies (ARTs) (Clarke GN. A.R.T. and history, 1678-1978. Hum Reprod. 2006 Jul;21(7):1645-50. Epub 2006 Apr 10.). Increased experience has led to higher success rates and broadened indications for such procedures . ARTs now account for 1 to 3 percent of live births in the United States and Europe (Van Voorhis BJ. Outcomes from assisted reproductive technology. Obstet Gynecol. 2006 Jan;107(1):183-200.).

In 1996, the Reproductive Medicine and Surgery fellowship program was initially an individual program at the King Faisal Hospital and Research Centre; 10-years later, it was introduced as a training program at King Abdul-Aziz Medical City. The Saudi Commission for Health Specialties (SCFHS) have been supervising these programs since 2010. The demands on the service and the presence of multiple academic centers required the formation of the fellowship program in SCFHS, which commenced in 2015.

Candidates of the Reproductive Medicine and Surgery fellowship program are interviewed by the SCFHS. they must be board-certified OB/GYNs priority is given to Saudi and Gulf Cooperation Council citizens. There are four recognized centers for the fellowship in Saudi Arabia: King Faisal Specialist Hospital & Research Centre (KFSH&RC), Prince Sultan Military Medical City (PSMMC), King Fahad Medical City (KFMC), and King AbdulAziz Medical City (KAMC). Currently, there are nine fellows. Each fellow is expected to progressively manage a minimum of 500 cycles over the duration of the program. two fellows will be assigned to each center , except for KFSH&RC, which will have three fellows due to its large hospital capacity and high number of IVF procedures . Each center should have a minimum of three full-time, specialized consultants with a minimum of 500 IVF cycles per year.

2. Goals and Responsibilities of Curriculum Implementation

This curriculum ultimately seeks to guide trainees to become *competent* in their respective specialties. Accordingly, this goal requires a significant amount of effort and coordination from all stakeholders involved in postgraduate training. As "*adult-learners*," trainees must be proactive, fully

engaged, and exhibit the following: a careful understanding of learning objectives, self-directed learning, problem solving, an eagerness to apply learning by means of reflective practice from feedback and formative assessment, and self-awareness and willingness to ask for support when needed. The program director plays a vital role in ensuring the successful implementation of this curriculum. Moreover, training committee members, particularly the program administrator and chief resident, have a significant impact on program implementation. Trainees should be called to share responsibility in curriculum implementation. The Saudi Commission for Health Specialties (SCFHS) applies the best models of training governance to achieve the highest quality of training. Additionally, academic affairs in training centers and the regional supervisory training committee play major role in training supervision and implementation. The scientific *committee* of The Reproductive Medicine and Surgery fellowship program will guarantee that the content of this curriculum is constantly updated to match the highest standards in postgraduate education of each trainee's specialty.

The training offered in the Reproductive Medicine and Surgery fellowship program consists of the following:

- Infertility evaluation and treatment, including various aspects of ARTs.
- Female endocrinology, including amenorrhea, polycystic ovarian disease syndrome (PCOS), and premature ovarian insufficiency (POI)
- Male infertility
- Preimplantation genetic diagnosis (PGD)
- Fertility preservation
- Perimenopausal and menopausal evaluation and treatment, including hormonal replacement therapy (HRT)
- Recurrent pregnancy loss (RPL)
- Evaluation and management of pelvic abnormalities, including uterine fibroids and polyps, endometriosis, pelvic adhesions, uterine and vaginal anomalies, tubal disease, and ectopic pregnancy.
- Operative laparoscopy and operative hysteroscopy
- Clinical research

3. Policies and Procedures

This curriculum represents the means and materials outlines the learning objectives with which trainees and trainers will interact for the purpose of achieving the identified educational outcomes. The Saudi Commission for Health Specialties (SCFHS) has a full set of "General Bylaws" and "Executive Policies" (published on the official SCFHS website) that regulate all training-related processes. The general bylaws of training, assessment, and accreditation as well as executive policies on admission, registration, continuous assessment and promotion, examination, trainees' representation and support, duty hours, and leaves are examples of regulations that need to be implemented. Under this curriculum, trainees, trainers, and supervisors must comply with the most updated bylaws and policies, which can be accessed online (via the official SCFHS website).

4. Abbreviations Used in This Document

Blueprint	It is a tool that identifies the content areas covered in the examination. The blueprint provides details of the assessment tools used in the examination and outlines the weighting of the area, the domains, and sections examined for each content area.
CBD	An encounter between a trainee and an evaluator that involves a comprehensive review of clinical cases. The evaluator gives the candidate feedback regarding a range of areas in relation to clinical knowledge, clinical decision making, and patient management.
Competence	Attainment of a satisfactory level relevant knowledge as well as a range of relevant skills, which include interpersonal and technical components, at a given point during the educational process.



DOPS	A structured checklist for assessing competence in performing diagnostic and interventional procedures. It facilitates feedback to develop behaviors and performance related to operative, decision-making, communication, and teamwork skills.
External evaluator	An evaluator who is from a different country as the candidates who are being examined. The general role of the external evaluator is to ensure that the examination processes are fair and equitable according to the SCFHS policies and regulations.
FITER	A summative evaluation prepared at the end of the training program, which grants a candidate with a full range of competencies (i.e., knowledge, skills, and attitudes) required of a specialist and the readiness to take the Saudi certification examinations. The FITER is not a composite of the regular in-training evaluations; rather, it is a testimony of the evaluation of competencies at the end of a training program.
CER	A summative evaluation report prepared for each candidate at the end of each year based on the end-of-rotation reports, which could also involve clinical, oral exams, and completing other academic or clinical assignments.
Internal examiner	An examiner who is from the same country as the candidates who are being examined.
Mini-CEX	A direct observation assessment or “snapshot” of a candidate-patient interaction. To maximize its benefits, the evaluator should provide timely and specific feedback to the candidate after every encounter.
MPL	The cut score used to determine the pass/fail mark in a competency test
Multi-source feedback/360-degree evaluation	A method used to assess interpersonal and communication skills, professional behaviors, and certain aspects of patient care and systems-based practice. Usually, evaluators who complete rating forms in 360-degree evaluations are superiors, peers, subordinates, and patients and their families.
OSCE	A standardized way of assessing clinical competencies. It provides a means of assessing the “shows how” of physical examination and history-taking skills, communication skills with patients and family members, breadth and depth of knowledge, ability to summarize and document findings, and ability to make a differential diagnosis or plan treatment.
Portfolio	A systematic and organized collection of a candidate's work that exhibits to others the direct evidence of a candidate's efforts, achievements, and progress over a certain period.
Post hoc review (item analysis)	A process that involves the examination of candidate responses to individual test items (questions) to assess the quality of the said items and of the test.
Standard setting method	A process used to set a passing score for an examination. Standard-setting methods fall into two categories: item-centered and person-centered. Examples of item-centered methods include the Angoff, Ebel, and Nedelsky methods, while examples of person-centered methods include the Borderline Survey and Contrasting Groups approaches.
Standardized patients	Individuals who have been trained to accurately reproduce the history and/or physical findings of typical clinical cases. They could be real patients who have been "standardized" or simulated patients (i.e., persons who are not sick, but take on “the role of a patient).
SOE	A performance assessment method that uses realistic patient cases in which trained physician examiners question a candidate in a structured and standardized manner. This exam format “know-how in clinical decision-making and the candidates’ proficiency in clinical decision-making and their application or use of medical knowledge in realistic patient scenarios.

**Systematic
quality
assurance**

A system of procedures, checks, audits, and corrective actions to ensure that all exam items are of the highest achievable quality. Involves an iteration process of review and correction for item-writing flaws and an independent subject matter expert review.

WBA

A form where assessments of a candidate's competence are based on what they do in the workplace. WBAs assist supervisors in monitoring a candidate's progress and could be used to inform CERs. Such assessments may come in the form of multi-source feedback, mini-CEXs, DOPS, or other appropriate WBA tools.



PROGRAM STRUCTURE

1. Program Entry Requirements

The candidates must be board-certified OB/GYNs and priority is given to Saudi and Gulf Cooperation Council citizens.

For further information, please check the executive policy of SCFHS on admission and registration.

2. Program Duration

As per the approval of the Executive Council of Training and Education, the program will consist of three (3) years of training

3. Program Rotations

The program will be carried out for a total of 36 months with a maximum stay of 24 months in a single center), which will be divided into the following:

1. Assisted reproductive technologies (ART)

This goal will take place over a period of 50 weeks (32% of the training time which is equivalent to 500 sessions).

- 1.1. The fellow will acquire competency in executing and monitoring different ovulation induction methods, Intrauterine Insemination (IUI) (a minimum of 50 cases during the entire training period), IVF treatment protocols, ovum pick-up in IVF procedures (a minimum of 300 cases during the entire training period), Egg Transfer (ET) (a minimum 300 cases during the entire training period), ultrasounds for follicular measurement, ultrasounds for early pregnancy, baseline ultrasounds, and exposure to the IVF laboratory.
- 1.2. They will develop the ability to carry out patient counseling for different outcomes and address various related complications.

2. Infertility

This goal will take place over a period of 20 weeks (12.6% of the training time which is equivalent to 200 sessions).

- 2.1. demonstrate ability to evaluate infertile couples, formulate treatment plans, and counsel patients regarding the pros and cons of different therapeutic options.

3. Reproductive surgery

This goal will take place over a period of 20 weeks (13% of the training time which is equivalent to 200 sessions)

- 3.1. Acquire the competency in performing the surgical procedures required for reproductive medicine and reproductive surgery subspecialists practice.
- 3.2. show ability to choose the most appropriate procedure, counsel the patient regarding the pros and cons, and deal with any related complications.
- 3.3. The candidate should attend and perform the following procedures:
 - 3.3.1. Operative and diagnostic hysteroscopy (a minimum of 50 cases during the entire training period)
 - 3.3.2. Operative and diagnostic laparoscopy (a minimum of 50 cases during the entire training period)

4. Reproductive endocrinology

This goal will take place over a period of 4 weeks (2.6% of the training time which is equivalent to 40 sessions).

- 4.1. Evaluate patients suffering from various reproductive problems, including adolescent endocrine and anatomical issues, post-menopausal hormone replacement therapy (HRT) counseling, primary ovarian insufficiency (POI) patient work-up and counseling, osteoporosis prevention and treatment, formulating treatment plans, and counseling patients regarding the pros and cons of different therapeutic and preventive options.

5. RPL and reproductive immunology

This goal will take place over a period of 4 weeks (2.6% of the training time which is equivalent to 40 sessions).

- 5.1. Evaluate couples with RPL or recurrent implantation failure, formulate treatment plans, and execute wide range of intervention options.

6. Preimplantation genetic diagnosis (PGD)

This goal will take place over a period of 4 weeks (2.6% of the training time which is equivalent to 40 sessions). This rotation is only done during the 3rd year of fellowship.

- 6.1. Evaluate couples who are potential candidates for PGD/ prenatal diagnosis (PND), formulating treatment plan, and counseling them regarding the pros and cons of different therapeutic options.

7. Elective rotation for 3 months

This goal will take place over a period of 12 weeks (7.7% of the training time which is equivalent to 120 sessions).

- 7.1. Generally, the fellows identify an area in their chosen in which they would like to receive further training either locally or internationally.

8. Clinical Rotations

This goal will take place over a period of 8 weeks (5% of the training time which is equivalent to 80 sessions).

- 8.1. Clinical rotations should be carried out in the following areas:
 - 8.1.1. Male infertility clinics (20 sessions)
 - 8.1.2. Medical genetics and genetic counseling (20 sessions)
 - 8.1.3. Adult endocrinology (20 sessions)
 - 8.1.4. Pediatric endocrinology (20 sessions)

9. Research

This goal will take place over a period of 11 weeks (7% of the training time which is equivalent to 110 sessions).

- 9.1. The fellow develop the ability to prepare research proposals, obtain IRP approvals, and perform project, preparation, and publishing manuscripts.
- 9.2. They will be encouraged to participate in basic science research projects.
- 9.3. They will have a combined half-day protected time every week for research.
- 9.4. They are encouraged to attend research methodology courses.

10. Academic activities

This goal will take place over a period of 11 weeks (7% of the training time which is equivalent to 110 sessions).

- 10.1. All fellows will have a combined half-day protected time every week for structured goals-oriented educational sessions.



LEARNING AND COMPETENCIES

COMPETENCY

Goals

Upon completion of training, fellows are expected to be competent subspecialists in reproductive medicine and surgery, capable of assuming a consultant's role in the discipline. They must acquire a working knowledge of the theoretical basis of the specialty, including its foundations in basic medical sciences and research.

In addition, fellows must demonstrate the requisite knowledge, skills, and attitudes for effective patient-centered care and service that caters to a diverse population. Upon graduation, fellows must be able professionally address issues concerning sex, sexual orientation, age, culture, ethnicity, and ethics in all aspects of their practice .

REPRODUCTIVE MEDICINE AND SURGERY COMPETENCIES

The fellows are expected to progress from a novice to mastery level in term of professional competencies. This curriculum applies principles of competency-based medical education. The SCFHS utilizes the CanMEDS framework to articulate professional competencies. CanMEDS represents an internationally recognized framework outlining competency roles. It has been adopted in this curriculum as described in (Frank JR, Snell L, Sherbino J, editors. CanMEDS 2015 Physician Competency Framework. Ottawa: Royal College of Physicians and Surgeons of Canada; 2015)

Upon completion of training, fellows are expected to acquire the following competencies and effectively function as medical experts.

Medical expert definition

As medical experts, subspecialists in reproductive medicine and surgery integrate all the CanMEDS roles and apply medical knowledge, clinical skills, and professional attitudes in their provision of patient-centered care. Medical experts play a central role according to the CanMEDS framework.

1. Function effectively as consultants, integrating all the CanMEDS roles to provide optimal, ethical, and patient-centered medical care

- 1.1. Perform consultations, including the presentation of well-documented written and/or verbal assessments and recommendations in response to requests from other healthcare professionals
- 1.2. Demonstrate the use of all CanMEDS competencies relevant to reproductive medicine and surgery
- 1.3. Identify and appropriately respond to relevant ethical issues that arise from patient care
- 1.4. Demonstrate the ability to prioritize professional duties when faced with multiple patients and problems
- 1.5. Provide compassionate and patient-centered care
- 1.6. Recognize and respond to the ethical dimensions in medical decision-making
- 1.7. Demonstrate medical expertise in situations other than patient care when necessary (e.g., providing expert legal testimony or advising governments)

2. Establish and maintain clinical knowledge, skills, and attitudes appropriate to reproductive medicine and surgery

- 2.1. Demonstrate and apply knowledge of the clinical, socio-behavioral, and fundamental biomedical sciences relevant to reproductive medicine and reproductive surgery:
 - 2.1.1. Embryology, anatomy, histology, physiology, and genetics of the male and female reproductive tracts
 - 2.1.2. Anatomy, histology, and physiology of the hypothalamic pituitary-gonadal axis, and related endocrine functions throughout life
 - 2.1.3. Mechanisms of reproductive hormone action and endocrine pharmacology

- 2.1.4. Endocrinology and immunology of pregnancy and the fetoplacental unit
- 2.1.5. Physiology of gametogenesis, gamete transport, fertilization, embryo development, implantation, and early pregnancy development
- 2.1.6. Principles of epidemiology relevant to reproductive disorders
- 2.1.7. Microsurgical principles as they apply to oviductal and other reproductive surgery
 - 2.1.7.1. Principles for selection of patients and techniques of tubal re-anastomosis after previous tubal sterilization
- 2.1.8. Principles of assisted reproductive laboratory techniques, including gamete culture and micromanipulation techniques
- 2.1.9. Prevention and management of ART complications, including, but not limited to, high-order multiple pregnancies, ovarian hyperstimulation syndrome (OHSS), and ectopic pregnancy
- 2.1.10. Appropriate preoperative assessment of patients
- 2.1.11. Etiology, diagnosis, and management of the following reproductive endocrine disorders:
 - 2.1.11.1. Disorders of function and physiology of the hypothalamic pituitary-gonadal axis
 - 2.1.11.2. Disorders of the menstrual cycle regulation throughout reproductive life and disorders of ovulation and follicle development
 - 2.1.11.3. Congenital anomalies of the reproductive system
 - 2.1.11.4. Primary and secondary amenorrhea
 - 2.1.11.5. Oligomenorrhea
 - 2.1.11.6. Ovulatory bleeding
 - 2.1.11.7. Hyperprolactinemia
 - 2.1.11.8. Hypogonadotropic hypogonadism (HH)
 - 2.1.11.9. Hypothyroidism
 - 2.1.11.10. Hyper androgenic disorders in women, including idiopathic hirsutism, polycystic ovary syndrome (PCOS), congenital adrenal hyperplasia, Cushing's syndrome, and androgen secreting tumors
 - 2.1.11.11. Disorders of sexual differentiation, anatomic alterations, and congenital anatomical variations, including ambiguous genitalia, ovarian dysgenesis, androgen insensitivity syndrome, testicular failure, and male hypogonadism
 - 2.1.11.12. Climacteric and menopause, including vasomotor symptoms and osteopenia or osteoporosis
- 2.2. Describe the CanMEDS framework of competencies relevant to reproductive medicine and reproductive surgery
- 2.3. Apply lifelong learning skills as a scholar to implement a personal program to stay up to date and enhance professional competence
- 2.4. Contribute to the improvement of quality care and patient safety in reproductive medicine and surgery, integrating the best available evidence and practices
- 2.5. Understand and manage aspects of genetic history and counseling, approach to chromosome analysis, prenatal diagnosis, pre-implantation genetic diagnosis, and pre-implantation genetic screening
- 2.6. Understand and manage all aspects of RPL

3. Perform complete and appropriate assessments of patients

- 3.1. Identify and explore issues to be addressed in patient encounters, including the patient's context and preferences
- 3.2. Obtain histories that are relevant, concise, and accurate to context and preferences for the purposes of disease prevention, health promotion, diagnosis and/or management
- 3.3. Perform focused physical examinations that are relevant and accurate for the purposes of disease prevention, health promotion, diagnosis and/or management
- 3.4. Select medically appropriate investigative methods in a resource-effective and ethical manner



- 3.5. Demonstrate effective clinical problem solving and judgment to address patient problems, which includes interpreting available data and integrating information to generate differential diagnoses and management plans in the following:
 - 3.5.1. The infertile couples, including, but not limited to, female and male causes, unexplained infertility, genetic abnormalities associated with infertility, assisted reproductive techniques, and the emotional needs of the couples
 - 3.5.2. RPL
 - 3.5.3. Reproductive abnormalities during childhood and adolescence, including, but not limited to, precocious puberty, delayed puberty, growth disorders, and ambiguous genitalia
 - 3.5.4. Endometriosis
 - 3.5.5. Uterine leiomyomas
 - 3.5.6. Appropriate patient selection for medical and/or surgical management of infertility, including, but not limited to treatment of ectopic pregnancies and uterine myomas
 - 3.5.7. Sexual disorders” or “sexual dysfunction in females, males, and couples, including the ability to recognize and recommend appropriate professional programs for ongoing care

4. Use preventive and therapeutic interventions effectively

- 4.1. Implement effective management plans in collaboration with patients and their families
- 4.2. Demonstrate effective, appropriate, and timely application of preventive and therapeutic interventions relevant to reproductive medicine and surgery
 - 4.2.1. Effectively manage and promote the prevention of ART complications, including, but not limited to, high-order multiple pregnancies, OHSS, and ectopic pregnancies
- 4.3. Ensure that appropriate informed consent for therapies is obtained
- 4.4. Ensure that patients receive appropriate end-of-treatment care
- 4.5. Understand candidates for disease prevention through the use of ART (e.g., the use of pre-implantation genetic diagnosis and screening for preventing of genetic disease or the use of ART for fertility preservation)

5. Demonstrate proficient and appropriate use of procedural skills, both diagnostic and therapeutic

- 5.1. Demonstrate effective, appropriate, and timely performance of diagnostic procedures relevant to reproductive medicine and surgery
 - 5.1.1. Hysterosalpingogram or sonohysterography/sonohysterogram
 - 5.1.2. Pelvic ultrasonography for diagnostic procedures and appropriate selection of ancillary imaging techniques
- 5.2. Demonstrate awareness of indications, contra-indications, techniques, limitations, sources of error, and interpretation of procedures
- 5.3. Demonstrate effective, appropriate, and timely performance of therapeutic procedures relevant to reproductive medicine and surgery
 - 5.3.1. Pelvic ultrasonography for therapeutic procedures and appropriate use of ancillary imaging techniques
 - 5.3.2. Appropriate medical and surgical management of ovulatory dysfunction
 - 5.3.3. Minimally invasive surgical procedures for pelvic assessment (e.g., laparoscopy and hysteroscopy) and the surgical treatment of pelvic pathology that affects reproduction
 - 5.3.3.1. Lysis of adhesions
 - 5.3.3.2. Treatment of ectopic pregnancy
 - 5.3.3.3. Treatment of hydrosalpinx, including salpingectomy
 - 5.3.3.4. Ovarian cystectomy
 - 5.3.3.5. Treatment of pelvic endometriosis
 - 5.3.3.6. Myomectomy
 - 5.3.3.7. Diagnostic and operative hysteroscopy (office or operating room), including, but not limited to, the following:

- 5.3.3.7.1. Hysteroscopic polypectomy
 - 5.3.3.7.2. Hysteroscopic myomectomy
 - 5.3.3.7.3. Hysteroscopic lysis of adhesions
 - 5.3.3.7.4. Hysteroscopic resection of uterine septum
 - 5.3.4. Assisted reproductive technology procedures
 - 5.3.4.1. Transvaginal ultrasonography (TVUS) for ovum retrieval under local anesthesia
 - 5.3.4.2. Embryo transfer (ET) with or without ultrasound guidance
 - 5.3.4.3. Paracentesis (abdominal or by TVUS guidance)
 - 5.3.4.4. TVUS for cyst aspiration/aspiration of hydrosalpinx
 - 5.3.4.5. Artificial insemination with or without ultrasound guidance
 - 5.3.5. Ovulation induction and controlled ovarian hyperstimulation
 - 5.4. Ensure that appropriate informed consent for procedures is obtained
 - 5.5. Document and disseminate information related to procedures performed and their outcomes
 - 5.6. Ensure that adequate follow-ups are arranged for procedures performed
- 6. Seek appropriate consultation from other health professionals and recognize the limits of their own expertise**
- 6.1. Demonstrate insight into their own limits of expertise
 - 6.2. Demonstrate effective, appropriate, and timely consultation of other health professionals for optimal patient care when necessary
 - 6.3. Arrange appropriate follow-up care services for patients and their families

Communicator definition:

As communicators, subspecialists in reproductive medicine and surgery effectively facilitate the doctor-patient relationship and the dynamic exchanges that occur before, during, and after medical encounters.

- 1. Develop rapport, trust, and ethical therapeutic relationships with patients and families**
- 1.1. Recognize that being a good communicator is a core clinical skill for reproductive medicine and surgery specialists, and that effective physician-patient communication can foster patient satisfaction, physician satisfaction, adherence, and improved clinical outcomes
 - 1.2. Establish positive therapeutic relationships with patients and their families that are built on understanding, trust, respect, support, honesty, and empathy
 - 1.3. Respect patient confidentiality, privacy, and autonomy
 - 1.4. Listen effectively
 - 1.5. Be aware of and responsive to nonverbal cues
 - 1.6. Facilitate structured clinical encounters effectively
- 2. Accurately obtain and synthesize relevant information and the perspectives of patients and their families, colleagues, and other professionals**
- 2.1. Gather information about a certain disease and about a patient's beliefs, concerns, expectations, and illness experience
 - 2.2. Seek out and synthesize relevant information from other sources (e.g., a patient's family, caregivers, and other professionals)
- 3. Convey relevant information and explanations accurately to patients and their families, colleagues, and other professionals**
- 3.1. Compassionately deliver information to patients and their families, colleagues, and other professionals in a manner that it is understandable and encourages discussion and participation in decision-making
 - 3.1.1. Recognize that patients with endocrine dysfunction and infertility are faced with complex diagnoses and treatments that they may find difficult to understand and explain to others



- 3.1.2. Recognize that those seeking infertility investigations often feel isolated and may prefer not to confide in friends and family
- 3.1.3. Demonstrate expertise in clearly explaining diagnoses, rationale for treatment, and treatment protocols, avoiding highly technical language

4. Develop a mutual understanding on issues, problems, and plans with patients, families, and other professionals to develop a shared plan of care

- 4.1. Identify and explore problems to be addressed from patient encounters effectively, including patients' context, responses, concerns, and preferences
- 4.2. Respect diversity and difference, including, but not limited to, the impact of sex, sexual orientation, religion, and cultural beliefs on decision-making
- 4.3. Encourage discussion, questions, and interaction during encounters
 - 4.3.1. Demonstrate an understanding that patients may believe that past decisions adversely affect the current situation
- 4.4. Engage patients, families, and relevant health professionals in shared decision-making to develop plans of care
 - 4.4.1. Offer referrals for professional support
 - 4.4.2. Provide information and links to peer support groups
 - 4.4.3. Demonstrate empathy with patients' concerns and preferences; assist patients in making the best personal choices possible
- 4.5. Address challenging communication issues effectively (e.g., obtaining informed consent, delivering unwelcome news, and addressing anger, confusion, and misunderstandings)

5. Convey effective oral and written information about medical encounters

- 5.1. Maintain clear, accurate, and appropriate records of clinical encounters and plans
- 5.2. Present verbal reports of clinical encounters and plans
- 5.3. Present medical information about medical issues to the public or media

Collaborator Definition

As collaborators, subspecialists in reproductive medicine and surgery effectively work within healthcare teams to provide optimal patient care.

1. Participate effectively and appropriately in an interprofessional healthcare team

- 1.1. Describe the the roles and responsibilities of a reproductive medicine and surgery consultant to other professionals
- 1.2. Describe the roles and responsibilities of other professionals within the healthcare team
- 1.3. Describe the roles of an interprofessional and a multidisciplinary team in assisted reproduction programs
- 1.4. Describe the roles of an interprofessional and a multidisciplinary team involved in inimally invasive reproductive surgery-relevant procedures
- 1.5. Recognize and respect the diversity of roles, responsibilities, and competences of other professionals in relation to their own, including, but not limited to, urologists, endocrinologists, generalist OB/GYNs, and other healthcare professionals in the management of complex reproductive disorders
- 1.6. Work with others to assess, plan, provide, and integrate care for individuals and groups of patients
 - 1.6.1. Demonstrate active participation with urologists, endocrinologists, and other healthcare professionals in the management of complex reproductive disorders
 - 1.6.2. Synchronize and coordinate the clinical component of assisted reproductive technology procedures with the laboratory component, including, but not limited to, gamete and embryo treatment in assisted reproduction laboratories
- 1.7. Work with others to assess, plan, provide, and review other tasks such as research, educational work, program review or administrative responsibilities
- 1.8. Participate effectively in interprofessional team meetings
- 1.9. Form interdependent relationships with other professions for the provision of quality care

- 1.10. Describe the principles of team dynamics
- 1.11. Respect team ethics, including confidentiality, resource allocation, and professionalism
- 1.12. Demonstrate leadership in a healthcare team as appropriate

2. Work with other health professionals effectively to prevent, negotiate, and resolve interprofessional conflict

- 2.1. Demonstrate a respectful attitude toward colleagues and members of interprofessional teams
- 2.2. Work with other professionals to prevent conflicts
- 2.3. Employ collaborative negotiation to resolve conflicts
- 2.4. Respect differences and address misunderstandings and limitations of other professionals
- 2.5. Recognize their personal differences, misunderstandings, and limitations that may contribute to interprofessional tension
- 2.6. Reflect on interprofessional team functions

Manager Definition

As managers, subspecialists in reproductive medicine and surgery are integral participants in healthcare organizations, organizing sustainable practices, making decisions about allocating resources, and contributing to the effectiveness of the healthcare system.

1. Participate in activities that contribute to the effectiveness of their healthcare organizations and systems

- 1.1. Work collaboratively with others in their organizations
 - 1.1.1. Demonstrate administrative and organizational skills in various clinical settings (e.g., multidisciplinary teams)
- 1.2. Participate in systemic quality process evaluation and improvement, including patient safety initiatives
 - 1.2.1. Demonstrate an understanding of the principles of quality and infection control of gamete handling, culture, and cryopreservation in assisted-reproductive technology
- 1.3. Describe the structure and function of the healthcare system as it relates to gynecologic reproductive endocrinology and infertility, including the roles of physicians
- 1.4. Describe principles of healthcare financing, including physician remuneration, budgeting, and organizational funding
- 1.5. Describe principles of developing interprofessional and multidisciplinary teams in a reproductive clinic

2. Manage their practice and careers effectively

- 2.1. Set priorities and manage time to balance patient care, practice requirements, outside activities, and personal life
- 2.2. Manage their practice, including finances and human resources
- 2.3. Implement processes to ensure personal practice improvement
- 2.4. Employ information technology appropriately for patient care

3. Allocate finite healthcare resources appropriately

- 3.1. Recognize the importance of just allocation of healthcare resources, balancing effectiveness, efficiency, and access to optimal patient care
- 3.2. Apply evidence and management processes for cost-effective care
- 3.3. Demonstrate an understanding of public and private funding for assisted reproductive technology

4. Serve in administration and leadership roles as appropriate

- 4.1. Chair or actively participate in committees and meetings
- 4.2. Lead or implement changes in healthcare
- 4.3. Plan relevant elements of healthcare delivery (e.g., work schedules)



Health Advocate Definition

As health advocates, subspecialists in reproductive medicine and surgery responsibly use their expertise and influence to advance the health and well-being of individual patients, communities, and populations.

1. Respond to patients' individual health needs and issues as part of patient care

- 1.1. Identify the health needs of an individual patient
- 1.2. Identify opportunities for advocacy, health promotion, and disease prevention with individuals to whom they provide care
- 1.3. Identify opportunities for patient education on prevention, timely intervention, and available resources, for the management of Gynecology Reproductive Endocrinology and Infertility (GREI)-relevant conditions
- 1.4. Identify opportunities for the emotional support of patients with infertility or other Reproductive Medicine and Surgery-relevant conditions

2. Respond to the health needs of the communities that they serve

- 2.1. Describe the practice communities that they serve
- 2.2. Identify opportunities for advocacy, health promotion, and disease prevention in the communities that they serve, and appropriately respond to them
- 2.3. Provide information and suggest strategies for a timely approach to infertility management
- 2.4. Provide comprehensive information to educate patients about the impact of reproductive age on fertility
- 2.5. Provide comprehensive information to educate patients about strategies for minimizing the probability of multiple pregnancies associated with infertility treatment
- 2.6. Communicate effectively to the public and media about issues of local concern
 - 2.6.1. Demonstrate the ability to respond to patients who inquire about information released by the media that pertains to the developments in infertility management technology
 - 2.6.2. Demonstrate awareness of patients' concerns about privacy that may limit their ability to advocate for themselves and be prepared to take part in this process
- 2.7. Recognize the possibility of competing interests between the communities served and other populations

3. Identify the main determinants of health for the populations that they serve

- 3.1. Identify the main determinants of health of the populations that they serve, including barriers to access to care and resources
- 3.2. Identify vulnerable or marginalized populations within those served and respond appropriately
- 3.3. Identify opportunities for short- and long-term analyses of outcomes of commonly used treatments for GREI-relevant conditions
- 3.4. Identify public and private funding for assisted reproductive technology

4. Promote the health of individual patients, communities, and populations

- 4.1. Describe approaches to implementing changes in the determinants of health of the populations they serve
- 4.2. Describe how public policy impacts the health of the populations served
- 4.3. Identify points of influence in the healthcare system and its structure
- 4.4. Describe the inherent ethical and professional issues in health advocacy, including altruism, social justice, autonomy, integrity, and idealism
- 4.5. Acknowledge the possibility of conflict inherent in their role as health advocates for patients or communities with that of managers or gatekeepers
- 4.6. Describe the role of the medical profession in collectively advocating for health and patient safety

Scholar Definition

As scholars, subspecialists in reproductive medicine and surgery demonstrate a lifelong commitment to reflective learning as well as the creation, dissemination, application, and translation of medical knowledge.

1. Maintain and enhance professional activities through ongoing learning

- 1.1. Describe the principles of maintenance of competence
- 1.2. Describe the principles and strategies for implementing a personal knowledge management system
- 1.3. Recognize and reflect on learning issues in practice
- 1.4. Conduct personal practice audits
- 1.5. Pose appropriate learning questions
- 1.6. Access and interpret relevant evidence
- 1.7. Integrate new learning into practice
- 1.8. Evaluate the impact of any change in practice
- 1.9. Document their learning process

2. Critically evaluate medical information and its sources, and apply this appropriately to practice decisions

- 2.1. Describe the principles of critical appraisal
 - 2.1.1. Recognize and identify gaps in knowledge and expertise around clinical questions
 - 2.1.2. Develop plans for finding relevant information in the literature for clinical questions
- 2.2. Critically appraise retrieved evidence to address clinical questions
 - 2.2.1. Demonstrate competence in the critical appraisal of therapies, diagnostic tests, prognoses, and integrative literature, including, but not limited to, meta-analyses, practice guidelines, decisions, and economic analyses
 - 2.2.2. Develop proposed solutions for clinical questions with assisted reproduction teams
 - 2.2.3. Demonstrate an understanding of clinical trials methodology and biostatistics
- 2.3. Integrate critical appraisal conclusions into clinical care

3. Facilitate the learning of patients and their families, students, residents, other health professionals, the public, etc. as appropriate

- 3.1. Describe principles of learning relevant to medical education
 - 3.1.1. Demonstrate knowledge of ongoing developments in reproductive endocrinology and infertility, including treatment, technologies, and diagnostics
- 3.2. Collaboratively identify the learning needs and desired learning outcomes of others
- 3.3. Select effective teaching strategies and content to facilitate others' learning
- 3.4. Demonstrate conducting an effective lecture or presentation
 - 3.4.1. Present updates on or research relevant to GREI at a local, national, or international level
- 3.5. Assess and reflect on teaching encounters
- 3.6. Provide helpful feedback
- 3.7. Describe the principles of ethics in teaching

4. Contribute to the development, dissemination, and translation of new knowledge and practices

- 4.1. Describe the principles of research and scholarly inquiry
 - 4.1.1. Explain the fundamental elements of biostatistics, research ethics, study design, protocol writing, and manuscript preparation
- 4.2. Describe the principles of research ethics
- 4.3. Pose scholarly questions
- 4.4. Obtain the approval of the local bioethics review board for a research proposal
- 4.5. Conduct systematic searches for evidence
- 4.6. Select and apply appropriate methods to address questions



- 4.7. Complete a scholarly research project relevant to relevant research project (GREI)
- 4.8. Disseminate the findings of a study

Professional definition

As professionals, subspecialists in reproductive medicine and surgery are committed to the health and well-being of individuals and the overall society through ethical practice, profession-led regulation, and high personal standards of behavior.

1. Demonstrate a commitment to their patients, profession, and society through ethical practice

- 1.1. Demonstrate the ability to constantly meet deadlines and be punctual
- 1.2. Exhibit appropriate professional behavior in practice, including honesty, integrity, commitment, compassion, respect, and altruism
- 1.3. Demonstrate a commitment to delivering the highest quality care and maintenance of competence
- 1.4. Recognize and appropriately respond to ethical issues encountered in practice, including impact of new reproductive technologies on bioethics and health economics
- 1.5. Manage conflicts of interest
- 1.6. Recognize the principles and limits of patient confidentiality as defined by professional practice standards and the law
- 1.7. Maintain appropriate boundaries with patients

2. Demonstrate a commitment to their patients, profession, and society through participation in profession-led regulation

- 2.1. Demonstrate knowledge and an understanding of the professional, legal, and ethical codes of practice
- 2.2. Fulfill the regulatory and legal obligations required of their current practice
- 2.3. Demonstrate accountability to professional regulatory bodies
- 2.4. Recognize and respond to others' unprofessional behavior.
- 2.5. Participate in peer reviews

3. Demonstrate a commitment to physician health and sustainable practice

- 3.1. Balance personal and professional priorities to ensure personal health and a sustainable practice
- 3.2. Strive to heighten personal and professional awareness and insight
- 3.3. Recognize other professionals in need and respond accordingly

<< Acknowledgement to the Royal College of Physician and Surgeons of Canada, where the fellowship competencies were adopted, an e-mail of the agreement was forwarded to the SCFHS

1. Academic Activities:

The goal of the fellowship program is to provide training in the IVF subspecialty. Upon completion, candidates will be considered as subspecialists in this field and can pursue careers in clinical reproductive medicine and surgery.

The fellows must demonstrate the knowledge and attitude relating to patients' special problems and psychological needs in reproductive medicine and reproductive surgery cases.

Topics to be covered in the program

1. Basic anatomy and physiology of the male and female reproductive system
2. Applied pharmacology, biochemistry, and pathology of the male and female reproductive system
3. Endocrinology of the reproductive system
4. Ultra-sonography in reproductive medicine
5. Infertility enhancing surgeries, including endoscopic surgery (both hysteroscopy and laparoscopy)
6. Diagnosis and management of male and female infertility
7. Ovulation induction

8. Monitoring of ovulation
9. Intrauterine insemination
10. Controlled ovarian stimulation
11. Ovum pick-up and ET
12. Safety issue in ART, including OHSS and multiple pregnancies
13. Basic embryology
14. Exposure to laboratory techniques in ART
15. Storage and use of gametes
16. Reproductive ethics
17. Ethics of pre-implementation genetic diagnosis
18. Basics of reproductive genetics
 - a. Genetic history and counseling
 - b. Approach to chromosome analysis
 - c. Prenatal diagnosis
 - d. Pre-implantation genetic diagnosis
 - e. Pre-implantation genetic screening
19. Fertility preservation
20. RPL and reproductive immunology
21. Gynecological endocrine disorders e.g., pituitary disorders, PCOS, and hirsutism diagnosis and management)
22. Women's perimenopausal and postmenopausal healthcare, including HRT and osteoporosis
23. Pelvic inflammatory disease
24. Research methodology
25. Medical statistics
26. Proposal writing and presentation
27. Medical ethics related to their subspecialty

PROTECTED TIME

Three hours of protected time for formal training are arranged on a weekly basis. Protected time for formal training may include participation in: departmental activities, tutorial sessions, lectures, and a journal club, which could help with the following:

1. Promoting continued professional development
2. Keeping up-to-date with the literature
3. Disseminating information and encouraging debate about good practice
4. Ensuring that professional practice is evidence-based
5. Learning and practicing critical appraisal skills
6. Providing enjoyable educational and social exchanges

Every week, fellows and attending physicians share responsibility for teaching residents. Fellows are encouraged to attend various workshops related to their respective specialties (e.g., laparoscopy, hysteroscopy, ultrasonography, ethics, and research workshops). Attendance and Participation in national and international conferences related to the subspecialty is also recommended.

LEARNING RESOURCES

Textbooks

Clinical gynecologic endocrinology and infertility (MARC A. Fertilz and Leon Speroff)

Guidelines

American Society for Reproductive Medicine (ASRM) guidelines, ASRM eLearning

ESHRE guidelines, and Cochrane database and Up-to-date database



Journals

Fertility and Sterility, Human Reproduction, Human Reproduction Update, and Reproductive BioMedicine Online

RESEARCH

One of the primary goals of the fellowship program is to promote a more advanced scientific thought process with respect to reproductive medicine and surgery research. This is currently accomplished by a multidimensional approach designed to enhance fellows' knowledge particularly in basic science and clinical research.

Fellows are given protected time to conduct research in an established basic science and clinical methodology research under supervision and guidance. This process enables fellows to develop scientific presentation skills and gives mentors an opportunity to provide constructive criticism, which helps fellows address any obstacles encountered.

Fellows are expected to keep meticulous records of their research projects in the same manner as pre- and post-doctoral trainees customarily do. Under the direct supervision of mentors, fellows are guided through all aspects of the research project, data analysis, and production of an abstract and a manuscript/thesis. Their anticipation is to present their findings at a national scientific meeting and published in a peer-reviewed scientific journal.

During the second and third years of fellowship training, emphasis is placed on clinical research methodology. Second and third year fellows are constantly exposed to a wide range of these clinical research initiatives during their daily service duties. In addition, they identify various specific projects of interest and are guided by faculty members through the design, implementation, data collection and analysis, and abstract/publication preparation of each clinical research project. They also meet regularly with the fellowship director to discuss their overall progress and research status. Furthermore, all fellows are encouraged to present their research at national or international scientific meetings.

Universal Topics

Online Teaching Modules:

These 6 high-value topics have been selected given their relevance to the practice of the Reproductive Medicine and Surgery fellowship program. The topics are taught centrally through an e-learning platform and are to be completed during the fellowship program. An online formative assessment will be conducted at the end of the learning module. After completion of all the topics, there will be a combined summative assessment in the form of context-rich MCQs. All trainees must attain a certain level of competency in the summative assessment.

The objectives of the selected universal topics are as follows:

F-1:

1. **Ethical issues: treatment refusal; patient autonomy:** By the end of this learning unit, fellows should be able to:
 - a) Predict situations where a patient or family is likely to decline prescribed treatment
 - b) Describe the concept of "rational adult" in the context of patient autonomy and treatment refusal
 - c) Analyze key ethical, moral, and regulatory dilemmas in treatment refusal
 - d) Recognize the importance of patient autonomy in the decision-making process
 - e) Counsel patients and families declining medical treatment in the light of best interest of patients

2. Sepsis, SIRS, DIVC: By the end of this learning unit, fellows should be able to:

Explain the pathogenesis of sepsis, SIRS, and DIVC

- a) Identify patient-related and non-patient-related predisposing factors of sepsis, SIRS, and DIVC
- b) Recognize a patient at risk of developing sepsis, SIRS, and DIVC
- c) Describe the complications of sepsis, SIRS, and DIVC
- d) Apply the principles of management of patients with sepsis, SIRS, and DIVC
- e) Describe the prognosis of sepsis, SIRS, and DIVC

F-2:

3. Blood Transfusion: By the end of this learning unit, fellows should be able to:

- a) Review the different components of blood products available for transfusion
- b) Recognize the indications and contraindications of blood product transfusion
- c) Discuss the benefits, risks, and alternatives to transfusion
- d) Assume consent for specific blood product transfusion
- e) Perform necessary steps for safe transfusion
- f) Develop an understanding of special precautions and procedures necessary during massive transfusions
- g) Recognize transfusion-associated reactions and provide immediate management

4. Management of Acute Chest Pain: By the end of this learning unit, fellows should be able to:

- a) Triage and categorize patients
- b) Identify patients who need prompt medical and surgical attention
- c) Generate preliminary diagnosis-based histories and physical examinations
- d) Order and interpret urgent investigations
- e) Provide appropriate immediate management to patients
- f) Refer patients to the next level of care, if needed

F-3:

5. Management of Fluid in Hospitalized Patients: By the end of this learning unit, fellows should be able to:

- a) Review physiological bases of water balance in the body
- b) Assess patients' hydration status
- c) Recognize patients who are overhydrated or dehydrated
- d) Order fluid therapy (oral as well as intravenous) for hospitalized patients
- e) Monitor patients' fluid status and response to therapy through history, physical examination, and selected laboratory investigations

6. Patient Advocacy: By the end of this learning unit, fellows should be able to:

- a) Define patient advocacy
- b) Recognize patient advocacy as a core value that governs medical practice
- c) Describe the role of patient advocates in the care of the patients
- d) Develop a positive attitude toward patient advocacy
- e) Be a patient advocate in conflicting situations
- f) Be familiar with local and national patient advocacy groups



ASSESSMENT OF LEARNING

1. Purpose of Assessment

Assessment plays a vital role in the success of postgraduate training and it will guide both trainees and trainers to achieve the targeted learning objectives. Moreover, reliable and valid assessment could provide an excellent means for training improvement as it could inform the following aspects: curriculum development, teaching methods, and quality of learning environment.

For the sake of organization, assessment will be further classified into two main categories: *Formative* and *Summative*.

Throughout the training period, fellows' performance will be assessed in a timely manner to ensure that the aim and objectives of the program are being achieved. Such assessment is conducted during training rotations throughout the academic year as continuous assessment in the form of formative and summative evaluation.

2. Formative Assessment

2.1. General Principles

As adult learners, fellows should strive for feedback throughout their journey of competency from "novice" to "mastery" levels. *Formative assessment* is a component of assessment that is distributed throughout the academic year, which primarily aims to provide trainees with effective feedback. Input from the overall formative assessment tools will be utilized at the end of the year to determine whether individual trainees will be promoted from the current to subsequent training level. Formative assessment is defined based on the scientific committee recommendations (usually updated and announced for each individual program at the beginning of the academic year). According to the executive policy on continuous assessment (available online: www.scfhs.org), formative assessment must have the following features:

- a. Multisource: minimum of four tools
- b. Comprehensive: covering all learning domains (knowledge, skills, and attitude)
- c. Relevant: focusing on workplace-based observations
- d. Competency-milestone oriented: reflecting trainees' expected competencies that match their respective developmental levels.

Trainees should play an active role in seeking feedback during their training. Correspondingly, trainers are expected to provide timely and formative assessment. The SCFHS will provide an e-portfolio system to facilitate communication and data analysis during formative assessment.

2.2. Formative Assessment Tools

The following Formative assessment tools will be applied:

- Portfolio and logbook
- Mini-clinical evaluation exercise (Mini-CEX)
- Direct observation of practical skills (DOPS)
- Case-based discussion (CBD)
- Multi-source feedback: 360-degree feedback from peers, supervisors, allied health staff, and co-workers
- A mid-year mock exam in the form of a written MCQ and a clinical structured oral exam (SOE) and/or objective structured clinical examination (OSCE) consisting of patient management problems (PMPs) will be conducted as modes of assessment and preparation for the final annual end of year exam.

Continuous assessment formats consist of:

a. In-Training Evaluation Reports (ITER)

ITERS should be conducted at least thrice which covers nine (9) training months per year. They are submitted to the local supervisory committee for each trainee and are based on a series of workplace-based assessments (WBA) considered relevant to the specialty. Examples of this can be found in Appendix 4 and 5.

b. Other assessment formats

Other assessment formats include:

- Mid-year mock exams (written and clinical)
- OSCEs
- SOEs
- Research activities
- International examinations
- Academic assignments

According to the executive policy of continuous assessment, trainees are required to reach a minimum grade (borderline-pass) in every component of the continuous assessment tools to be qualified for promotion. For further details, please refer to the policy indicated in the SCFHS website.

Portfolio

The Portfolio will serve as an integral component of training. Each trainee will be required to maintain a logbook. An educational supervisor should oversee the monitoring and review of the portfolios as well as provide continuous feedback to trainees. Each portfolio should include the following:

- Curriculum vitae
- Professional development plan
- Records of educational training events
- Reports from educational supervisors
- Logbook
- Case write-ups (selected)
- Reflections
- Others: patient feedback, clinical audits, etc.

Logbook

The Logbook will be a part of the portfolio. The purposes of the logbook are to:

- Monitor trainees' performance on a continuous basis
- Document and record cases seen and managed by trainees
- Maintain a record of procedures and technical interventions performed
- Enable trainees and supervisors to identify learning gaps
- Provide a basis of feedback to the trainee

3. Summative Assessment

3.1. General Principles

Summative assessment is a component of assessment that primarily aims to make informed decisions on trainees' competency. In comparison to formative assessment, it does not seek to provide constructive feedback. For further details on this section, please refer to the general bylaws and executive policy of assessment (available online: www.scfhs.org). In order to be eligible to sit for the final exams, a trainee should be granted "*Certification of Training Completion*."



3.2. Certification of Training Completion

In order to be eligible to sit for the final specialty examinations, each trainee is required to obtain “*Certification of Training Completion.*” Based on the training bylaws and executive policy (please refer to), trainees will be granted “Certification of Training Completion” upon successful completion of all training rotations

3.3. Final Specialty Examinations:

3.3.1. Final Written Exam

This written examination, which consists of multiple-choice questions (MCQs), is conducted annually at the end of each academic year. The number of exam items, eligibility, and the passing score will be determined in accordance with the Commission’s training and examination rules and regulations.

3.3.2. Final Clinical Exam

This examination assesses trainees’ level of clinical skills and approach in management, including data gathering, patient management, communication, and counseling skills. It is held annually at the end of each academic year and will be either (SOE or OSCE) format in the form of PMPs. Exam eligibility and the passing score will be in accordance with the Commission’s training and examination rules and regulations.

Blueprint outlines (fellowship final examination: IVF)

	Written component (60 questions)	Range
1	Infertility	18–20
2	Endocrine	18–20
3	Assisted productive medicine	18–20
4	Research and ethics and patient safety	5–6
	Clinical component (2 SOE)	
1	Station: infertility or endocrine	1
2	Station: assisted reproductive medicine	1

ROLES OF MENTORS, FELLOWS, AND PROGRAM DIRECTOR:

The purposes of the assessment during training is to:

- Support learning
- Develop professional growth
- Monitor progression
- Judge competency and certification
- Evaluate the quality of the training program

The general principles include the following:

- Judgment should be based on holistic profiling of trainees rather than on individual traits or instruments
- Assessment should be continuous in nature
- Trainees and faculty must meet to review portfolios and logbooks once every three months and at the end of a given rotation.
- Assessment should be strongly linked to the curriculum and the content.

Program Directors and supervising mentors provide objective competence assessments in patient care and procedural skills, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice based on the

specialty-specific milestones use multiple evaluators (e.g., faculty, peers, patients, self, and other professional staff). They document progressive fellow performance improvement appropriate to educational level and provide each fellow with documented semiannual performance evaluations with feedback. In accordance with the institutional policy, evaluations of fellow performance must be accessible to the fellow for review.

Program and sponsoring institutions must educate fellows and faculty members regarding the professional responsibility of physicians to appear for duty appropriately rested and fit to provide the services required by their patients. The program must be committed to and responsible for promoting patient safety and fellow well-being through a supportive educational environment. The program director must ensure that fellows are integrated and actively participate in interdisciplinary clinical quality improvement and patient safety programs. The program director and institution should promote a culture of professionalism that supports patient safety and personal responsibility.

The primary role of mentors is to nurture a long-term professional relationship with the assigned fellows. Mentors are expected to provide an “academic home” for fellows so that they can feel comfortable in sharing their experiences, express their concerns, and clarify issues in a non-threatening environment. They are expected to treat sensitive information about the fellows in the strictest confidence.

They are also expected to make appropriate and early referrals to the Program Director or Head of the Department if they identify a problem that would require expertise or resources beyond their capacity. Examples of such referrals could include:

- Serious academic problems
- Progressive deterioration of academic performance
- Potential mental or psychological issues
- Personal problems that interfere with academic duties
- Professional misconduct, etc.

However, the following are NOT expected roles from mentors:

- Providing extra tutorials, lectures, or clinical sessions
- Providing counseling for serious mental and psychological problems
- Being involved in residents’ personal matters
- Providing financial or other material support

1. Mandatory reporting to Program Director or Head of the Department

- Consecutive absence from three scheduled meetings without any valid reasons
- Unprofessional behavior
- Consistent underperformance despite counseling
- Serious psychological, emotional, or health problems that could potentially compromise patient care
- Any other serious concerns of mentors

2. Who can be a mentor?

Any faculty member, consultant grade and above, who is part of the program can be a mentor. No special training is required.

3. Mentoring tasks

The following are recommended tasks to be completed during training:

- Discussion of overall clinical experience of the fellow with specific attention to any concerns raised
- Review of logbook or portfolio with the fellows to determine whether the trainee is on track to meeting their training goals
- Revisiting earlier concerns or unresolved issues, if any
- Exploration of any non-academic factors that seriously interfere with trainee performance



FELLOW ROLE

Fellows must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning.

They are expected to develop skills and habits to be able to meet the following goals: identify strengths, deficiencies, and limits in their knowledge and expertise; set learning and improvement goals; identify and perform appropriate learning activities; systematically analyze practice using quality improvement methods; and make changes toward the goal of practice improvement.

In addition, they are expected to develop the skills and habits necessary to regularly review individual, program, and national ART outcome data to assess and improve patient outcomes. They are also expected to incorporate formative evaluation feedback into daily practice; locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems; use information technology to optimize learning; participate in the education of patients, families, students, residents and other health professionals; and participate in multidisciplinary inter-professional conferences devoted to care of reproductive endocrinology and infertility patients.

They are expected to communicate effectively with patients and their families as well as the public across a broad range of socioeconomic and cultural backgrounds as appropriate; efficiently work with physicians, other health professionals, and health related agencies; competently function as a member or leader of a healthcare team or other professional group; consult with other physicians and health professionals; and maintain comprehensive, timely, and legible medical records, when applicable.

They must demonstrate a commitment to carrying out their professional responsibilities and adhere to ethical principles.

They are expected to demonstrate compassion, integrity, and respect for others; responsiveness to patient needs that supersedes self-interest; and respect for patient privacy and autonomy. This must include fundamental ethical principles concerning sex differences and reproductive care; accountability to patients, society, and the profession; sensitivity and responsiveness to a diverse patient population, including, but not limited to, diversity in sex, age, culture, race, religion, disabilities; and sensitivity to the psychological, sexual, legal, and ethical implications of reproductive issues.

They must demonstrate an awareness of and responsiveness to the larger context and system of healthcare, as well as the ability to effectively call on other resources within the system to provide optimal healthcare.

They are expected to work effectively in various healthcare delivery settings and systems; coordinate patient care within the healthcare system relevant to their clinical specialty; incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care as appropriate. This must include cost-effective approaches to infertility management. They must advocate for quality patient care and optimal patient care systems; work in inter-professional teams to enhance patient safety and improve patient care quality; and participate in identifying system errors and implementing potential system solutions.

APPENDICES

- A. Examples of K1 and K2 type multiple choice questions
- B. Systematic quality assurance process for exam items
- C. ITER
- D. Examples of Formative Assessment Tools
- E. Final In-Training Evaluation Report (FITER)/Comprehensive Competency Report (CCR)
- F. Standard setting method
- G. Case development template (OSCE/SOE)
- H. SOE example
- I. Blueprint outlines (fellowship final examination: IVF)
- J. Minimum performance level (MPL) for the Clinical Examination Performance Checklist
- K. Top Conditions and procedures in the Specialty



Appendix A: Examples of K1 and K2 type multiple choice questions¹

Examples of K2 type questions:

Question 1

A couple presented with a 4-year history of unexplained infertility. They had three cycles of intrauterine insemination without success. The wife then underwent the first cycle of long protocol IVF and had an optimal response. In total, 12 oocytes were retrieved. The inseminating semen sample was normal and standard IVF was performed. The oocytes were checked 18-hours post insemination (i.e., the following day); however, there was total fertilization failure. A rescue ICSI was performed and 5 oocytes were fertilized and cleaved into good-quality embryos. Of the following, which is the most appropriate answer?

- Reported incidence of total fertilization failure after standard IVF is 26%
- Total fertilization failure after standard IVF is less common in unexplained infertility
- Rescue ICSI usually results in 89% fertilization rate
- After rescue ICSI, pregnancy rate is higher with vitrified-thawed embryos compared to fresh ET

Question 2

A 30-year-old woman came to the emergency department with increasing abdominal distention after IVF was performed 1-week earlier. The investigations revealed the following:

Hemoglobin 13.2g/dl
B-HCG 20 iu/l
Pelvic ultrasound (see ultrasound picture)



What would be your next step in managing this patient?

- Ask for a repeat B-HCG after 48 hours
- Ask for a repeat pelvic ultrasound in one week
- Prepare her for surgical ovarian de-torsion
- Admit her for observation and rehydration

¹Bloom described six levels in the taxonomy of the cognitive domain: recall, comprehension, application, analysis, synthesis, and evaluation. However, experts had difficulty in reaching consensus about specific items at this level of specificity; therefore, most Q-bank classifications only use recall and reasoning, or K1 and K2.

Examples of K1 type questions:

Question 3

A 26-year-old woman has been married for 7 months and has not become pregnant despite the couple trying. The patient is anxious. What would be some reassuring advice that you could provide her regarding the time required for conception?

- Couples have about a 25–30% chance of becoming pregnant in each cycle.
- After 3 months of being together, the chance of becoming pregnant is 90%.
- After 1 year of marriage, the chance of becoming pregnant is 55%.
- After 2 years of marriage, the chance of becoming pregnant is 30%.

Question 4

A 30-year-old woman visited your clinic with a previous report of laparoscopy confirming pelvic inflammatory disease. She wants to know the incidence of subsequent tubal infertility after one episode. What would be the appropriate information to be given to the patient?

- The incidence of subsequent tubal infertility is around 12%.
- The incidence of subsequent tubal infertility is around 20%.
- The incidence of subsequent tubal infertility is around 30%.
- The incidence of subsequent tubal infertility is around 50%.

Examples of research and ethics questions

Ethics:

Question 5

A surgeon with a busy operation list was told by his assistant that the next operation would involve a right below-knee amputation. After the operation, it was discovered that the operation should have been a left below-knee amputation. What term best describes this event?

- Sentinel event
- Adverse event
- Unintentional error
- Medical negligence

Research:

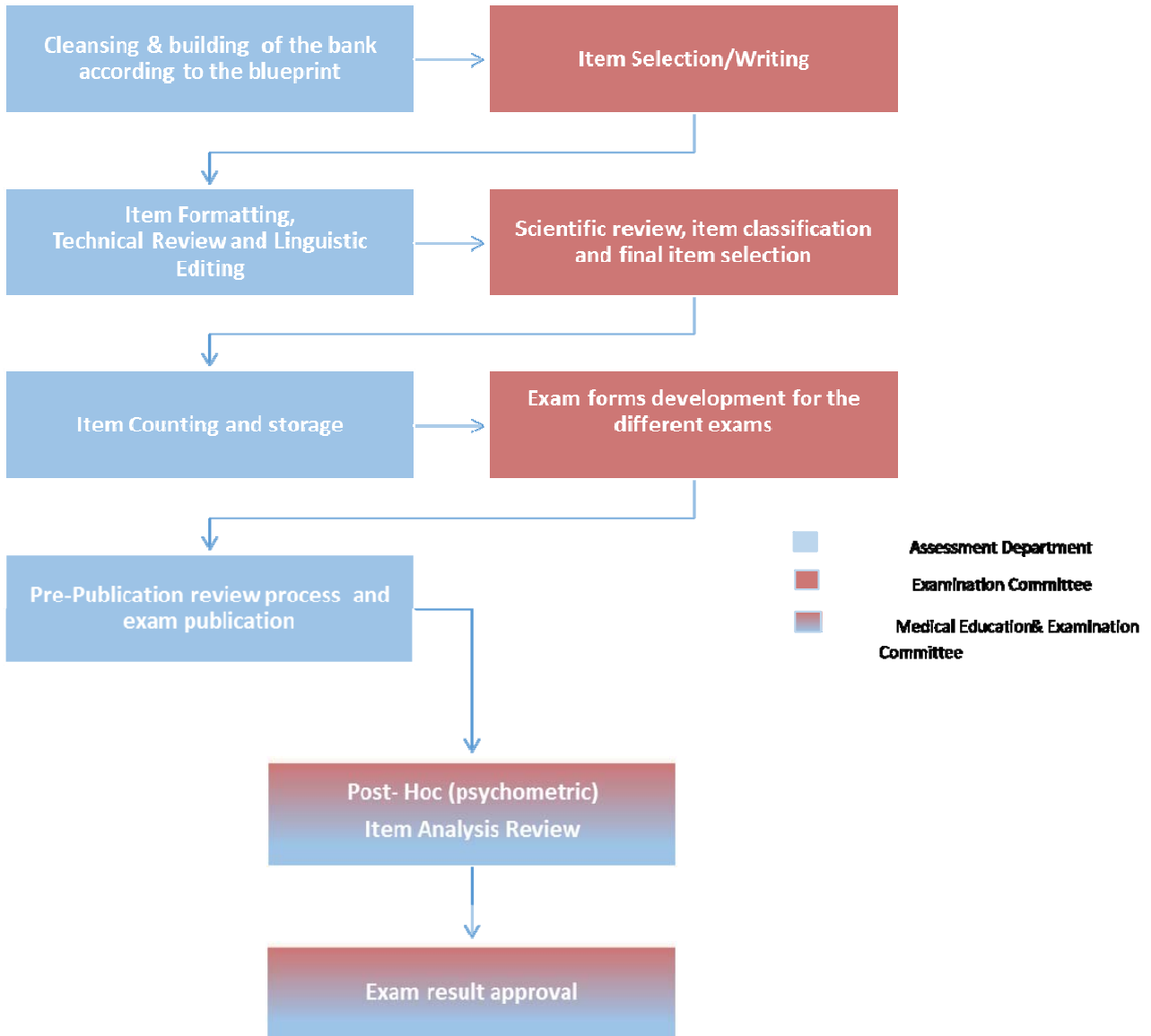
Question 6

A study was conducted to determine if there was a difference in the prevalence of diabetes mellitus among healthcare workers in Riyadh. The results showed that 30 out of 100 doctors were diabetic as compared to 50 out of 200 nurses. What is the most appropriate statistical test for this?

- t-test
- ANOVA
- Chi-square
- Correlation



Appendix B: Systematic quality assurance process for exam items



Appendix C: Continuous assessment report

Definition

The CanMEDS-based competencies end-of-rotation evaluation form is a summative evaluation report prepared for each trainee at the end of each year based on the end-of-rotation reports, which could also involve clinical assessment, oral exams, and the completion of other academic or clinical assignments. These academic or clinical assignments should be documented by an electronic tracking system (e.g., T-Res) on an annual basis. Evaluations will be based on the accomplishment of the minimum requirements of the procedures and clinical skills as determined by the program.

CER examination by law

I. Introduction

- a. The annual CER is a component of promotion to the next year of the specialist training program. Eligibility of promotion includes a satisfactory overall annual CER.

II. CER format

- a. Upon approval of the fellowship training committee, at least three CERs are submitted by the program director for each trainee during a specific training year based on a series of workplace-based assessments considered relevant by the specialty. Assessments could come in the form of multi-source feedback, mini-CEXs, DOPS, or a combination of these.
- b. An annual CER consists of the average of the CERs during a specific training year, which could also involve OSCEs, SOEs, research activities, international examinations, and/or academic assignments. The proportion of any one of these should not exceed 50% of the annual CER score.
- c. If any other assessment format is used, the CAC must agree to its implementation.

III. General rules

- a. The promotion examination shall be held once a year within 4–6 weeks after the completion of 9 months of training during that year.

Continuous evaluation report (CER)

Trainee name: _____ SCFHS# _____ Training center: _____

Level of training: _____ Rotation dates: _____

Meeting Expectations*

Competencies	Rarely	Inconsistently	Generally	Exceeds	N/A		
Medical Expert						Score	Weight %
• Appropriate basic knowledge						Subtotal /100	50%
• Accurate history and physical exam							
• Appropriate clinical decisions							
• Appropriate emergency management							
• Appropriate indication for procedures							
• Performance before, during, & after procedures							
• Clinical skills proficiency							



Communicator		
<ul style="list-style-type: none"> • Appropriate interaction with patient/family/others • Accurate documentation • Appropriate planning • Clear presentation 	Subtotal /100	15
Collaborator		
<ul style="list-style-type: none"> • Proper Interaction with health professionals • Proper consultations • Proper management of conflicts 	Subtotal /100	5
Manager		
<ul style="list-style-type: none"> • Proper use of information technology • Proper understanding of resources • Appropriate time management • Follows policies and procedures • Maximizes benefits to patients 	Subtotal /100	10
Health Advocate		
<ul style="list-style-type: none"> • Appropriate response to patient health needs • Appropriate promotion and participation in patient safety 	Subtotal /100	5
Scholar		
<ul style="list-style-type: none"> • Participates in appropriate medical education activities • Implements an ongoing plan for self-education • Analyzes and integrates medical information • Teaches others • Completion of the electronic logbook 	Subtotal /100	10
Professional		
<ul style="list-style-type: none"> • Proper professional attitude • Understands medical and legal obligations • Punctual • Maintains ethics and morals • Accepts advice • Participates in professional organizations 	Subtotal /100	5
	Total score /100	100

	Comment on the strengths and weaknesses of the candidate. Make direct references to the objectives and give specific examples wherever possible.
--	---

Evaluation methods Mini- DOPS OSCE CBD MSF Others (specify):
CEX

Residency training committee approval Meeting No. Date

Program director name: Date Signature

Trainee name: Date Signature

*Rarely ≤ 30%, inconsistently > 30–60%, generally > 60–90%, Exceeds > 90%.



Appendix D: Examples of Formative Assessment Tools

Workplace-based assessment

Assessment forms to be completed by the supervisor as required by rotation-specific objectives, which consist of the following:

- Presentation rating form (see Appendix D Form 1)
- CBD (see Appendix D Form 2)
- DOPS (see Appendix D Form 3)
- Mini-CEX (see Appendix D Form 4)

Form 1: Presentation rating form

Trainee name: _____ Level: _____

Date of presentation: _____ Topic: _____

Please use the following scale to evaluate the presentation:

Very weak	Weak	Acceptable	Good	Very good	Not applicable
1	2	3	4	5	N/A

Medical expert	1	2	3	4	5	N/A
-----------------------	---	---	---	---	---	-----

- Demonstrated thorough knowledge of the topic
- Presented at an appropriate level and with adequate details
- Well-prepared, knew the content, and answered questions

Comments (optional)

Communicator						
---------------------	--	--	--	--	--	--

- Provided objectives and an outline
- Presentation was clear and organized
- Used effective methods and presentation style
- Built good rapport with the audience

Comments (optional)

Collaborator						
---------------------	--	--	--	--	--	--

- Welcomed comments from learners and led discussions
- Worked with supervisor/team effectively in preparing the session

Comments (optional)

Health advocate						
------------------------	--	--	--	--	--	--

- Managed time effectively
- Addressed preventive aspects of care

Comments (optional)

Scholar						
----------------	--	--	--	--	--	--

- Posed appropriate learning questions
- Accessed and interpreted relevant literature

Comments (optional)

Professional						
---------------------	--	--	--	--	--	--

- Maintained patients’ confidentiality if clinical material was used
 - Identified and managed relevant conflicts of interest
 - Supported conclusions with relevant convincing evidence
- Comments (optional)

Overall performance

Did not meet expectations	Short of expectations	Met expectations	Exceeded expectations	Far exceeded expectations
----------------------------------	------------------------------	-------------------------	------------------------------	----------------------------------

Comments:

Evaluator name:

Evaluator signature:

Form 2: CBD

CBD Definition

The purpose of CBD encounters is to evaluate the level of professional judgment exercised in clinical cases by the trainees. CBDs are designed to:

- a. Guide trainees’ learning through structured feedback
- b. Help improve clinical decision making, clinical knowledge, and patient management
- c. Provide trainees with an opportunity to discuss their approach to the case and identify strategies to improve their practice
- d. Enable evaluators to share their professional knowledge and experience

Overview

A CBD encounter involves a comprehensive review of clinical cases between a trainee and an evaluator. The trainee is given feedback from an evaluator across a range of areas relating to clinical knowledge, clinical decision making, and patient management. CBD encounters generally take approximately 20–30 minutes.

Trainee responsibilities

- a. Arrange a CBD encounter with an evaluator
- b. Provide the evaluator with a copy of the CBD rating form

Evaluator responsibilities

- a. Choose the case(s) for discussion
- b. Use the CBD form to rate the trainee
- c. Provide constructive feedback and discuss improvement strategies
- d. Provide an overall judgment on the trainee’s clinical decision-making skills



CBD rating form

Trainee name:

Registration no.:

Residency level:

Date:

Summary of case:

New case Follow-up case

Assessment setting: Inpatient Ambulatory ICU CCU Emergency department
 Other _____

Complexity: Low Moderate High

Focus: Data gathering Diagnosis Therapy Counseling
 Other _____

Assessment

Questions	Stage of training score								
	Unsatisfactory			Satisfactory			Superior		
	1	2	3	4	5	6	7	8	9

Medical record
documentation

Clinical assessment

Investigation and referrals

Treatment

Follow-up and future
planning

Professionalism

Clinical judgment

Leadership/managerial skills

Overall performance

Suggestions for development

- 1-
- 2-
- 3-

Evaluator name:

Evaluator signature:

Form 3: DOPS

The DOPS is a WBA tool. It is a structured checklist for assessing competence in performing diagnostic and interventional procedures. It facilitates feedback to develop behaviors and performance related to operative, decision-making, communication, and teamwork skills. The assessment is formative and is aimed at guiding further development of practice.

DOPS rating form

Trainee name

Procedure observed
Observed by
Signature of observer

Registration

Date

Description

Understood the indications for the procedure and clinical alternatives
Explained plans and potential risks to the patient in a clear and understandable manner
Has a good understanding of the theoretical background of the procedure, including anatomy, physiology, and imaging
Good advanced preparation for the procedure
Communicated the procedural plan to relevant staff
Explained procedures to the patient and obtained valid informed consent
Was aware of risks of cross infection and demonstrated an effective aseptic technique during the procedure
Procedure success or failure was understood in the current setting
Coped well with unexpected problems
Demonstrated awareness through constant monitoring; maintained focus
Confidently demonstrated correct procedural sequence; minimal hesitation
Was skillful and gently handled patient and tissues
Maintained accurate and legible records, including descriptions of problems or difficulties
Issued clear post-procedural instructions to the patient and/or staff
Always sought to work to the highest professional standards

Satisfactory Unsatisfactory Comment

Assessment

Practice was satisfactory

Practice was unsatisfactory

Examples of good practice:

Areas of practice requiring improvement

Should focus on the following:

Further learning and experience



Form 4: Mini-CEX

Definition

The mini-CEX is a 10–20-minute direct observation assessment or “snapshot” of a trainee-patient interaction. To be most useful, the evaluator should provide timely and specific feedback to the trainee after each assessment of a trainee-patient encounter.

Purpose

Mini-CEXs are designed to:

- a. Guide trainees’ learning through structured feedback
- b. Help improve trainees’ communication, history-taking, physical examination, and professional practice
- c. Provide trainees with an opportunity to be observed during interactions with patients and identify strategies to improve their practice
- d. Enable the evaluator to share their professional knowledge and experience

Overview

A mini-CEX encounter involves the observation of trainees while they consult with a patient in their workplace. The evaluator provides the trainee with feedback across a range of areas relating to professional qualities and clinical competence immediately after the observation.

Trainee responsibilities

- a. Arrange a mini-CEX encounter with an evaluator
- b. Provide the evaluator with a copy of the Mini-CEX rating form

Evaluator responsibilities

- a. Choose an appropriate consultation for the encounter
- b. Use the Mini-CEX rating form to rate the trainee
- c. Provide constructive feedback and discuss improvement strategies. If a trainee receives a rating that is unsatisfactory, the evaluator must complete the “Suggestions for Development” section. The form cannot be submitted if this section is left blank.

Mini-CEX rating form

Trainee name: _____ Registration no.: _____ Residency level: _____

Date: _____

Mini-CEX time: _____ min

Observing: _____ min

Providing feedback: _____ min

Summary of case:

New case Follow-up Case

Assessment setting: Inpatient Ambulatory ICU CCU Emergency department
Other _____ Complexity: Low Moderate High

Focus: Data gathering Diagnosis Therapy Counseling
Other _____

Assessment:

Questions	Stage of training score								
	Unsatisfactory			Satisfactory			Superior		
	1	2	3	4	5	6	7	8	9
History-taking									
Physical examination skills									
Communication skills									
Critical judgment									
Humanistic quality/professionalism									
Organization and efficiency									
Overall clinical care									

Suggestions for development

- 1-
- 2-
- 3-

Evaluator name:

Evaluator signature:

Question	Description
History-taking	Facilitates patients' narrative; uses appropriate questions to effectively obtain accurate and adequate information; and appropriately responds to verbal and nonverbal cues
Physical examination skills	Follows an efficient, logical sequence; examinations are appropriate for clinical problems; provides patients with explanations; and is sensitive to patients' comfort and modesty
Communication skills	Explores patients' perspectives; uses jargon-free speech; open, honest, and empathetic; and agrees with management plans and therapies with patients
Critical judgment	Forms appropriate diagnoses and suitable management plans, orders selectively, conducts appropriate diagnostic studies, and considers risks and benefits



Humanistic quality/professionalism	Shows respect, compassion, and empathy; establishes trust; attends to patients' comfort needs; respects confidentiality; behaves in an ethical manner; and is aware of legal frameworks and their own limitations
Organization and efficiency	Prioritizes, is timely and succinct, and summarizes
Overall clinical care	Demonstrates global judgment based on the above topics

Appendix E: Final In-Training Evaluation Report (FITER)/ Comprehensive Competency Report (CCR)

Definition

The FITER is completed by the training program director for each trainee at the end of his/her final year of fellowship, which could also involve clinical assessment, oral exams, and completing other academic assignments. It is a summative evaluation prepared at the end of a program, which grants trainees with a full range of competencies (knowledge, skills, and attitudes) required for being a specialist, and the readiness to complete the Saudi certification examinations. The FITER is not a composite of the regular in-training evaluations; rather, it is a testimony of the evaluation of competencies at the end of a fellowship education program.

FITER examination by law

Obtaining a training completion certificate issued by the local supervisory committee based on a satisfactory FITER report and any other related requirements assigned by any mentioned scientific boards (e.g. research, publication, logbook, etc.) grants trainees eligibility to sit for the final examination.

Final In-Training Evaluation Report (FITER)/Comprehensive Competency Report (CCR)

Trainee name:

Trainee SCFHS number:

Evaluation covering the last year as a fellow:

In the view of the Fellowship Program Committee, the trainee mentioned above has acquired the competencies of the specialty/subspecialty as prescribed in the training objectives and is competent to practice as a subspecialist.

	Yes	No
Written exams		
Oral exams		
Clinical observations (e.g., CERs) from faculty members		
OSCEs		
Feedback from healthcare professionals		
Completion of a scholarly project		
Other evaluations:		

Comments:

Name of program director/assessor for CCR:

Date:

Signature:



This is to attest that I have read this document.

Name of trainee:

SCFHS number:

Date:

Signature:

Trainee's comments:

Note: If, during the period from the date of signature of this document to the completion of training, the Fellowship Program Committee judges that the candidate's demonstration of competence is inconsistent with its present evaluation, it may declare the document null and void and replace it with an updated FITER. Accordingly, eligibility for examination would be dependent on the updated FITER.

FITER: medical expert competency Trainee name:	Expectations					
	*Rarely meets	*Inconsistently meets	*Generally meets	*Sometimes exceeds	*Consistently exceeds	Not applicable

Trainee SCFHS number:

Medical expert

- a. Possesses basic scientific and clinical knowledge relevant to the specialty
- b. Performs histories and physical examinations that are complete, accurate, and well-organized
- c. Uses all pertinent information to arrive at complete and accurate clinical decisions

d. Recognizes and manages emergency conditions resulting in prompt and appropriate treatment.

Remains calm, acts in a timely manner, and prioritizes correctly

e. Recognizes and appropriately manages patients with complex problems and multi-system diseases

f. Demonstrates proficiency in pre-operative and post-operative patient management, including indications for surgical intervention

Please comment on the strengths and weaknesses of the candidate and provide a rationale for your ratings. Make direct references to the objectives and give specific examples wherever possible.

*Rarely meets $\leq 30\%$, inconsistently meets $> 30-60\%$, generally meets $> 60-80\%$, sometimes exceeds $> 80-90\%$, consistently exceeds $> 90\%$



FITER:

procedures
and clinical
skills
competencies
Trainee name:

Expectations

*Rarely meets	*Inconsistently meets	*Generally meets	*Sometimes exceeds	*Consistently exceeds	Not applicable
------------------	--------------------------	---------------------	-----------------------	--------------------------	-------------------

Trainee
SCFHS
number:

Procedures and clinical skills

a. Demonstrates the ability to perform diagnostic and therapeutic procedures/skills described in the specialty curriculum

1. Endoscopic procedures

•

2. Open surgical procedures

•

3. Laparoscopic procedures

•

4. Other procedures

•

5. Clinical skills

•

a. Minimizes risks
and discomfort to
the patient

b. Overall is
proficient in
procedures and
clinical skills

Please comment on the strengths and weaknesses of the candidate and provide a rationale for your ratings. Make direct references to the objectives and give specific examples wherever possible.

*Rarely meets $\leq 30\%$, inconsistently meets $> 30-60\%$, generally meets $> 60-80\%$, sometimes exceeds $> 80-90\%$, consistently exceeds $> 90\%$



FITER:

communicator
competency
Trainee name:

Expectations						
*Rarely meets	*Inconsistently meets	*Generally meets	*Sometimes exceeds	*Consistently exceeds	Not applicable	

Trainee SCFHS
number:

Communicator

- a. Establishes a therapeutic relationship with patients and communicates well with the patients' families. Provides clear and thorough explanations of diagnosis, investigation, and management in a professional manner. Demonstrates empathy and sensitivity to racial, sex, and cultural issues
- b. Prepares documentation that is accurate and timely
- c. Develops diagnostic and therapeutic plans that are understandable to patients and clear and concise for other healthcare personnel, including other consultants
- d. Presents clinical summaries and scientific information to a healthcare audience in a clear and concise manner

Please comment on the strengths and weaknesses of the candidate and provide a rationale for your ratings. Make direct references to the objectives and give specific examples wherever possible.

*Rarely meets ≤ 30%, inconsistently meets > 30–60%, generally meets > 60–80%, sometimes exceeds > 80–90%, consistently exceeds > 90%



FITER:

collaborator
competency
Trainee name:

Expectations						
*Rarely meets	*Inconsistently meets	*Generally meets	*Sometimes exceeds	*Consistently exceeds	Not applicable	

Trainee SCFHS
number:

Collaborator

- a. Interacts effectively with health professionals by recognizing and acknowledging their roles and expertise
- b. Consults and delegates effectively
- c. Establishes good relationships with peers and other health professionals
- d. Effectively provides and receives information from other health professionals
- e. Manages conflict situations well

Please comment on the strengths and weaknesses of the candidate and provide a rationale for your ratings. Make direct references to the objectives and give specific examples wherever possible.

*Rarely meets ≤ 30%, inconsistently meets > 30–60%, generally meets > 60–80%, sometimes exceeds > 80–90%, consistently exceeds > 90%



FITER: manager
competency

Trainee name:

Expectations

*Rarely meets	*Inconsistently meets	*Generally meets	*Sometimes exceeds	*Consistently exceeds	Not applicable
------------------	--------------------------	---------------------	-----------------------	--------------------------	-------------------

Trainee SCFHS
number:

Manager

- a. Understands and makes effective use of information technology (e.g., methods for searching medical databases)
- b. Makes cost-effective use of healthcare resources based on sound judgment
- c. Prioritizes and uses personal and professional time effectively to achieve a balanced personal and professional life
- d. Demonstrates an understanding of the principles of practice management
- e. Demonstrates the ability to effectively utilize healthcare resources to maximize benefits to all patients, including managing waiting lists

Please comment on the strengths and weaknesses of the candidate and provide a rationale for your ratings. Make direct references to the objectives and give specific examples wherever possible.

*Rarely meets ≤ 30%, inconsistently meets > 30–60%, generally meets > 60–80%, sometimes exceeds > 80–90%, consistently exceeds > 90%



FITER: health
advocate
competency
Trainee name:

Expectations					
*Rarely meets	*Inconsistently meets	*Generally meets	*Sometimes exceeds	*Consistently exceeds	Not applicable

Trainee SCFHS
number:

Health advocate

- a. Understands the specialist's role in intervening on behalf of patients with respect to the social, economic, and biological factors that may impact their health
- b. Understands the specialist's role in intervening on behalf of the community with respect to the social, economic, and biological factors that may impact community health
- c. Recognizes and responds appropriately in advocacy situations

Please comment on the strengths and weaknesses of the candidate and provide a rationale for your ratings. Make direct reference to the objectives and give specific examples wherever possible.

*Rarely meets ≤ 30%, inconsistently meets > 30–60%, generally meets > 60–80%, sometimes exceeds > 80–90%, consistently exceeds > 90%



FITER: scholar
competency
Trainee name:

Expectations						
*Rarely meets	*Inconsistently meets	*Generally meets	*Sometimes exceeds	*Consistently exceeds	Not applicable	

Trainee SCFHS
number:

Scholar

- a. Demonstrates an understanding of, and a commitment to, the need for continuous learning. Develops and implements an ongoing and effective personal learning strategy
- b. Critically appraises medical information by asking relevant questions and determining what information is reliable. Successfully integrates information from a variety of sources
- c. Understands the principles of adult learning and helps others learn by providing guidance, teaching, and constructive feedback
- d. Facilitates the learning of patients, other staff/students, and health professionals
- e. Completes the electronic log book in a timely fashion

Please comment on the strengths and weaknesses of the candidate and provide a rationale for your ratings. Make direct references to the specific objectives and give specific examples wherever possible.

*Rarely meets ≤ 30%, inconsistently meets > 30–60%, generally meets > 60–80%, sometimes exceeds > 80–90%, consistently exceeds > 90%



FITER:

professional
competency
Trainee name:

Expectations						
*Rarely meets	*Inconsistently meets	*Generally meets	*Sometimes exceeds	*Consistently exceeds	Not applicable	

Trainee SCFHS
number:

Professional

- a. Demonstrates integrity, honesty, compassion, and respect for diversity
- b. Fulfills the medical, legal, and professional obligations of a specialist
- c. Meets deadlines and demonstrates punctuality
- d. Monitors patients and provides follow-ups
- e. Understands the principles of ethics and applies these in clinical situations
- f. Demonstrates an awareness of one's limitations and seeks advice when necessary. Accepts advice graciously
- g. Demonstrates respect toward other physicians and healthcare workers
- h. Participates in professional organizations: local, provincial, and national

Please comment on the strengths and weaknesses of the candidate and provide a rationale for your ratings. Make direct references to the objectives and give specific examples wherever possible.

*Rarely meets $\leq 30\%$, inconsistently meets $> 30-60\%$, generally meets $> 60-80\%$, sometimes exceeds $> 80-90\%$, consistently exceeds $> 90\%$



Appendix F: Standard setting method⁶

To set a passing score using a standard setting method, the specialty examination committee must adhere to the following:

- a. Use a standard setting method based on judgments of the test questions/examinees; in this case, Angoff's method is recommended
- b. Approve the process and passing score from the SCFHS Assistant General Secretary for Postgraduate Studies one month prior to exam administration
- c. The passing score should be posted on the SCFHS website after the approval of the SCFHS Assistant General Secretary for Postgraduate Studies
- d. Adhere to the following five basic steps (if Angoff's method is used) outlined below and document the detailed standard setting process in meeting minutes

The five basic steps for setting a passing score

1. **Select the judges:** The judges must be qualified to decide what level of competence measured by the exam is necessary. The more judges, the better. The least to be involved in setting the passing score are five judges. Judges involved in this process must be specialty exam committee members. If needed, other judges could be included upon the approval of the SCFHS Assistant General Secretary for Postgraduate Studies.
2. **Define "borderline candidate" competence:** The judges need to describe and agree upon a person whose competence level represents the borderline between the acceptable and unacceptable levels of competence measured by the exam. This definition must be documented.
3. **Train the judges to use Angoff's method:** The passing score is computed from the expected scores for each individual question. The judge considers each question and makes a judgment regarding the probability of a borderline candidate answering the question correctly. The probability must be between 0.00 and 1.00.
4. **Collect judgments:** Two approaches exist: either allowing judges to make individual judgments or trying to reach a consensus. A compromise procedure would involve:
 - a. Having the judges make preliminary judgments for the first few questions only
 - b. Conducting a brief discussion of each of these questions. Each judge announces his/her choice of probability for each question. If the figures are similar (i.e., within 10–15% points), go on to the next question. However, if they are not similar, a judge who gave one of the highest values will be asked to explain his/her reasons for choosing such a high probability. A judge who gave one of the lowest values will then be asked to explain his/her reasons for choosing such a low probability. If they wish, the judges are permitted to change their judgments, although they must be made to understand that their judgments are supposed to describe the performance of borderline candidates.
 - c. After discussing the first few questions, the judges will be asked to make preliminary judgments regarding the remaining questions.
 - d. Discussing the remaining questions as indicated above and giving the judges a chance to change their judgments if they want to.
 - e. Collecting the judgments
5. **Combine the judgments to set a passing score:** Simply add the probabilities of the individual questions to get each judge's estimate of the borderline candidates' expected scores for the whole test. Then, combine the scores computed by the individual judges by computing the mean, median, or trimmed mean.



Appendix G: Case development template (OSCE/SOE)

Patient demographics

History of present illness

Current life situation

Personality

Past medical history

Family medical history

Medications

Allergies

Social history

Physical exam

Images/figures/tables

Laboratory, radiology, and other relevant findings

Name, age, sex, etc. (how did the current encounter come about?)

Chief complaint (reason for visit)

Where (location and radiation of symptom)

When (when it began, fluctuation over time,

Quality duration)



Quantity (what it feels like)

Aggravating/alleviating factors (intensity, extent, and degree of disability)

Associated symptoms (what makes it better/worse)

Beliefs (other manifestations, what the patient thinks is wrong)

(where the patient lives/works, etc.)

(key emotional tone and approach to responses)

(past illness, including surgical or psychiatric conditions)

(past medical, surgical, and/or psychiatric conditions relevant to the case)

(list with quantity, if relevant)

(list)

(e.g., smoking, drugs, alcohol, diet, exercise, etc.)

Relevant positive and negative findings

Relevant supporting data

Relevant positive and negative results



Appendix H: SOE example

Instructions to candidate: (15 minutes)

Note: Text in “*Italic*” is the outline of questions and information presented by the examiner. This is followed by expected actions/responses by the candidate.

How will you manage this patient prior to surgery?

Make a detailed pre-operative assessment to include patient history, review of medical and nursing records, and clinical examination. The likely problems of this patient include dehydration, electrolyte imbalance, acid base imbalance, asthma, or compromised respiratory function due to abdominal distension.

On clinical examination you elicit following clinical findings

- Patient looks ill, tired, and dehydrated
- Abdomen distended, nausea and vomiting
- Urine output of 10–20 ml/hour

What other information do you want?

I need to check her blood pressure (BP), heart rate (HR), state of peripheral perfusion (capillary refill), fluid balance (composition and quantity of intravenous fluids given). I also need to check her respiratory rate (RR), auscultate her chest for wheezes, and monitor her oxygen saturation using pulse oximetry (SpO₂).

BP is 90/42 mmHg, HR is 110/min, RR is 22/min, bilateral extensive wheezes present, SpO₂ is 90% (in-room air).

What investigations would you like to conduct at this stage?

I would want to do a full blood count, urea and electrolytes, blood glucose, electrocardiogram (ECG), chest X-ray, peak expiratory flow rate (PEFR), and arterial blood gas analyses:

Na = 132 mmol/l, K=3.1 mmol/l; Urea: 9.3 mmol/l, Creatinine: 122 mmol/l; PEFR: 150 l/min

The surgeon insists that she needs to go to theater immediately as he has some other commitment later. Are you happy to anaesthetize now? Why or why not?

No, her hydration needs to be addressed and her respiratory parameters need to be optimized before anaesthetization.

How will you assess dehydration?

- Vital signs: Tachycardia, hypotension
- End-organ perfusion: Altered mental state, decreased urine output, and reduced skin turgor

What electrolyte abnormalities does she have and what do you think is the cause? Hyponatraemia and hypokalaemia. This could be possibly due to vomiting and sequestration in the intestine.

Appendix I: Blueprint outlines (fellowship final examination: IVF)

	Written component (60 questions)	Range
1	Infertility	18–20
2	Endocrine	18–20
3	Assisted productive medicine	18–20
4	Research and ethics and patient safety	5–6
	Clinical component (2 SOE)	
1	Station: infertility or endocrine	1
2	Station: assisted reproductive medicine	1



Appendix J: Setting a minimum performance level (MPL) for the Clinical Examination Performance Checklist

For each item on the checklist, the judge estimates the proportion of minimally competent candidates (borderline) that perform the task correctly. The estimated scores are then averaged and added up to determine the MPL (cut score) for each station.

0 = not done, 1 = attempted but not done correctly, and 2 = done correctly

Patient care	0	1	2
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1. Asks how many minutes since the accident
2. Asks about respiratory complaints
3. Asks about signs of concussion
4. Examines cervical spine
5. Auscultates the lungs
6. Suspects internal hemorrhage

Communication and interpersonal skills			
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7. Elicits patient responses through appropriate questions (i.e., no leading questions; only one question at a time)
8. Clarifies information by repeating to make sure that he/she understood patient on an ongoing basis
9. Allows patient to speak without interrupting

Professionalism			
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10. Maintains professional composure and controlled emotions
11. Avoids assigning blame to someone else within “the system” or to the patient

Global rating	1	2	3	4	5	6	7	8	9	10
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Technique
Attitude

Judge 1 MPL = SUM (must do)/Max = 23/37 = 0.62 x 100 = 62%

Judge	One	Two	Three	Four	Five	Six	Station MPL
MPL	62%	58%	61%	55%	65%	59%	360/6 = 60%

Appendix J: Top Conditions and procedures in the Specialty

NEED TO BE FILLED

