

EDUCATIONAL OBJECTIVES
Fellowship in Minimally Invasive Gynecology
(Advanced Gynecologic Endoscopy)

CANMEDS OBJECTIVES

The objectives are consistent with those of Can MEDS competencies.

A) Medical Expert/Clinical Decision Maker

At the end of fellowship, the fellows will be able to:

1. Demonstrate that he/she possesses knowledge appropriate to the area of his/her special interest:
 - a. In biological information basic to and related to his/her clinical specialty area (anatomy, biochemistry, physiology, pathology etc.).
 - b. In understanding the status of standard clinical practice methods in Advanced Gynecologic Endoscopy.
 - c. An awareness of current literature and ideas, which concern Gynecologic Endoscopy.
 - d. An awareness of the deficiencies and problems within Gynecologic Endoscopy.
2. Demonstrate the technical capabilities in his/her specialty area. These capabilities include interview and examination, appropriate laboratory or diagnostic procedures, expected therapeutic or rehabilitative procedures.
3. Demonstrate the appropriate use of those technical capabilities and the ability to interpret, synthesize, and integrate the data derived in the approach to the patient's problem.
4. Demonstrate the application of diagnostic and therapeutic skills of Advanced Gynecologic Endoscopy for ethical and effective patient care.
5. Demonstrate the ability to provide consultation with respect to patient care, education and, to a certain extent, ethics to other physicians, patients and allied health professionals.
6. They should have knowledge of the indications, safety, complications, and limitation of endoscopic surgery as well non-surgical alternatives.
7. They should acquire a working knowledge of advanced gynecologic endoscopic operations including the indications, safety, complications, and limitation of endoscopic surgery as well non-surgical alternatives.
8. They will be able to act as a consultant to general gynecologists.

Technical skill:

- They should be able to conduct a proper diagnostic laparoscopy, as well advanced laparoscopy including myomectomy, hysterectomy, and tubal anastomosis.
- They should be able to perform diagnostic hysteroscopy, and operative hysteroscopy including myomectomy, lysis of adhesions, endometrial ablation, and resection of uterine septum.

B) Communicator

1. Demonstrate a body of knowledge and skills deemed to be common to all areas of medicine:
 - a. History taking.
 - b. Physical examination.
 - c. Emergency care
 - d. Appropriate responses and initial management of acute gynecological conditions.
2. Demonstrate the ability to establish and maintain an effective doctor-patient relationship. He/She should be able to explain to the patient in lay language the nature of the problem. He/she should give her the options in management. This allows the patients to maintain their autonomy and empowers them to influence the decision. The final decision should be theirs in collaboration with the physician.
3. Demonstrate the ability to communicate with patients, their families, and the community. Develop a compassionate understanding of the patient's needs, background; explain the nature of disease in a conscientious manner; involve relatives appropriately.
4. Demonstrate the ability to gain respect from the patients and their relatives and to be culturally sensitive.
5. The fellow must then develop a management plan including expectant management, surgical or non-surgical treatment.

C) Collaborator

1. Demonstrate the ability to establish and maintain effective working relationships as a consultant with other physicians, allied health professionals, non-medical experts, and other institutions or departments. This is regardless of whether he/she is the leader or a member of the team.
2. Demonstrate the ability to contribute and collaborate with others.
3. In this particular goal, respect among professional disciplines is to be stressed, as is an awareness of the various strengths and capabilities of the different professionals involved in health care.
4. Understand the relationship between general medical disease and surgery.
5. Recognize his/her own limitations and collaborate with other specialties including anesthesiologist, general surgeon, urologist, gastroenterologist and other specialties.
6. The fellow must learn to establish a good rapport with the operating room staff and other health professionals including the pathology and laboratory personnel.

D) Manager

1. Demonstrate the ability to use resources effectively and efficiently to balance patient care, to allocate resources wisely, to work effectively and efficiently in health care organization, to utilize information technology to optimize patient care and lifelong education, and to manage clinical practice.
2. Relationship to Health Care Team: The fellow must utilize the health care team appropriately i.e., support mutual academic activities (e.g., Wednesday Academic activities etc); work with professional colleagues regarding vacation time, share of workload, service activity, and awareness of patient care.

3. Administrative Skills: The fellow must show efficient organization of his/her time. This would include punctuality and ability to allow appropriate time for self-learning, adequate preparation for journal club, research, and clinical assignments.
4. Fellows should organize preoperative management of the patient, booking and preparation of the patient before surgery.
5. Coordinate preoperative treatment if needed.
6. Fellows should coordinate consultation pre or postoperatively with other specialties if needed.
7. Fellows should prescribe postoperative management and follow-up.
8. Have an appreciation of psychological, emotional, cultural, sexual, ethical, health economics, and social aspects of surgery.

E) Health Advocate

1. Demonstrate the ability to identify issues in human health and illness in the following manner:
 - a. Identify the existence of any such problem when it confronts him/her.
 - b. Identify the appropriate resources to solve the problems not in his/her area of training or expertise.
2. Demonstrate the ability to solve problems that are in his/her sphere of knowledge or activity, or arrange for the solution of those problems that are not in this specialty area.
3. Demonstrate the ability to contribute to improved health of patients and communities, and to recognize and respond to issues where advocacy is appropriate.
4. Demonstrate knowledge of regulations and changes in *Surgical and Endoscopic Technologies*.
5. Demonstrate the knowledge of choosing between expectant management, surgical or non-surgical treatment.
6. Advocate for the concepts of *indicated-surgery*.
7. Advocate the concept of *minimally invasive surgery*.

In this goal, there is the implication of personal responsibility. Examples would be fellow's responsibility towards perusing the solutions to problems that may be more than just the immediate medical issue including drug abuse, or marital problems.

F) Scholar

1. Demonstrate the attitudes and habits necessary to ensure his/her continuing self-directed learning, and continuing medical education. This implies seeking information from archival sources, resource persons, colleagues, peers, regular reading, and study.
2. Contribute personally to the improvement of fellowship, medical, and community programs in which he/she is involved.
3. Demonstrate the ability to critically appraise medical literature, and to facilitate learning of patients, students, and allied health professionals.
4. Demonstrate the ability to contribute to development of new knowledge by presentations and publications
5. Use evidence based data for patient's management.
6. Understand the importance of quality assurance.

7. Use the data for clinical investigations.

G. Professional

1. Demonstrate an awareness of his/her strengths, weaknesses, and feelings as they relate to his/her activities.
Implied in this goal is a willingness to modify his/her own behavior, if possible, appropriate to the activities in his/her specialty area. It is important to consider the student's role in modifying his/her identified weaknesses during his/her training and the responsibilities of the program director to provide methods for evaluating this.
2. Demonstrate the ability to function as educator to junior learners, peers, patients, colleagues, students of all disciplines, and other allied health care professionals, within the limits of his/her competence. The educational techniques of adult education (emphasizing communication, negotiation, and support, as well as dialogue, decision making, and problem solving are de rigueur).
3. Responsibility and Intellectual Honesty: The fellow must at all times be honest in his/her work and not hesitate to report the facts about patients, including errors. He/she maintains the respect of colleagues and the confidence of patients by putting patient welfare ahead of personal considerations. He/she manifests increasing ability to accept the appropriate level of responsibility for patient care. He/she must recognize his/her own limitations and be able to seek help from others (and profit from the counsel). All residents must demonstrate acceptable demeanor in appearance appropriate to the educational or clinical setting.
4. Demonstrate the ability to deliver highest quality of care with integrity, honesty, compassion, and ethics, and to exhibit appropriate personal and interpersonal professionalism.
5. Fellows should manage and schedule preoperative testing, consultation with other specialties if needed.
6. Preoperative treatment if needed for example administration of GnRHa 1 or 3 months prior to myomectomy.
7. Demonstrate the ability to identify high-risk patient and to administer proper judgment for surgical or non-surgical treatment.
8. Understand the limitation of surgical treatment and the fellow's limitation in surgery.

SPECIFIC OBJECTIVES

I. Anatomy

1. Know the anatomic structures of the pelvis, including the bony structures, muscles, blood vessels, lymphatics, and nerves.
2. Know the pelvic viscera, their anatomic relationships to one another, and to the other structures of the pelvis.
3. Understand the embryology of the pelvic viscera.
4. Know the layers, vascular supply, and nerve supply of the abdominal wall.
5. Be familiar with the retroperitoneum and retroperitoneal spaces of the pelvis, including the prevesical space (Space of Retzius), the paravesical space, the

- vesicovaginal space, the rectovaginal space, the pararectal space, and the presacral space.
6. Know the course of the ureter and the major vessels through the lower abdomen and pelvis.
 7. Know the structures of the pelvic floor and their relationship to structures visualized at laparoscopy.

II. Instrumentation

1. Understand alternative video-cameras, light sources and insufflators available.
2. Be familiar with instruments to access peritoneal cavity; Veress needle, trocars.
3. Know the principals behind various optical instruments, micro- and macrolaparoscopes.
4. Be familiar with forceps for grasping, holding, manipulating, dissecting, and typing.
5. Understand the use of needle holders, curved, straight, fine for microsuturing.
6. Thoroughly understand the physics behind electrosurgical instrumentations; unipolar forceps, needles, probes.
7. Be familiar with irrigators/aspirators, irrigating fluids.

III. Operative Laparoscopy

1. Know the role of laparoscopy in the diagnosis and management of gynecologic disease.
2. Understand the advantages and disadvantages of laparoscopic surgery in gynecology.
3. Know the instruments that are utilized in laparoscopic access to the peritoneal cavity.
4. Be aware of the various approaches to establish a pneumoperitoneum; i.e. entry sites.
5. Be familiar with open and closed laparoscopy.
6. Understand the disposable and reusable instruments.
7. Understand the various power sources utilized in laparoscopic surgery.
8. Know the anatomic landmarks of the anterior abdominal wall to safely introduce the principal and accessory trocars.
9. Know the anatomic landmarks of the abdominal/pelvic cavity and its organs.
10. Recognize normal versus abnormal anatomy, organs, and disease processes of the peritoneal space.

IV. Operative Hysteroscopy

1. Know the anatomy and physiology of the cervical canal and endometrial cavity.
2. Understand the properties of the different fluid distension media, their complications, and their treatments.
3. Be familiar with automated fluid management systems, fluid pumps, and other ancillary information used in hysteroscopy.
4. Understand the principals of continuous flow hysteroscopic instrumentation.
5. Know the indications, methods and complications associated with endometrial ablation.
6. Know the indications, methods, and complications associated with hysteroscopic myomectomy.
7. Know the indications, methods, and complications associated with lysis of intrauterine adhesions.

8. Know the indications, methods, and complications associated with incision/excision of uterine septum.
9. Know the indications, methods, and complications associated with hysteroscopic tubal cannulation.

V. Benign Gynecology

A. Ectopic pregnancy

1. Describe the major risk factors to ectopic pregnancy.
2. Describe the differential diagnosis of ectopic pregnancy.
3. Perform and interpret the tests necessary to confirm the diagnosis including accurate performance of transvaginal ultrasound.
4. Describe the indications, success and complications of medical management including prognosis for future pregnancy.
5. Describe the indications, complications and success of endoscopic surgery including prognosis for future pregnancy.
6. Perform laparoscopic salpingectomy, linear salpingostomy and partial salpingectomy.
7. Describe the diagnosis and treatment options for nontubal ectopic pregnancy.
8. Knowledge of endoscopic approach to nontubal ectopic pregnancy.

B. Recurrent pregnancy loss

1. Describe the causes of recurrent pregnancy loss and the diagnostic testing.
2. Describe congenital uterine malformations and role in recurrent pregnancy loss.
3. Describe surgical procedures to treat congenital uterine malformations.
4. Perform uterine septum resection.
5. Describe causes and diagnosis of Asherman's syndrome.
6. Perform hysteroscopic uterine lysis of synechiae.
7. Describe the role of myomas in recurrent pregnancy loss and accurately counsel patients.
8. Perform myomectomy - hysteroscopic, laparoscopic and abdominal.
9. Understand the role of hydrosalpinx in recurrent pregnancy loss and treatment options.

C. Sterilization

1. Describe the methods of tubal ligation, how to perform them, and the rates.
2. Describe history of hysteroscopic sterilization.
3. Perform tubal ligation.

D. Abnormal Uterine Bleeding

1. Describe the causes of abnormal uterine bleeding and appropriate tests to establish an accurate diagnosis.
2. Perform transvaginal sonography and hysterosonography.
3. Perform office hysteroscopy.
4. Treat abnormal uterine bleeding medically.
5. Perform operative hysteroscopy and endometrial ablation.

6. Describe types of endometrial ablation including risks and success.
7. Describe pros and cons of abdominal hysterectomy, vaginal hysterectomy, laparoscopic assisted vaginal hysterectomy, laparoscopic supracervical hysterectomy, laparoscopic assisted vaginal hysterectomy, laparoscopic supracervical hysterectomy, and total laparoscopic hysterectomy.
8. Perform laparoscopic assisted vaginal hysterectomy, laparoscopic supracervical hysterectomy and total laparoscopic hysterectomy.

E. Adnexal Masses

1. Describe the differential diagnosis of adnexal masses and the appropriate testing to confirm the diagnosis.
2. Perform transvaginal ultrasound with accurate interpretation to narrow differential diagnosis.
3. Describe management options of functional vs. pathologic ovarian cyst.
4. Describe ovarian cancer risks by age, ultrasound appearance and markers.
5. Describe risks of laparoscopic approach to ovarian cancer.
6. Perform laparoscopic ovarian cystectomy for benign adnexal path including endometrioma, dermoid cyst, fibroma, and paratubal cyst.
7. Describe management options for tubo-ovarian abscess and role of laparoscopy.
8. Perform laparoscopy for tubo-ovarian abscess.
9. Describe appropriate evaluation and treatment for hydrosalpinx.
10. Perform salpingectomy and neosalpingostomy.
11. Describe the evaluation of adnexal masses in pregnancy. Describe optimal timing of surgery and the use of the laparoscopic approach in pregnancy.
12. Perform laparoscopic surgery in pregnancy for evaluation and treatment of adnexal mass.

F. Uterine Myoma

1. Describe differential diagnosis and evaluation of uterine masses.
2. Describe indication for treatment of uterine masses.
3. Describe role of uterine myoma in infertility and pregnancy.
4. Describe treatment option for myomas including success and risks.
5. Manage patients undergoing uterine artery embolization.
6. Perform hysteroscopic resection of myoma.
7. Perform laparoscopic myomectomy.
8. Perform laparoscopic hysterectomy for uterine myoma.

G. Chronic Pelvic Pain

1. Describe the causes of pelvic pain and the evaluation indicated to make an accurate diagnosis.
2. Describe or perform the injection of an anesthetic to trigger point.
3. Describe or perform laparoscopy under IV sedation with pain mapping.
4. Describe or perform transvaginal hydrolaparoscopy.
5. Describe treatment options and their success for chronic pelvic pain.

H. Endometriosis

1. Describe pathogenesis theories and common symptoms of endometriosis.
2. Describe common physical exam and ultrasound findings for endometriosis and the role of other testing.
3. Describe medical management alternatives and their success in infertility pain management.
4. Describe ASRM staging system and its limitations.
5. Perform operative laparoscopy for all stages of endometriosis. Perform ablation of endometriosis and peritoneal resection of endometriosis.
6. Perform ureterolysis and cul de sac dissection for ovarian fossa and cul de sac endometriosis.
7. Perform ovarian cystectomy and/or ovarian ablation for endometrioma.
8. Perform or describe treatment of endometriosis involving the bladder, ureter, colon, small bowel, or diaphragm.

VI. Reproductive Surgery

1. Know microsurgical principles as they apply to pelvic laparoscopic surgery.
2. Be able to perform lysis of adhesions.
3. Be prepared to laparoscopically treat endometriosis by ablation and excision.
4. Be capable of performing a laparoscopic fimbrioplasty, neosalpingostomy, and neosalpingotomy.
5. Be able to laparoscopically treat ectopic pregnancy.
6. Be aware of laparoscopic techniques for tubal anastomosis.

VIII. General Surgery

1. Be able to perform laparoscopic appendectomy.
2. Be able to perform laparoscopic enterolysis.
3. Be able to describe and manage the complications of bowel surgery.
4. Be able to perform laparoscopic partial and full thickness resection of endometriosis of rectum and colon with repair.
5. Be able to perform laparoscopic repair of large and small bowel injuries.

X. Complications

1. Know the anatomic landmarks of the abdominal wall and of the pelvis that are important for laparoscopic access and endoscopic surgery.
2. Understand safe trocar placement and insertion to reduce complications.
3. Know potential complications associated with laparoscopic surgery.
4. Thoroughly understand the safe and effective use of power (electricity, laser, ultrasonic energy) instruments in the endoscopic surgery.
5. Be familiar with surgical endoscopic techniques that facilitate exposure and reduce the incidence of complications.
6. Know how to diagnose and manage endoscopic complications.

XI. Medico-legal Issues

1. Understand the definition of medical malpractice.
2. Be aware of procedures/situations which create increased risk for litigation.

3. Know the meaning of and practice true informed consent.
4. Develop excellent documentation/charting skills.
5. Know the appropriate methods for decreasing the risk of litigation when complications occur.