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Priority Topics and Key Features for the Assessment of Competence in Obstetrical Surgical Skills

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Introduction

The Board of Directors of the College of Family Physicians of Canada (CFPC) approved the initiative to develop Certificates of Added Competence (CACs) in Obstetrical Surgical Skills (OSS) and Obstetrical Surgical Skills (OSS) in 2015. It is founded on the ultimate goal of improving access to high-quality surgery and maternity care close to home in rural areas.

The CFPC's Working Group on the Assessment of Competence in Enhanced Surgical Skills developed this collection of priority topics and key features for assessment from 2017 to 2019. This working group was established as a collaboration among family physicians with enhanced surgical skills; family physicians with obstetrical surgical skills; representatives of the Royal College of Physicians and Surgeons of Canada's Specialty Committees for General Surgery and for Obstetrics and Gynecology; representatives from the Canadian Association of General Surgeons and from the Society of Obstetricians and Gynaecologists of Canada; and a representative from the Society of Rural Physicians of Canada.

The goals of these priority topics and key features are:

- To guide the assessment of required knowledge and skills when determining competence for awarding CACs in ESS (for family physicians who provide a broad range of surgical procedures, including Cesarean sections) and OSS (for family physicians who provide Cesarean sections and advanced obstetrical care)
- To set national standards for CFPC accreditation; all ESS and OSS programs will need to show they are evaluating all their graduates on these assessable competencies

These priority topics and key features are not all encompassing and may not fully capture the extent of the role of the OSS physician. These roles may vary appropriately according to the resources, alternatives for care, and expectations of the community. A physician with OSS may practise as one or more individuals with enhanced skills in a small community or in a smaller regional centre in partnership with specialists.

The practice of a physician with OSS must also take into account:

- The desirability of maintaining or re-establishing high-quality services as close to patients' homes as is reasonably feasible, considering factors including, but not limited to, accessibility, minimizing disruption for the patient and family, respecting cultural issues, and reducing cost to the system and patients
- The strategic importance of a robust local surgical program in the sustainability of maternity care close to home in rural and remote areas

- The foundational competence of patient selection that includes the skill to collaborate effectively with the patient, local team, and regional network when deciding to provide care locally or transfer a patient to a higher level of care
- The emerging consensus that surgical care in rural communities is best delivered, reported, and assessed for quality within regional networks of care that include family physicians with OSS and specialist surgeons; these networks recognize that competency is a team-based attribute belonging to all of surgery, anesthesia, nursing, and institutional resources
- The robust potential for integrating remote presence technology to bring personnel from regional networks or programs into the team-based surgical and maternity care in rural areas
- The emerging paradigm that outcomes of care, whether attached to practitioners or to programs, actually belong to the entire region, and that the quality of outcomes is a measure of the triage efficacy and regional network function
- The necessity for physicians with OSS to deal with clinical situations that require them to exercise clinical courage and to assume the role (which may well be placed upon them) of the team leader and surgical first responder
- The role of physicians with OSS to advocate for both physician and team education and to lead regular quality improvement activities
- The role of physicians with OSS to identify and advocate for surgical services that can be provided locally and will improve the quality of care in the community

How the priority topics and key features were developed

The Working Group on the Assessment of Competence in Enhanced Surgical Skills (which has nine members) acted as the nominal group. They generated an initial list of priority topics through an individual survey followed by group discussion and consensus. The validation survey was sent to 196 family physicians who are interested in enhanced surgical skills; the working group recommended 48 and the rest were identified using the CFPC's Section of Communities of Practice in Family Medicine database (stratified to ensure diverse and balanced representation). The survey yielded a response rate of 19 per cent, with 37 completed surveys. The responses were coded independently and another list of priority topics was generated. The lists generated by the nominal group and the larger reference group were very similar, both in the topics named and the priorities assigned, with a strong positive correlation of 0.75. This original combined list for ESS and OSS included 22 priority topics.

Key features were developed and finalized for all topics using the nominal group technique, which included four iterations of individual comments, multiple in-person discussions, and consensus building. Through this iterative process key features for certain priority topics were combined and some were removed if overlap was detected, resulting in the final list of 12 priority topics. Deliberate attention was paid to avoiding the duplication of priority topics already included in the evaluation objectives for family medicine, unless a specific focus on enhanced surgical skills was identified through key feature generation. Successful candidates for CACs in OSS are expected to have acquired core competencies in family medicine, including the [six essential skills](#) and [procedures](#).¹

In the construction of both the list of priority topics and the list of procedural skills, the working group was guided by one the largest and most established ESS programs—that of the University of Saskatchewan in Prince Albert—and by the national collaborative work accomplished over the past several years by working group members' respective organizations, including:

- The consensus curriculum papers published for ESS² and OSS³
- The Joint Position Paper on Rural Surgery and Operative Delivery⁴
- The Summit on Rural Surgery and Operative Delivery, held in Banff, Alberta, in 2016

¹ College of Family Physicians of Canada. *Defining competence for the purposes of certification by the College of Family Physicians of Canada*. Mississauga, ON: College of Family Physicians of Canada; 2010.

² Caron N, Iglesias S, Friesen R, Berjat V, Humber N, Falk R, et al. A proposal for the curriculum and evaluation for training rural family physicians in enhanced surgical skills. *Can J Surg*. 2015;58(6):419-421.

³ Burnett M, Iglesias S, Siverston J, Blake J, Woollard R, Ebert N, et al. A competency-based curriculum for training rural family physicians in operative delivery. *J Obstet Gynaecol Can*. 2017;39(6):474-477.

⁴ Iglesias S, Kornelsen J, Woollard R, Caron N, Warnock G, Friesen R, et al. Joint position paper on rural surgery and operative delivery. *Can J Rural Med*. 2015;20(4):129-138.

It is important to bear in mind that because there is great overlap between crucial competencies that are required for different priority topics, the tendency was to avoid repetition and list key features selectively. This is a living document that will be revisited regularly and updated to ensure its relevance.

How to use the priority topics and key features

It is important to note that materials in this booklet are intentionally selective and not comprehensive. Priority topics do not represent an extensive list of topics that should be covered in training but rather a selective list of areas for assessment that can help teachers/assessors infer overall competence in enhanced/obstetrical surgical skills. Key features represent the critical or essential steps in the resolution of a clinical situation or problem, so the achievement of underlying competencies can be inferred. Extrapolation of practice to reasonably related activities should be anticipated and is desirable. All key features refer to observable actions, not knowledge. They do not cover all necessary steps (e.g., history, physical examination, diagnosis, management), only those that are critical and most likely to be missed.

As such, the priority topics and their key features are not meant to be used in a checklist approach when assessing competence. They are best used for guiding assessment efforts (e.g., sampling, observation, reflection) over time to build a case for overall competence or the lack thereof. They may also be useful in the following situations:

For trainees:

- Use as a guide for self-reflection on competence and the development of a learning plan, particularly prior to and during clinical experiences
- Use as a guide for soliciting feedback from preceptors/assessors

For preceptors/assessors:

- Compare and contrast materials in this document with your assessment strategies and adjust as necessary
- Use as a guide to help develop learning plans for your trainees
- Use as a guided assessment of your trainees, including soliciting feedback, developing questions to ask trainees, and completing field notes
- Use as a self-reflection guide to assess your teaching

For programs:

- Use as a guide to plan a curriculum that can adequately expose trainees to the priority topics and procedures
- Use as a guide to develop assessment strategies
- Use as assessment standards when making decisions about residents' successful completion of training

Priority Topics

1. [Patient selection/Preoperative assessment](#)
2. [Consulting as a physician with obstetrical surgical skills](#)
3. [Labour and delivery management](#)
4. [Cesarean section](#)
5. [Abdominal access \(adapted for OSS\)](#)
6. [Female surgical sterilization \(adapted for OSS\)](#)
7. [Complex obstetrical lacerations](#)
8. [Surgical management of postpartum hemorrhage](#)
9. [First trimester bleeding](#)
10. [Intraoperative complications](#)
11. [Post-operative management](#)
12. [Continuous quality improvement](#)

Priority Topic 1: Patient selection/Preoperative assessment

1. When working as a physician with obstetrical surgical skills participate in the development of institutional and regional policies about patient selection.
2. When considering a surgery or procedure for a patient:
 - a) Independently confirm the diagnosis
 - b) Consult appropriately with anesthetists and other members of the team to determine the suitability of the patient for the procedure
 - c) Respond appropriately to the urgency of the situation
 - d) Decide where care should be provided based on personal and team skill sets, as well as the available local resources
3. In collaboration with the patient, assess the options and risks and benefits of performing the surgery/procedure locally or transferring, taking into consideration factors that include:
 - Patient stability
 - Potential complications
 - Weather conditions and geographic factors
 - Prolonged transfer delays
 - Socio-cultural factors, and the patient's and family's wishes and financial resources
 - Patient autonomy
4. When creating a management plan for a patient who will undergo a surgery or procedure locally:
 - a) Identify individual medical risks and optimize the preoperative medical status
 - b) Anticipate complications and develop a contingency plan
 - c) Develop, implement, and communicate a comprehensive plan for post-operative care

Note: For detailed key features on the priority topic **Patient Transfer**, please see the document [*Priority Topics for the Assessment of Competence in Rural and Remote Family Medicine pg.8.*](#)

Priority Topic 2: Consulting as a physician with obstetrical surgical skills

1. When consulted about a patient:
 - a) Address the concerns of the referring practitioner and the patient
 - b) Confirm the diagnosis independently using an appropriate history, examination, and investigations
 - c) Decide and clearly communicate who has ongoing responsibility for care (i.e., most responsible practitioner) to the referring physician and the patient
 - d) Communicate the treatment plan to the patient and the referring practitioner
2. When your clinical opinion does not align with the opinion of the referring practitioner and/or patient:
 - a) Define, communicate, and document your diagnosis clearly in the proposed management plan and provide alternative options
 - b) Take appropriate steps to resolve the difference of opinion respectfully and in a timely manner
 - c) Ensure ongoing follow-up as required and determine ongoing responsibility for care

Priority Topic 3: Labour and delivery management

1. When consulted regarding an antepartum or intrapartum patient for possible operative vaginal delivery or Cesarean section:
 - a) Perform a full, independent assessment of both the mother and fetus
 - b) Address the concerns of the referring practitioner and patient
 - c) Develop a time-sensitive management plan based on:
 - The acuity of the situation
 - Consideration of both maternal and fetal well-being
 - Your own skills
 - The available resources (e.g., team, equipment, transfer time)
 - d) Decide and clearly communicate who has ongoing responsibility for care (i.e., most responsible practitioner)
2. When consulted about a patient who presents with an obstetrical emergency (e.g., antepartum hemorrhage, suspected uterine rupture, abnormal fetal heart rate):
 - a) Remain calm, assume control of the situation, and communicate your plan of action assertively with the patient, referring practitioner, and health care team
 - b) Implement a management plan that considers and optimizes maternal and fetal well-being using all available resources
 - c) Initiate timely transfer when necessary
3. When consulted about a patient with possible abnormal progress in labour:
 - a) Re-evaluate to establish the diagnosis of labour and confirm or rule out dystocia (i.e., recognize variations of “normal”)
 - b) Ensure optimal management of labour
 - c) Initiate delivery when appropriate
4. When consulted for a patient with possible atypical or abnormal fetal heart monitoring:
 - a) Obtain and interpret the fetal heart tracing while considering the clinical situation
 - b) Ensure adequate intra-uterine resuscitation
 - c) Promptly initiate delivery when appropriate
5. When consulted about a patient with a complex obstetrical laceration:
 - a) Complete an appropriate examination including adequate light, analgesia, and exposure
 - b) Thoroughly assess and determine the extent of the injury to the anal sphincter
 - c) Optimize care and recognize the need for transfer
6. When initiating transfer for a patient with an acute perianal or perineal presentation:
 - a) Ensure hemostasis
 - b) Start antibiotics prior to transfer

Note: See also [Priority Topics and Key Features for the Assessment of Competence in Intrapartum and Perinatal Care.](#)

Priority Topic 4: Cesarean section

1. When consulted to assess a patient who may need a Cesarean section:
 - a) Complete an independent reassessment of the patient and determine whether a Cesarean section is an appropriate decision
 - b) Discuss with the patient the option of possibly avoiding a Cesarean section by a trial of labour
2. After a decision to perform a Cesarean section is made:
 - a) Decide whether to perform the Cesarean section locally based on the urgency, the maternal and fetal conditions, gestational age, the available surgical and neonatal resources, the availability of transportation to another site, and the importance of birth close to home
 - b) Choose the appropriate abdominal and uterine incisions based on the clinical scenario
 - c) Ensure ongoing monitoring of the mother and the fetus
 - d) Anticipate and plan for a possible difficult Cesarean section delivery (e.g., impacted head after long labour, anterior placenta, high BMI, prior abdominal surgery) to develop a team-based management plan
 - e) Ensure a team is prepared for the newborn
3. When performing a Cesarean section:
 - a) Change the surgical plan when necessary (e.g., unsuccessful anesthesia, substantial blood loss, malpresentation) in collaboration with the team
 - b) Adjust the speed/urgency of the procedure according to the circumstances (e.g., uterine rupture, abnormal fetal heart rate)
 - c) Communicate in a sensitive manner, recognizing the unique nature of the situation (e.g., awake patient, partner present)
4. When difficulty with extraction of the fetus occurs:
 - a) Recognize the need for and perform an extension of the incision (i.e., uterus, muscle, fascia, skin)
 - b) Employ alternative delivery techniques when necessary (e.g., elevate the head, breech extraction)
 - c) Direct the team for necessary assistance
5. After an unexpected or negative outcome:
 - a) Recognize the emotional impact on the mother, partner and family and provide appropriate support (e.g., maintain communication with the team caring for the newborn, arrange appropriate follow-up)

- b) Debrief and reflect on the emotional impact on you, the team, and the community and seek appropriate support

Priority Topic 5: Abdominal access (adapted for OSS)

1. In a patient who is about to have a Cesarean section:
 - a) Choose between a mid-line and Pfannenstiel incision based on history and examination (e.g., previous surgeries, obesity, most likely intra-abdominal findings)
 - b) Create optimal conditions for abdominal entry (e.g., empty the bladder, optimize patient position) in collaboration with the health care team, especially anesthesiologists
 - c) Anticipate and recognize the need to change the size and location of the incision
2. When using electrosurgery, choose appropriate applications that will enhance both efficacy and safety.

Priority Topic 6: Female surgical sterilization (adapted for OSS)

1. When consulted about a patient requesting surgical sterilization at Cesarean section or postpartum:
 - a) Provide adequate counselling, taking into consideration various patient factors (e.g., current relationship and relationship stability, cultural aspects, age, parity), risks and benefits of the procedure (e.g., permanency, risk of ectopic pregnancy, failure rates), and expected outcomes
 - b) Discuss all options for non-surgical options and surgical techniques (tubal occlusion versus salpingectomy)
2. When consulted about a patient requesting surgical sterilization at an emergency Cesarean section without previous counselling about sterilization, consider deferring sterilization until the patient has had adequate counselling and time for consideration.
3. When performing surgical sterilization, identify the appropriate anatomy (e.g., round ligament versus fallopian tube).
4. After performing surgical sterilization, verify that the pathology report matches the expected surgical specimen.

Priority Topic 7: Complex obstetrical lacerations

1. When consulted to assess a patient with a possible obstetrical laceration:
 - a) Ensure appropriate analgesia, positioning, exposure, and lighting in the operating room, if necessary
 - b) Examine the birth canal in a systematic fashion, including a digital rectal exam and walking the cervix, to ensure all injuries are identified with specific attention to fourth-degree tears
 - c) Monitor ongoing blood loss and recognize postpartum hemorrhage

2. When an obstetrical laceration requires surgical intervention:
 - a) Assess accurately whether you have the skills necessary for the repair of complex injuries (e.g., fourth-degree tear) and consider early consultation with possible transfer
 - b) Repair the tear(s) and involved anatomic structures using appropriate surgical techniques and instruments
 - c) If transfer is planned, ensure adequate analgesia, hemostasis and resuscitation

3. When creating the post-operative plan:
 - a) Prevent constipation to avoid the breakdown of the repair (e.g., prescribe laxatives)
 - b) Prescribe adequate multi-modal analgesia
 - c) Educate the patient regarding the potential long-term consequences

Priority Topic 8: Surgical management of postpartum hemorrhage

1. When consulted to manage a patient with a postpartum hemorrhage:
 - a) Remain calm and assume control of the situation
 - b) Resuscitate the patient and optimize medical management
 - c) Consider all causes of bleeding and treat correctable etiologies
 - d) Do not underestimate blood loss
 - e) Anticipate, prevent, and manage shock

2. In a hemorrhaging postpartum patient who is not responding to management:
 - a) Ensure ongoing resuscitation while preparing for surgery
 - b) Decide on the surgical intervention based on etiology, urgency, available resources, and skill level
 - c) Communicate clearly the urgency of the intervention to the team and the patient
 - d) Initiate transfer when necessary
 - e) Use an appropriate range of surgical techniques

Note: See also [*Priority Topics and Key Features for the Assessment of Competence in Intrapartum and Perinatal Care.*](#)

Priority Topic 9: First trimester bleeding

1. When consulted regarding a patient with presumed first trimester bleeding:
 - a) Perform a full reassessment (e.g., hCG, gestational age, Rh) of the patient, including a speculum exam (i.e., do not rely solely on technology and lab results), to include or exclude pregnancy
 - b) Confirm the gestational age and location of the pregnancy while considering the possibility of a heterotopic pregnancy
 - c) Confirm and respect the patient's expectations for this pregnancy
2. In a patient with a pregnancy of unknown location or uncertain viability consider delaying intervention if the patient is stable and arrange close follow-up.
3. In a patient diagnosed with a non-viable intrauterine pregnancy consider medical versus surgical management (i.e., do not rush to the operating room).
4. In a patient with a diagnosed ectopic pregnancy:
 - a) Anticipate and monitor for blood loss and possible concealed hemorrhage
 - b) Act promptly on diagnosis and initiate medical or surgical management
 - c) Discuss with the patient the impact of management options on future fertility and increased risk of recurrence
5. When performing a dilation and curettage, ensure a timely and appropriate response to suspected or actual uterine perforation.
6. In a patient who has had treatment for first trimester bleeding:
 - a) Educate the patient to recognize immediate post-op and long-term complications and the need for follow-up
 - b) Recognize and address the emotional impact of pregnancy loss

Priority Topic 10: Intraoperative complications

1. When performing any surgery:
 - a) Continuously monitor the progress of the operation to recognize developing complications
 - b) Verify anatomy at every step of the procedure
 - c) Adjust the surgical plan (e.g., stop the surgery, different approach) when the procedure is not progressing as anticipated
 - d) Facilitate open communication with the OR team throughout the procedure

2. When an intraoperative complication occurs:
 - a) Consider potential causes (both procedure related and others) and manage appropriately
 - b) Remain calm and communicate clearly
 - c) Seek input from the team and consultants
 - d) Apply basic surgical principles and skill transference
 - e) Recognize the severity of the situation and manage appropriately (e.g., stopping the procedure and arranging alternative care)

3. After completing a procedure in which an intraoperative complication has occurred:
 - a) Disclose the complication and the potential adverse outcomes to the patient and family
 - b) Recognize and address the impact the complication had on you and the team (especially after a negative outcome)
 - c) Use quality improvement strategies to reduce the likelihood of similar occurrences in the future

Priority Topic 11: Post-operative management

1. For all post-operative patients:
 - a) Make operative notes readily available
 - b) Communicate the process for follow-up and how to recognize complications with the health care team, patient, and family
2. In a patient with an unexpected post-operative course:
 - a) Review the operative notes
 - b) Reassess/re-examine the patient and undertake appropriate investigations to identify specific complications
 - c) Create a broad-based differential diagnosis and management plan considering the common complications, variations of normal recovery, and the context (e.g., demographics, age, comorbid issues)
3. When managing a patient with a post-operative complication:
 - a) Determine the need and urgency to re-operate
 - b) Mobilize resources, both locally and regionally, and consider transfer if appropriate
 - c) Consult a colleague early, when appropriate
4. Following an unexpected outcome of a surgery:
 - a) Disclose the complication and the potential adverse outcomes to the patient and family
 - b) Recognize and address the impact the complication had on you and the team (especially after a negative outcome)
 - c) Use quality improvement strategies to reduce the likelihood of similar occurrences in the future

Priority Topic 12: Continuous quality improvement

The use of obstetrical surgical skills should be done in the context of a regional network of care that includes support, education, and quality improvement.

1. When providing surgical care:
 - a) Participate in continuous quality improvement as a patient care improvement tool
 - b) Engage proactively in local and regional processes for quality improvement
 - c) Incorporate the recommendations from systematic reviews of integrated, regional processes into your practice
 - d) Review all cases systematically for predefined standards of care for both adherence to protocol and expected outcomes
 - e) Review critical incidents for opportunities to improve the quality of care

2. Advocate for both physician and team education (including simulation and mock scenarios).

Table 1. List of procedural skills for enhanced and obstetrical surgical skills

Procedures	Enhanced Surgical Skills		Obstetrical Surgical Skills	
	List A	List B	List A	List B
Gastrointestinal:				
Appendectomy	Yes			
Primary uncomplicated inguinal and umbilical hernia repair	Yes			
Colonoscopy including polypectomy	Yes			
Upper GI diagnostic endoscopy	Yes			
Hemorrhoid banding		Yes		
Diagnostic laparoscopy	Yes			
Reproductive:				
Assisted vaginal delivery	Yes (vacuum)	Low and outlet forceps	Yes (vacuum)	Low and outlet forceps
Dilation and curettage (first trimester and postpartum)	Yes		Yes	
Third-degree perineal laceration repair	Yes		Yes	
Fourth-degree perineal laceration repair		Yes		Yes
Obstetrical lacerations (excluding third- and fourth-degree perineal lacerations)	Yes		Yes	
Tubal ligation postpartum		Yes		Yes
Sterilization at Cesarean section	Yes		Yes	
Cesarean section	Yes		Yes	
Manual removal of placenta	Yes		Yes	
Surgical management of ectopic pregnancy	Yes			Yes
Compression sutures for postpartum hemorrhage	Yes		Yes	
Vasectomy		Yes		
Laparoscopic sterilization (occlusion or salpingectomy)	Yes			
Non-neonatal circumcision		Yes		
Uterine balloon tamponade (e.g., Bakri)	Yes		Yes	
Extremity:				
Carpal tunnel release		Yes		
Complex abscess drainage	Yes			Yes

Complex wound repair (flaps and grafts)		Yes		
Advanced access (central line)		Yes		
Other:				
Tonsillectomy		Yes		