Entrustable Professional Activities for Surgical Foundations

2021 VERSION 2.0

This document applies to residents who have not yet entered the stage containing revised EPAs.

This document is to be used in conjunction with the *Entrustable Professional Activity User Guide*, which is available on the Royal College's website.

Surgical Foundations: Transition to Discipline EPA #1

Performing the preoperative preparation of patients for basic surgical procedures

Key Features:

- This EPA includes verifying pertinent clinical findings and completing relevant clinical documentation, including orders.

Assessment Plan:

Case discussion and/or review of documentation by supervisor (surgeon, senior surgical assistant, senior resident or fellow)

Use Form 1.

Collect 1 observation of achievement

- 1 COM 1.2 Optimize the physical environment for patient comfort and privacy
- 2 ME 2.2 Elicit an accurate relevant history
- 3 COM 2.1 Conduct the interview in a patient-centred manner
- **4 COM 2.3** Identify other sources of information (e.g., family, medical record) that may assist in a given patient's care
- 5 ME 2.2 Perform a physical examination relevant to the presentation
- 6 ME 2.4 Develop an initial management plan for common patient presentations in surgical practice
- 7 COM 5.1 Organize information in appropriate sections within the medical record
- 8 COM 5.1 Document accurate and up-to-date problem lists and medication lists
- 9 P 1.1 Complete assigned responsibilities in a timely fashion

Recognizing and initiating early management for critically ill surgical patients

Key Features:

- This EPA focuses on the initial approach to a critically ill patient; at this early stage of training, an important feature of this task is recognizing one's own limits and seeking assistance and/or handing over care to ensure safe patient management.
- This EPA may be observed in simulation.

Assessment Plan:

Direct observation by supervisor (surgeon, senior surgical assistant, senior resident or fellow) and review of documentation

Use Form 1. Form collects information on:

- Setting: clinical; simulated

Collect 2 observations of achievement

- At least 1 in a clinical setting
- At least 2 different assessors

- 1 ME 1.6 Recognize own limits and seek assistance when necessary
- 2 ME 2.1 Perform initial resuscitation
- 3 ME 2.2 Elicit a history and perform a physical exam that informs the diagnosis
- 4 ME 2.2 Develop a differential diagnosis and adjust as new information is obtained
- 5 ME 2.2 Select necessary initial investigations to assist in diagnosis and management
- 6 ME 4.1 Identify the potential need for consultation
- 7 COM 1.2 Mitigate physical barriers to communication to optimize patient comfort, privacy, engagement, and safety
- 8 COM 2.3 Seek and synthesize relevant information from other sources, which may include the patient's family, hospital records and other health care professionals
- 9 COL 1.3 Communicate effectively with other physicians and health care professionals
- 10 S 1.1 Recognize the duality of being a learner as well as a practitioner
- **P 1.1** Consistently prioritize the needs of patients and others to ensure a patient's legitimate needs are met

Documenting clinical encounters

Key Features:

- This EPA focuses on the synthesis and documentation of relevant medical and surgical information while ensuring professional behaviour in the use of electronic medical records and/or other technologies.

Assessment Plan:

Direct observation or case discussion by supervisor (surgeon, senior surgical assistant, senior resident or fellow) with review of clinical documentation

Use Form 1.

Collect 2 observations of achievement

- 1 ME 2.2 Synthesize and interpret information from the clinical assessment
- 2 COM 5.1 Organize information in appropriate sections within the medical record
- **3 COM 5.1** Document all relevant findings and investigations
- 4 COM 5.1 Convey clinical reasoning and the rationale for decisions
- 5 COM 5.1 Provide a clear plan for ongoing management
- 6 COM 5.1 Document accurate and up-to-date problem lists and medication lists
- 7 P 1.1 Complete assigned responsibilities in a timely fashion

Demonstrating handover technique

Key Features:

- This EPA focuses on the transitions of care that occur between residents and/or at times of patient transfer to another health care setting or location.
- Key aspects of this task include accurate and effective communication as well as professionalism in the use of medical information technology.
- This EPA may be observed in the simulation setting.

Assessment Plan:

Direct observation by supervisor (surgeon, senior surgical assistant, senior resident or fellow)

Use Form 1. Form collects information on:

- Setting: clinical; simulation

Collect 2 observations of achievement

- At least 1 observation in a clinical setting
- At least 2 different assessors

- 1 ME 5.2 Use structured handover tools and strategies to enhance patient safety
- 2 ME 2.1 Identify patients at risk for sudden deterioration in clinical status
- 3 COL 3.2 Summarize and prioritize patient issues providing rationale for key decisions
- 4 COL 3.2 Communicate plans for ongoing management of patients, such as outstanding investigations and anticipated events or outcomes
- 5 COL 3.2 Answer questions from the receiving physician(s) during transitions in care, clarifying issues as needed
- **6 L 4.3** Use information technology in a manner that improves patient safety, recognizing its limitations and risks to privacy and confidentiality

Demonstrating ability to function in the operating room

Key Features:

- This EPA focuses on the safe and timely preparation for a surgical procedure including maintenance of sterility, universal precautions, handling of sharps and understanding occupational risks and hazards.
- This EPA may be observed in simulation.

Assessment Plan:

Direct observation by supervisor (surgeon, senior surgical assistant, senior resident or fellow)

Use Form 1. Form collects information on:

- Setting: clinical; simulation

Collect 1 observation of achievement

- 1 ME 3.4 Demonstrate effective procedure preparation, including the use of a pre-procedure time-out or surgical safety checklist as appropriate
- 2 ME 3.4 Hand-cleanse, gown and glove
- 3 ME 3.4 Establish and maintain a sterile field
- 4 ME 3.4 Maintain universal precautions
- 5 COL 1.2 Demonstrate knowledge of the roles and responsibilities of all participants in the operating room
- 6 P 4.1 Demonstrate an understanding of occupational risks and their management

Suturing incisions

Key Features:

- This EPA focuses on the technical skills of repairing simple skin incisions or lacerations.
- This EPA may be observed in simulation.

Assessment Plan:

Direct observation by supervisor (surgeon, senior surgical assistant, senior resident or fellow)

Use Form 1. Form collects information on:

- Wound size: < 5 cm; >5 cm
- Setting: clinical; simulation

Collect 2 observations of achievement

- At least 1 wound > 5 cm long
- At least 1 observation in a clinical setting
- At least 2 different assessors

- 1 ME 3.4 Maintain sterile technique
- 2 ME 3.4 Obtain appropriate assistance
- 3 ME 3.4 Select and use suture materials
- 4 ME 3.4 Use surgical instruments and equipment correctly and in a fluid manner
- 5 ME 3.4 Assess the quality of the closure

Managing tubes, drains and central lines

Key Features:

- This EPA may be observed in any clinical or simulated setting related to tubes and drains, including nasogastric, Jackson-Pratt or similar, chest tubes, feeding tubes, Foley catheter, and central venous catheter (e.g. blocked, accidentally removed etc.).
- This EPA may be observed in simulation.

Assessment Plan:

Direct observation or case discussion by supervisor (surgeon, senior resident or fellow)

Use Form 1. Form collects information on:

- Drain type: nasogastric; Jackson-Pratt or similar; chest tubes; feeding tubes; Foley catheter; central venous catheter; other
- Setting: clinical; simulation

Collect 2 observations of achievement

- 2 different types of tubes/drains
- At least 1 observation of a clinical setting
- At least 2 different assessors

- 1 ME 1.3 Apply knowledge of the different tubes, drains and lines used in the care of the surgical patient, the indications for their use and the risks associated with them
- **ME 2.4** Develop a management plan for common presentations related to tubes, drains and lines
- 3 ME 3.3 Determine the urgency with which various problems with in-situ tubes, drains and lines require intervention
- 4 ME 3.4 Troubleshoot tubes and drains including insertion, unblocking, repositioning, removal or replacement
- **5 COM 3.1** Communicate the plan of care in a clear, compassionate, respectful, and accurate manner to the patient and family
- **6 COL 2.1** Respond to nursing requests and concerns in a respectful and timely manner
- **P 1.1** Consistently prioritize the needs of patients and others to ensure a patient's legitimate needs are met

Providing initial management for critically ill patients

Key Features:

- This EPA focuses on recognizing when a patient requires timely intervention and/or an increased level of care, and initiating necessary interventions.
- It includes identifying when further assistance is required and promptly seeking it.
- This EPA may be observed on the ward, in the emergency department, in the intensive care unit or in a simulation facility.

Assessment Plan:

Direct observation or case discussion by supervisor (surgeon, physician, senior resident or fellow)

Use Form 1. Form collects information on:

- Type of presentation: hemodynamic; airway/respiratory; decreased level of consciousness/acute change in mental status; sepsis
- Setting: ward; emergency department; intensive care unit; simulation

Collect 3 observations of achievement

- At least 2 different presentations
- No more than 1 observation in a simulation setting
- At least 2 different assessors

- **ME 1.3** Apply clinical and biomedical sciences to manage core patient presentations in surgical practice
- 2 ME 1.4 Perform the clinical assessment in a time-effective manner
- 3 ME 1.4 Recognize urgent problems that may need the involvement of more experienced colleagues and seek their assistance
- **ME 1.5** On the basis of patient-centred priorities, seek assistance to prioritize multiple competing tasks that need to be addressed
- 5 ME 2.2 Develop a specific differential diagnosis relevant to the patient's presentation
- **6 ME 2.2** Select and/or interpret appropriate investigations and/or imaging with sufficient attention to clinical details
- 7 ME 2.2 Interpret common and simple investigational modalities
- 8 ME 2.4 Develop and implement initial management plans for common problems in surgical practice
- 9 ME 3.3 Consider urgency and potential for deterioration, in advocating for the timely execution of a procedure or therapy
- **ME 4.1** Coordinate investigation, treatment, and follow-up plans when multiple physicians and healthcare professionals are involved
- 11 COM 5.1 Document the clinical encounter to adequately convey clinical reasoning and the rationale for decisions

- ME 4.1 Identify the need for and timing of consultation with another physician or health care professional
- 13 COL 3.2 Communicate with the receiving physicians or health care professionals during transitions in care, clarifying issues after transfer as needed
- 14 L 2.2 Apply evidence and guidelines with respect to resource utilization in common clinical settings including use of blood products, investigations, inpatient versus outpatient treatment and appropriate utilization of critical care unit resources
- **P 1.3** Provide care to the critically ill patient commensurate to expressed advanced directives
- **P 4.1** Regulate attention, emotions, thoughts, and behaviours while maintaining capacity to perform professional tasks

Inserting central venous lines

Key Features:

- This EPA focuses on the technical skills of central line insertion at any anatomic site.
- This EPA may be observed on the ward, in the emergency department, in the intensive care unit or in a simulation facility.

Assessment Plan:

Direct observation by supervisor (surgeon, physician, senior resident or fellow)

Use Form 2. Form collects information on:

- Setting: clinical; simulation

Collect 2 observations of achievement

- No more than 1 in a simulation setting
- At least 2 different assessors

- 1 ME 3.1 Determine the appropriate site for line insertion
- 2 ME 3.2 Obtain and document informed consent, explaining the risks and rationale for the procedure
- 3 ME 3.4 Set up, position and drape the patient for the procedure
- 4 ME 3.4 Prepare and cleanse the procedural site
- 5 ME 3.4 Maintain universal precautions
- 6 ME 3.4 Perform the insertion of a central venous line, using ultrasound guidance as appropriate
- **7 COM 5.1** Document the encounter to convey the procedure and outcome(s)

Providing initial management for trauma patients

Key Features:

- The focus of this EPA is participation as a member of the trauma team caring for a patient with multisystem trauma.
- This EPA may include vascular control, application of a splint for bony injury or soft tissue injury, and securing of arterial and/or venous vascular access in critical and non-critical situations.
- This EPA may be observed in simulation.

Assessment Plan:

Direct observation by trauma team leader, fellow or senior resident with trauma experience

Use Form 1. Form collects information on:

- Role of resident: primary survey; secondary survey
- Setting: clinical; simulation

Collect 2 observations of achievement

- At least 1 each primary and secondary survey

- 1 ME 1.4 Perform the clinical assessment in a timely manner
- 2 ME 1.4 Recognize urgent problems that may need the involvement of more experienced colleagues and seek their assistance
- 3 ME 2.1 Iteratively establish priorities as the patient's situation evolves
- 4 ME 2.2 Develop a specific differential diagnosis relevant to the patient's presentation
- 5 ME 3.3 Consider urgency and potential for deterioration, in advocating for the timely execution of a procedure or therapy
- **6 ME 3.4** Perform pre-procedural tasks in a timely, skillful, and safe manner
- 7 ME 3.4 Perform surgical techniques in a timely, skillful, and safe manner
 - Vascular control in elective and critical situations
 - Application of a splint for bony injury or soft tissue injury
 - Securing arterial and venous vascular access in critical and non-critical situations
- 8 ME 4.1 Establish plans for ongoing care, taking into account the patient's clinical state as well as available resources
- 9 ME 4.1 Implement management to stabilize the patient prior to additional testing or transfer
- 10 COM 1.2 Optimize the physical environment for patient comfort and privacy
- 11 COL 1.1 Receive and appropriately respond to input from other health care professionals
- **12 COL 2.2** Communicate clearly and directly to promote understanding, manage differences, and resolve conflicts
- 13 COL 3.1 Determine when care should be transferred to another physician or health

professional

- 14 COL 3.2 Communicate with the receiving physicians or health care professionals during transitions in care, clarifying issues after transfer as needed
- **P 4.1** Manage the mental, physical and environmental challenges that impact behaviour and/or performance in the clinical setting

Providing risk assessment and management for preoperative patients in preparation for surgery

Key Features:

- This EPA includes selecting/reviewing relevant investigations, optimizing any preoperative risk factors and preparing the patient for surgery.

Assessment Plan:

Direct or indirect observation by supervisor (surgeon, senior resident or fellow)

Use Form 1. Form collects information on:

- Surgical priority: elective; emergent
- Patient risk category: low; high; critically ill

Collect 4 observations of achievement

- At least 1 elective
- At least 1 emergent
- At least 1 high risk
- At least 2 different assessors

- 1 ME 1.4 Perform a focused clinical assessment that addresses all relevant issues
- 2 ME 2.2 Select and/or interpret appropriate investigations and/or imaging with sufficient attention to clinical details
- 3 ME 2.4 Develop and implement plans for preoperative optimization of patients
- 4 ME 5.2 Use preoperative care pathways, as appropriate
- 5 ME 2.4 Use appropriate prophylaxis
- 6 ME 3.3 Consider urgency and potential for deterioration, in advocating for the timely execution of a procedure or therapy
- 7 COM 5.1 Document the clinical encounter to adequately convey clinical reasoning and the rationale for decisions
- 8 COL 1.2 Collaborate with other health care providers and all involved parties in booking the case including ICU, step down unit, or OR
- **9 COL 1.3** Integrate the patient's perspective and context into the collaborative care plan
- 10 HA 1.3 Identify modifiable risk factors and promote health and wellness
- 11 HA 1.3 Anticipate and advocate for the perioperative needs of patients belonging to vulnerable and marginalized populations

Providing patient education and informed consent in preparation for surgical care

Key Features:

- This EPA focuses on the communication that occurs with patients and families to inform and discuss plans for surgical care.
- This EPA may be observed in simulation.

Assessment Plan:

Direct observation by supervisor (surgeon, senior resident or fellow)

Use Form 1. Form collects information on:

- Type of procedure: emergency; elective
- Setting: clinical; simulation

Collect 3 observations of achievement

- At least 1 emergency procedure
- At least 1 elective procedure
- At least 2 in clinical settings
- At least 2 different assessors

- 1 ME 3.2 Describe a proposed surgical care plan to the patient/family, including its risks, expected outcomes and alternative treatments
- 2 COM 3.1 Convey information about the post-operative care and issues, immediate and long-term, clearly and accurately
- 3 P 1.1 Disclose the role of surgical learners in the patient's procedure and care
- 4 COM 3.1 Use plain language and avoid medical jargon
- 5 COM 3.1 Verify and validate the patient's and/or family's understanding
- 6 COM 4.3 Answer questions from the patient and/or family
- 7 COM 4.3 Use communication skills and strategies that help the patient and/or family make informed decisions
- 8 COM 5.1 Document the consent discussion and its outcome

Participating in surgical procedures

Key Features:

- This EPA focuses on foundational technical skills of surgical procedures and participation as a member of the surgical team.
- This includes demonstrating the fundamental aspects of surgical procedures, but does not include performing a procedure independently from start to finish.
- This EPA may be observed in a range of procedures, including those specific to the primary entry surgical specialty as well as others.
- This EPA may be observed in any clinical setting (e.g. emergency department, OR, minor procedures setting).

Assessment Plan:

Direct observation by supervisor (surgeon, senior resident or fellow)

Use Form 2. Form collects information on:

- Role of resident: primary assistant to the operator; secondary assistant to the operator
- Role of observer: surgeon; senior resident; other
- Type or part of procedure (write in):

Collect 4 observations of achievement

- At least 2 by surgeon
- At least 2 different types of procedures
- At least 2 different assessors

- 1 P 1.2 Prepare for the case, reviewing relevant patient information and imaging
- 2 ME 3.4 Set up, position and drape the patient for the procedure
- 3 ME 5.2 Participate in the surgical safety checklist or equivalent
- 4 ME 1.3 Apply knowledge of anatomy, key landmarks, and the surgical procedure
- 5 ME 3.4 Use surgical instruments and equipment correctly and in a fluid manner
- 6 ME 3.4 Perform safe dissection of relevant structures and tissue layers with gentle tissue handling
- 7 ME 3.4 Anticipate, recognize and respond to intraoperative challenges
- **8 ME 3.4** Demonstrate intraoperative judgement, fluidity of movement, and forward progression
- 9 COL 1.2 Provide and/or use operative assistance effectively
- 10 P 1.1 Work within personal limits, asking for help as needed
- 11 COL 1.2 Work effectively with the OR team
- 12 COM 5.1 Document the surgical procedure in a complete and timely manner

Managing patients with an uncomplicated post-operative course

Key Features:

- The observation of this EPA is divided into two parts: post-operative patient management and participation as a member of the clinical team.
- Post-operative patient management includes all aspects of writing post-operative orders, providing ongoing clinical care; documenting the post-operative course and planning for discharge.

Assessment Plan:

Part A: Postoperative management

Direct observation or case discussion by supervisor (surgeon, senior resident or fellow)

Use Form 1. Form collects information on:

- Surgical complexity: major; minor
- Patient complexity: low; high

Collect 4 observations of achievement

- At least 2 high complexity patients
- At least 2 different assessors

Part B: Collaborative care

Direct observation and/or case discussion by supervisor, with input from members of the clinical team

Use Form 1. Form collects information on

- Number of people providing input (write-in):
- Input from (select all that apply): other resident; other supervisor; nurse; other health professional

Collect feedback on at least 2 occasions

- At least 3 observers for each encounter
- At least 2 different team member roles for each encounter

<u>CanMEDS Milestones:</u>

Part A: Post-operative management

- **ME 1.3** Apply clinical and biomedical sciences to manage core patient presentations in surgical practice
- 2 ME 1.4 Perform a focused clinical assessment that addresses all relevant issues
- 3 ME 3.4 Perform wound surveillance and dressing care
- 4 ME 4.1 Coordinate investigation, treatment, and follow-up plans when multiple physicians and healthcare professionals are involved

- **ME 4.1** Ensure follow-up on results of investigation and response to treatment
- **ME 5.2** Use cognitive aids such as procedural checklists, structured communication tools, or care paths, to enhance patient safety
- 7 ME 4.1 Develop and implement a plan for post-operative, immediate and/or long-term care
- 8 COL 1.3 Integrate the patient's perspective and context into the collaborative care plan
- 9 COL 3.2 Communicate with the patient's primary health care professional about the patient's care
- 10 COL 3.2 Summarize the patient's issues in the transfer summary, including plans to deal with the ongoing issues
- 11 COL 3.2 Arrange for the appropriate resources and allied health care assistance to be available for the surgical patient
- **L 1.4** Access supports and notification processes to enhance patient safety in their institution
- 13 HA 1.2 Select patient education resources related to surgical practice
- 14 HA 1.3 Anticipate and advocate for the perioperative needs of patients belonging to vulnerable and marginalized populations
- 15 HA 1.3 Incorporate disease prevention, health promotion, and health surveillance into interactions with individual patients, including screening for child abuse, elder abuse, intimate partner abuse and domestic violence
- **P 2.2** Demonstrate a commitment to patient safety and quality improvement through adherence to institutional policies and procedures, and clinical practice guidelines

Part B: Collaborative care

- 1 COL 1.2 Demonstrate understanding of the roles and scopes of practice of other health care providers related to surgical practice
- 2 COL 1.3 Integrate the patient's perspective and context into the collaborative care plan
- 3 COL 2.1 Actively listen to and engage in interactions with collaborators
- 4 COL 3.2 Arrange for the appropriate resources and health care assistance to be available for the surgical patient
- 5 HA 1.1 Demonstrate an approach to working with patients to advocate for health services or resources
- P 4.1 Regulate attention, emotions, thoughts, and behaviours while maintaining capacity to perform professional tasks

Managing post-operative patients with complications

Key Features:

- This EPA may include any of the following complications: post-operative fever; low urine output; hypotension; chest pain; shortness of breath; bleeding; delirium; ileus.

Assessment Plan:

Case discussion by supervisor (surgeon, senior resident or fellow) with review of documentation

Use Form 1. Form collects information on:

- Type of complication: post-operative fever; low urine output; hypotension; chest pain; shortness of breath; bleeding; delirium; ileus; other complication
- Hemodynamic status: stable; unstable

Collect 8 observations of achievement

- At least 4 different complications
- At least 3 different assessors

- **ME 1.3** Apply clinical and biomedical sciences to manage core patient presentations in surgical practice
- 2 ME 1.4 Perform a focused clinical assessment that addresses all relevant issues
- 3 ME 1.4 Recognize urgent problems that may need the involvement of more experienced colleagues and seek their assistance
- 4 ME 2.2 Develop a specific differential diagnosis relevant to the patient's presentation
- 5 ME 2.2 Select and/or interpret appropriate investigations and/or imaging with sufficient attention to clinical details
- 6 ME 3.3 Consider urgency and potential for deterioration, in advocating for the timely execution of a procedure or therapy
- **ME 4.1** Coordinate investigation, treatment, and follow-up plans when multiple physicians and healthcare professionals are involved
- 8 ME 4.1 Ensure follow-up on results of investigation and response to treatment
- 9 ME 4.1 Implement a post-operative care plan for patients with a complicated post-operative course
- **ME 4.1** Identify the need for and timing of consultation with another physician or health care professional
- **ME 5.1** Recognize the occurrence of a patient safety incident
- **COM 3.1** Use strategies to verify and validate the understanding of the patient and family with regard to the diagnosis, prognosis, management plan and/or discharge plan
- 13 COM 3.1 Convey information about the post-operative care and issues, immediate

- and long-term, clearly and accurately
- 14 COM 3.2 Describe the steps in providing disclosure after a patient safety incident
- 15 COM 5.1 Document the clinical encounter to adequately convey clinical reasoning and the rationale for decisions
- **COL 1.1** Receive and appropriately respond to input from other health care professionals
- 17 P 2.2 Demonstrate a commitment to patient safety and quality improvement through adherence to institutional policies and procedures, and clinical practice guidelines

Supervising junior learners in the clinical setting

Key Features:

- This EPA focuses on the clinical supervision of junior learners, and includes ensuring safe patient care, as well as teaching and providing feedback.

Assessment Plan:

Direct observation by supervisor (surgeon, senior resident or fellow) or junior learners (medical students)

Use Form 1. Form collects information on:

- Assessor's role: junior learner; senior resident; faculty

Collect 3 observations of achievement

- At least 2 different senior residents or faculty

- 1 S 2.4 Identify the learning needs of a junior learner
- 2 S 2.1 Identify behaviours associated with positive and negative role-modelling
- 3 S 2.2 Create a positive learning environment
- **S 2.3** Identify unsafe clinical situations involving learners and manage them appropriately
- 5 S 2.3 Demonstrate an understanding of the role of appropriate supervision
- 6 S 2.4 Plan learning activities appropriate to the level of the learner
- 7 S 2.5 Provide written or oral feedback to other learners, faculty and other members of the team
- 8 P 3.3 Contribute to the assessments for other learners on their clinical rotation