

# **Proposal for seven Entrustable Professional Activities (EPAs) for the first year of postgraduate training in Anesthesiology in Switzerland**

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## **EPA 1: Preoperative assessment of an adult ASA 1/2 patient for a low complexity intervention**

### **Description:**

A low complexity intervention is defined as:

- Risk class<sup>1</sup> 1 & 2
- Anticipated blood loss <500ml

### **Competencies:**

#### **Anchoring criteria for the competence level "may perform this EPA without supervision"**

- communicates adequately and effectively with the patient, family members or legal representatives
- can obtain all relevant information about the patient, and interpret and react accordingly (history, physical examination, additional investigations if necessary)
- can estimate the patients perioperative risk (using scores such as the Revised Cardiac Risk Index)
- assesses the current medication of the patient and makes the necessary perioperative adjustments
- formulates a proper anesthetic plan based on the established findings
- explains the planned anesthetic procedure and its risks and possible alternatives appropriately (language and content)
- documents findings and agreements relevant to anesthesia (obtains informed consent)
- communicates effectively in a team (consisting of other professions and disciplines)
- reports the findings and the anesthetic plan to the supervisor in a problem-oriented way
- gets timely assistance (knows the limits of his or her expertise)

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<sup>1</sup> Based on the four risk classes for interventions of the Swiss TARMED system

## **EPA 2: Basic airway management in a fasted, adult patient without expected difficult airway**

### **Description:**

Basic airway management is defined as:

- All forms of bag-mask ventilation
- Insertion of supraglottic airway devices (e.g LMA)
- Tracheal intubation

### **Competencies:**

#### **Anchoring criteria for the competence level "may perform this EPA without supervision"**

- can assess the airway carefully and correctly and recognizes patients with a potentially difficult airway
- selects the appropriate method of oxygen application (nasal cannula, mask, etc.)
- performs preoxygenation appropriately (incl. guiding the patient at this stage) and monitors its effectiveness (Capnography-curve and EtO<sub>2</sub> value)
- chooses proper respiratory protection tools (tracheal tube, LMA) taking indications and contraindications into account
- can apply methods for opening the unsecured airway properly (repositioning, jaw-thrust maneuver, oropharyngeal (Guedel) and nasopharyngeal (Wendel) airway devices, etc.)
- is able to ventilate a patient sufficiently with bag and mask (and knows how to optimize ventilation)
- is familiar with the local algorithm for the unexpected difficult airway and acts accordingly; has also completed a Difficult Airway Course
- is able to place an endotracheal tube (with direct or video laryngoscopy) and a laryngeal mask correctly, incl. adjuncts (BURP maneuver, stylet) while ensuring adequate depth of anesthesia
- verifies the correct position of the tube and laryngeal mask; acts correctly if malpositioned
- adapts the initial mechanical ventilation to the given situation
- adheres to local hygiene regulations
- communicates effectively in the team and delegates tasks appropriate to the situation
- gets timely assistance (knows the limits of his or her expertise)

## **EPA 3: Anesthesia induction of a fasted, adult ASA 1/2 patient without expected difficult airway for a low complexity intervention**

### **Description**

Anesthesia induction is defined as the period from the beginning of anesthesia care until immediately before the beginning of the operation

A low complexity intervention is defined as

- Risk class 1 & 2
- Anticipated blood loss <500ml

### **Competencies:**

#### **Anchoring criteria for the competence level "may perform this EPA without supervision"**

- knows the local standards and directives for anesthesia induction
- prepares himself or herself correctly on the basis of the chosen anesthetic plan (case studies, workplace)
- knows the workplace and organizes it tidily and ergonomically
- ensures that at least 2 anesthesiologically trained persons are present for intubation (eg. 1 resident and 1 nurse)
- ensures that local checklists (e.g. WHO Safe Surgery, pre-induction checklist) are properly timed and carried out
- communicates adequately with the patient
- is able to obtain a peripheral venous access
- can obtain vital and laboratory data, interpret and respond to it (recognizes problems and complications)
- uses drugs with the appropriate indication and in a safe manner
- uses devices safely (e.g. ventilator, perfusion pump, etc.)
- arranges the patient transport from the induction area to the operating room efficiently and securely
- provides the timely administration of prophylactic antibiotics (if necessary)
- ensures adequate depth of anesthesia for the beginning of the operation (relaxation if necessary)
- ensures a timely and complete documentation
- communicates effectively in a team and delegates tasks appropriate to the situation
- adheres to local hygiene regulations
- re-evaluates the situation continuously and adjusts priorities dynamically (has a "Plan B")
- gets timely assistance (knows the limits of his or her expertise)
- complies with the EPA "basic airway management in a fasted, adult patient without expected difficult airway"

## **EPA 4: Postoperative prescriptions for an adult ASA 1/2 patient after a low complexity intervention**

### **Description:**

A low complexity intervention is defined as:

- Risk class 1 & 2
- Anticipated blood loss <500ml

### **Competencies:**

**Anchoring criteria for the competence level "may perform this EPA without supervision"**

- adjusts the local prescription scheme according to the patient's needs (e.g. consideration of contraindications and interactions of drugs, prescribing additional drugs such as to prevent post operative nausea and vomiting)
- ensures that a postoperative time-out has taken place with the surgeon and adjusts prescriptions according to the surgery (e.g., analgesia, prophylaxis of thromboembolism)
- adjusts any pre-existing prescriptions according to the situation
- considers the particular details of postoperative outpatient prescriptions
- gets timely assistance (knows the limits of his or her expertise)

## **EPA 5: Intraoperative care of an adult ASA 1/2 patient for a low complexity intervention**

### **Description:**

"Intraoperative" is defined as the period between the beginning of the operation and the end of the operation.

This EPA includes all forms of general anesthesia (GA) such as total intravenous anesthesia or balanced anesthesia using airway devices such as mask, the laryngeal mask or tracheal tube) as well as analgesic sedation, and all forms of regional anesthesia (RA)

A low complexity intervention is defined as:

- Risk class 1 & 2
- Anticipated blood loss <500ml

### **Competencies:**

#### **Anchoring criteria for the competence level "may perform this EPA without supervision"**

- knows his or her workplace and organizes it tidily and ergonomically
- can generate vital and laboratory data, interpret it and respond to it (recognizes problems and complications)
- uses drugs with the appropriate indication and in a safe manner
- for GA: can adjust the depth of anesthesia (incl. relaxation if necessary) and ventilation of the patient to individual and intraoperative conditions
- for analgesic sedation: controls sedation / analgesic sedation adequately and recognizes the limits of this method
- for RA: recognizes failures and specific complications of this procedure and acts adequately. Reacts adequately to the needs of the conscious patient
- monitors the patient's temperature and takes adequate measures to maintain it
- adjusts the fluid management according to the patient's needs and the requirements of the intervention
- regularly monitors the patients position and takes measures to prevent decubitus
- uses devices safely (e.g. ventilator, perfusion pump, etc.)
- communicates effectively in a team
- anticipates and plans ahead (important steps of each operation, ordering the next patient, informing the post anesthesia care unit, reducing the anesthetic agent towards the end of an operation, etc.)
- re-evaluates the situation regularly and sets priorities dynamically.
- ensures timely and complete documentation
- adheres to local hygiene regulations
- gets timely assistance (knows the limits of his or her expertise)
- complies with the EPA "postoperative prescription for an adult ASA 1/2 patient after a low complexity intervention"

## **EPA 6: Emergence of an adult ASA 1/2 patient without difficult airway after a low complexity intervention**

### **Description:**

"Emergence" is defined as the period between the end of the operation and the arrival in the postoperative care facility.

A low complexity intervention is defined as:

- Risk class 1 & 2
- Anticipated blood loss <500ml

### **Competencies:**

#### **Anchoring criteria for the competence level "may perform this EPA without supervision"**

- knows the workplace and organizes it tidily and ergonomically
- reduces the depth of the anesthesia towards the end of the operation according to the given situation
- is able to assess whether the patient meets the extubation criteria
- ensures that at least 2 anesthesiologically trained persons are present for extubation (eg. 1 resident and 1 nurse)
- can perform extubation correctly according to local standards
- detects hypoxia / hypoventilation during and after extubation and is able to treat it adequately (manually, or using devices)
- ensures secure transport (support, monitoring, medications, etc.)
- uses the standard drugs with the appropriate indication in a safe manner
- anticipates and plans ahead (e.g. non-invasive ventilation, possible re-intubation, informing the post anesthesia care unit in advance)
- takes responsibility for patient manipulation and installations during repositioning
- communicates effectively in the team
- adheres to the hygiene instructions
- uses devices safely (e.g. ventilator, perfusion pump, etc.)
- gets timely assistance (knows the limits of her expertise)
- complies with the EPA "basic airway management in a fasted, adult patient without expected difficult airway"

## **EPA 7: Postoperative handover of an adult ASA 1/2 patient to the post anesthesia care team**

### **Description:**

"Handover" is defined as the period of time from the arrival at the until the physician's departure from the post anesthesia care facility (end of anesthetic care).

### **Competencies:**

#### **Anchoring criteria for the competence level "may perform this EPA without supervision"**

- communicates adequately with the team and the patient
- chooses an appropriate time (everyone ready) and location (quiet) for the handover
- organizes handover in a structured way (e.g. ISBAR)
- passes on all the important information (prescriptions, documents, etc.) to the post anesthesia care team, esp. deviations from the expected (e.g. intraoperative abnormalities)
- provides an opportunity for inquiries and provides information professionally
- ensures that contact details of the surgeon and anesthesiologist are known