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| **Entry -to -Practice Competencies** | 2020 |
| ***“Optimal investment of human resources ... An absolute priority and the basis for success” Civil Service Bureau Belief.*** | **Anesthesia Assistant** |

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***Civil Service Bureau***

***ديوان الخدمة المدنية***

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**Introduction**

Complementing the efforts of the Bureau to meet its vision in developing the professions and employee in civil cervices and raising the capacity building to reach to excellence in leading human resources to protect public. Bureau has developed **Anesthesia Assistant Framework: Competencies & Indicators** to build entry -exams for Anesthesia Assistant in civil services, provide framework to managers in civil sectors to build job description, provide guidance to Anesthesia assistance regarding their professional obligations, and provide a framework to assess professional performance and address incompetence among them.

This framework developed by reviewing educational curriculums, best possible evidences of international and regional models and frameworks of anesthesia competencies that are relevant, comprehensive and have global applications and reviewing feedback provided by anesthesia assistants in a variety of civil settings and reviewed by Bureau and MOH.

**Target for Anesthesia Assistant:** person who completes diploma degree of Anesthesia graduated from an accredited Para-medical education program, and licensed to practice by Ministry of Health under the public health law



**The Framework consists of three categories of competencies:**

**Generic Health Competencies (GHC):** The competencies that are shared with all health profession in civil services that focus on provision of general health ethical legal care, health safety and quality practices, commination and therapeutic relationship, system-based practice, evidence-based practice and health informatics

**Professional Anesthesia Assistant Competencies (PAAC):** The competencies that promote professional and regulated care environment for Anesthesia assistance by promoting professional responsibilities and manage patients care safely

**Specific Practice Anesthesia Assistant Competencies (SPAAC):** The competencies that are most marketable for the entry to practice of Anesthesia Assistance by providing care for perioperative patients by preparing patients for theatre, handling anesthetic procedures competently, and manage patients under sedation and postoperative .

**Professional and Specific Practice Competencies Model for Anesthesia Assistant (AA)**

**Tables of detailed content for Anesthesia Assistants**

**Competencies& Indicators**

| **7.Generic Health Competencies** |
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| **Domains** | **Subdomains** | **Indicators** |
| **7.1 Safe and Effective Health Care Environment**  | **7.1.1 Health regulations in Jordan Laws , Bylaws and Policies of MOH**  | 7.1.1.1 Identify legislation governing health professions in Jordan 7.1.1.2 Understand MOH laws, policies and standards 7.1.1.3 Choose the appropriate actions that show awareness of legal implications for health practices |
| **7.1.2 Ethics**  | 7.1.2.1 Identify MOH code of conduct principles 7.1.2.2 Recognize ethical dilemmas and take appropriate action7.1.2.3 Able to Provide appropriate care adhered to code of conduct |
| **7.1.3 Quality Improvement** | 7.1.3.1 Identify human factors and basic safety design principles that affect safety7.1.3.2 Find out the factors that create a culture of safety (such as, open communication strategies and organizational error reporting systems)7.1.3.3 Describe how patients, families, individual clinicians, health care teams, and systems can contribute to promoting safety and reducing errors |
| **7.2 Communication**  | **7.2.1 Therapeutic Relationship** | 7.2.1.1 Identify principles of effective communication through various means 7.2.1.2 Able to provide care that reflects the whole person7.2.1.3 Able to provide physical comfort and emotional support. 7.2.1.4 Recognize patients feeling of pain and suffering and practice appropriate action to reduce it. 7.2.1.5 Identify practices for reducing fear and anxiety. |
| **7.2.2 Interdisciplinary Collaboration**  | 7.2.2.1 Apply basic group skills, including communication, delegation, and time management7.2.2.2 Ability to reach information to those who need it at the appropriate time.7.2.2.3 Coordinate care processes to ensure continuity of the care provided.7.2.2.4 Ability to resolve conflicts with other members of the team.7.2.2.5 Understand what each health team member uniquely provides in terms of patient care |
| **7.3 Utilize Health Information**  | **7.3.1 Evidence-Based Practice** | 7.3.1.1 Select reliable sources for locating evidence reports and clinical practice guidelines7.3.1.2 Recognize the value of continuous improvement in clinical practice based on new knowledge7.3.1.3 Discriminate between valid and invalid reasons for modifying evidence-based clinical practice based on clinical expertise or patient/family preferences7.3.1.4 Consult with clinical experts before deciding to deviate from evidence-based protocols |
| **7.3.2 Health Informatics**  | 7.3.2.1 Recognize the importance of information and technology skills in patient care safety 7.3.2.2 Identify essential information that must be available in a Common database to support patient care7.3.2.3 Understand the Value of technologies that support clinical decision-making, error prevention, and care coordination7.3.2.4 Ability to Protect confidentiality of protect health information in electronic health records |

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|  **6.24 Professional Anesthesia Assistant Competencies** |
| **Domains** | **Sub domains** | **Indicators** |
|  **6.24.1 Professional Responsibility**  |  **6.24.1.1Ethical Performance**  |  6.24.1.1.1Identify ethical principles  6.24.1.1.2Inform client/staff members of ethical issues affecting client care 6.24.1.1.3 Aware of situations which compromise patient checking procedures 6.24.1.1.Understand the responsibility of maintaining confidentiality of healthcare information 6.24.1.1.5Recognize the Anesthesia Assistant role in communicating patient’s concerns in regard to consent to the appropriate members of the multidisciplinary team 6.24.1.1.6Ability to act as the patient’s advocate and to support the patient appropriately in informed choices 6.24.1.1.7Understands consent issues for minors 6.24.1.1.8Evaluate outcomes of interventions to promote ethical practice |
|  **6.24.2Safety of practice and risk management**  |  **6.24.2.1Infection control and injury prevention**  |  6.24.2.1.1Identify risks from blood borne pathogens.  6.24.2.1.2Ability to prevent and manage needle-stick injury. 6.24.2.1.3Ability to secure a cannula, local anesthetic catheter or infusion line to minimize the possibility of accidental displacement. 6.24.2.1.4Ability to prepare anesthetic room and equipment for patient with known difficult airway.  6.24.2.1.5Ability to use safe practices for invasive monitoring lines  6.24.2.1.6Understand the management of accidental intra-arterial/ injection 6.24.2.1.7Ability to manage decontamination, terminal disinfection / disposal and use of anesthetic sundries 6.24.2.1.8Ability to manage decontamination, terminal disinfection / disposal and use of valves and self-inflating bags |
|  **6.24.2.2Reporting of Incidents and documentation**  |  6.24.2.2.1Describes processes used in error incidents and allocation of responsibility and accountability 6.24.2.2.2Evaluate response to error/event/occurrence  6.24.2.2.3Ability to intervene in unsafe practice of health care personnel appropriately  6.24.2.2.4Reports and documents all incidents related to safety and personal injury 6.24.2.2.5Identify and report any previous problems with anesthesia. 6.24.2.2.6Communicate information to the anesthetist regarding administration or non-administration of drugs likely to impact on anesthesia 6.24.2.2.7 Select the proposed site of operation and reports discrepancies. |
|  **6.24.2.3Emergency response** |  6.24.2.3.1perform Basic life support  6.24.2.3.2Respond to emergency code 6.24.2.3.3Assess Glasgow Coma Scale  6.24.2.3.4Respond to patients with shock  6.24.2.3.5Assess comatose patients  6.24.2.3.6Prepare and monitor patient for blood transfusion  6.24.2.3.7Ability to perform Discuss opening airway maneuver to clear the airway( effective head extension, jaw-thrust, oropharyngeal suction,..) 6.24.2.3.8Ability to assist in the management of failed intubation 6.24.2.3.9Takes appropriate action by highlighting clinically significant abnormal values 6.24.2.3.10 Identify individual or shared responsibilities in the provision of care in an emergency situation 6.24.2.3.11Ability to recognize complications and act appropriately |
|  **6.24.2.4Care of Anesthetic Machine, Monitoring and Related Equipment** |  6.24.2.1perform patency and safety checks on breathing systems. 6.24.2.4.1 check blood glucose  6.24.2.4.3check vital signs monitors 6.24.2.4.4check pulse oximeter 6.24.2.4.5Check ECG monitor 6.24.2.4.6Ability to set up a circle system. 6.24.2.4.7 Ability to safely change and refill CO2 absorption canister6.24.2.4.8 Ability to check machine-integrated and stand-alone ventilators 2.24.2.4.9Ability to use correct procedures in the storage and handling of gas cylinders. 2.24.2.4.10 Demonstrate safe removal and replacement of cylinders on the anesthetic machine 6.24.2.4.11Ability to safely connect / disconnect anesthetic machine connectors  6.24.2.4.12Prepare noninvasive monitor 6.24.2.4.13Ability to perform a ‘tug test’ to ensure safe connection.  6.24.2.4.14Identify color-codes for piped gases and vacuum.  6.24.2.4.15Identify the circumstances where the shut off valve would be used. 6.24.2.4.16Ability to identify and correct breathing system leaks; high pressure within patient circuit; vaporizer malfunction; failure of gas supply; electrical power failure; suction failure; and CO2 absorption failure |

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| **5.24Specific /Practice Anesthesia Assistant Competencies** |
| **Domains** | **Sub domains** | **Indicators** |
| **5.24.1 Preparation of Patients for Theatre** |  **5.24.1.1Physical status classification system**  |  5.24.1.1.1Define the American Society of Anesthesiologist (ASA) classification  5.24.1.1.2Recognize the clinical differences between the ASA scores.  5.24.1.1.3Discuss the required preparations in anesthetic room and theatre to provide individualized patient care taking into account ASA scores |
|  **5.24.1.2Clinical Assessment**  |  5.24.1.2.1Apply basic clinical assessment of cardiovascular with emphasis on factors which have a bearing on anesthetic care for * Respiratory system
* Renal system
* Neurological system
* Hematological system
* Hepatic system
* Endocrine system
* GI system

 5.24.1.2.2Recognize pre-existing medical conditions, which may adversely affect the patient during anesthesia |
|  **5.24.1.3Clinical Aspects for Fasting** |  5.24.1.3.1Identify the principles of pre-operative fasting. 5.24.1.3.2 Identify the local guideline for pre-operative fasting 5.24.1.3.3Apply strategies to minimize regurgitation. 5.24.1.3.4 Recognize the circumstances when fasting may not prevent regurgitation. * + - * 1. Ability to manage regurgitation.

 5.24.1.3.6Identify the signs aspiration. 5.24.1.3.7Ability to manage aspiration  |
|  **5.24.1.4Pre-operative investigations**. |  5.24.1.4.1 interpret normal and abnormal values of: blood hemoglobin, platelets, white cell count, clotting studies, serum potassium, urea and creatinine, blood sugar, arterial blood gases 5.24.1.4.2Recognize the normal conducting pathway of the heart.  5.24.1.4.3 interpret basic ECG  5.24.1.4.4 recognize sinus rhythm and significant dysrhythmias. |
|  **5.24.1.5Preoperative Medication and Therapy**  |  5.24.1.5.1Identify the role of pre-medication. 5.24.1.5.2Recognize commonly used pre-mendicant drugs.  5.24.1.5.3Recognize effects of common pre-mendicant drugs.  5.24.1.5.4 Understand the need to continue therapies in the pre-operative phase. |
|  **5.24.1.6Pre-operative Stress and Anxiety care**  |  5.24.1.6.1 recognize signs of patient anxiety 5.24.1.6.2 offer appropriate reassurance 5.24.1.6.3 Recognize where anxiety may lead to patient harm, and acts appropriately to reduce anxiety where possible 5.24.1.6.4Identify the clinical effects of anxiety including altered drug dosages and increased risk of cardiac arrhythmias |
|  **5.24.1.7Pre-operative care for special cases**  |  5.24.1.7.1Describe how to assess and manage the requirements of confused patients or patients with incapacity 5.24.1.7.2Summarize the assessment process of elderly or pediatric patients requirements |
| **5.24.2 Anesthetic Procedures** |  **5.24.2.1Peripheral IV access** |  5.24.2.1.1 select appropriate site for cannulation. 5.24.2.1.2Relate to techniques which improve venous filling. 5.24.2.1.3Identify techniques for increasing success-rate in patients who have ‘difficult’ veins |
|  **5.24.2.2Invasive monitoring/Invasive Arterial Pressure Monitoring** |  5.24.2.2.1Identify indications of arterial monitoring  5.24.2.2.2Discuss sites of cannulation and the associated risks.. 5.24.2.2.3Identify equipment required.  5.24.2.2.4Identify appropriate positions  5.24.2.2.5Demonstrate knowledge of transducer calibration.  5.24.2.2.6Identify dangers of intra-arterial injection and safety precautions. |
|  **5.24.2.3Invasive monitoring/ Central Venous Pressure CVP Monitoring** |  5.24.2.3.1Identify normal values of CVP 5.24.2.3.2Select sites used for central venous cannulation and associated potential complications.  5.24.2.3.3Demonstrate a knowledge of different central venous cannula.  5.24.2.3.4Identify correct positioning of patient during central venous cannulation..  |
| **5.24.3 Sedation** |  **5.24.3.1IV sedation** |  5.24.3.1.1Identify basic pharmacology of commonly used sedative agents. 5.24.3.1.2Identify principles of Conscious Sedation 5.24.3.1.3 list the uses and advantages of Conscious Sedation 5.24.3.1.4Identify side effects associated with the use of sedation 5.24.3.1.5 interpret vital signs during sedation 5.24.3.1.6Understand the steps of safely connecting the monitoring devices. 5.24.3.1.7Identify indications of O2 therapy administration 5.24.3.1.8Identify reversal agents in relation to sedation 5.24.3.1.9Ability to use sedation scoring tools.  5.24.3.1.10Ability to take appropriate action on actual or impending over-sedation 5.24.3.1.11Ability to monitor sedated patients |
|  **5.24.3.2Spinal, Epidural and Other Regional Analgesia** |  5.24.3.2.1Identify the anatomy of the spinal column.  5.24.3.2.2Compare between spinal and epidural anesthesia.  5.24.3.2.3Understand the physiological changes in spinal and epidural anesthesia.  5.24.3.2.4Identify vasopressors in relation to spinal /epidural anesthesia.  5.24.3.2.5 List the contraindications to spinal/epidural anesthesia.  5.24.3.2.6Recall the complications of spinal/epidural anesthesia.  5.24.3.2.7Identify basic knowledge of nerve pathways commonly blocked during regional anesthesia.  5.24.3.2.8Recognize contraindications to peripheral nerve block.  5.24.3.2.9 Recognize complications of peripheral nerve block.  5.24.3.2.10 Memorize basic local anesthetic pharmacology. 5.24.3.2.11 Recognize signs and symptoms of local anesthetic toxicity 5.24.3.2.12 Ability to assist in management of patient with symptoms and signs of local anesthetic toxicity |
|  **5.24.3.3Regional Anesthesia** |  5.24.3.3.1Ability to assemble appropriate equipment.  5.24.3.3.2Identify the correct patient position during regional anesthesia 5.24.3.3.3Ability to attach monitoring devices.  5.24.3.3.4Recognize the need for IV access.  5.24.3.3.5Identify the features of spinal needles. 5.24.3.3.6Recognize when cardio/respiratory function has been compromised as a result of regional block.  5.24.3.3.7Ability to alert anesthetist to changes in patient’s vital signs.  5.24.3.3.8Identify the stages involved in each type of block  |
| **5.24.4 Airway Management** |  **5.24.4.1Anatomy of the upper airway relevant to laryngoscopy, intubation, and other airways** |  5.24.4.1.1Understand airway anatomy.  5.24.4.1.2Describe airway anatomy and physiology in relation to:- Fraction of Inspired Oxygen concentration (FIO2)- End tidal CO2 (ETCO2)- Tidal volume (TV) (ml/kg) and expired minute volume ( MV)- End tidal anesthetic agent 5.24.4.1.3 Identify factors affect airway pressure |
|  **5.24.4.2Airway Management**  |  5.24.4.2.1Ability to support and maintain the patient’s airway.  5.24.4.2.2 recognize anesthetist’s requirements and provide suitable airway adjuncts. 5.24.4.2.3Apply optimum position for airway management.  5.24.4.2.4Identify the placement of a Guide airway.  5.24.4.2.5Identify the placement of a laryngeal mask airway.  5.24.4.2.6Identify the placement of a nasopharyngeal airway.  5.24.4.2.7Recognize upper-airway obstruction 5.24.4.2.8Ability to assist the anesthetist in securing the airway  |
|  **5.24.4.3Oxygen Delivery Equipment** & **Self-Inflating Bags** |  5.24.4.3.1Identify types of oxygen supply.  5.24.4.3.2Identify oxygen delivery devices. 5.24.4.3.3 Ability to select appropriate size and type of facemask.  5.24.4.3.4Ability to select appropriate O2 mask recognizing patient’s individual requirements 5.24.4.3.5Identify self-inflating bags pre-use checks.  5.24.4.3.6Identify the use of self-inflating bags.  5.24.4.3.7Identify non-disposable / single use self-inflating bags and valves. 5.24.4.3.8 Recognize the requirement for and self-inflating bags in the operating department and during intra / inter hospital transfer |
|  **5.24.4.4Airway Equipment** | * + - * 1. Identify types of laryngoscopes.

 5.24.4.4.2Identify specialized laryngoscopes used for difficult intubation \ 5.24.4.4.3 Discuss types of endotracheal tube.  5.24.4.4.4Recognize the use of non-cuffed endotracheal tubes in children  5.24.4.4.5Identify types of laryngeal mask airway.  |
|  **5.24.4.5Intubation of Trachea** |  5.24.4.5.1Identify the importance of endotracheal tube size and length.  5.24.4.5.2Ability to correctly calculate endotracheal tube length and size.  5.24.4.5.3Recognize complications due to wrongly sized endotracheal tube 5.24.4.5.4Ability to prepare and check equipment for routine intubation 5.24.4.5.5Ability to position the patient appropriately5.24.4.5.6 Ability to assist the anesthetist during intubation.  |
|  **5.24.4.6Difficult intubation and Rapid sequence induction** |  5.24.4.6.1Identify equipment required for difficult intubation  5.24.4.6.2Discuss failed intubation management. 5.24.4.6.3Identify the process of rapid sequence induction* + - * 1. Identify cricoid cartilage

 5.24.4.6.5Demonstrate correct application of cricoid pressure  |
|  **5.24.4.7Inhalation induction** |  5.24.4.7.1 List the indications for inhalation induction 5.24.4.7.2Ability to ensure patient safety throughout stages of anesthesia 5.24.4.7.3 Ability to Identify appropriate position patient during inhalation induction. |
| **5.24.5 Intra-operative care** |  **5.24.5.1Equipment preparation**  |  5.24.5.1.1 Able to set up patient controlled analgesia equipment 5.24.5.1.2 Able to set up equipment to deliver nebulized drugs 5.24.5.1.3Able to set up equipment designed to deliver drugs by epidural infusion |
|  **5.24.5.2Patient monitoring**  |  5.24.5.2.1Demonstrates ability to support and maintain the patients’ airway in the immediate postoperative period. 5.24.5.2.2Apply routine monitoring and interpret values. 5.24.5.2.3Assess patient for signs of surgical and postoperative complications. 5.24.5.2.4Recognize upper airway obstruction. 5.24.5.2.5 Demonstrate ability to maintain patients’ airway 5.24.5.2.6Identify principles of safe removal of an ET tube. 5.24.5.2.7Demonstrates ability to assess the nature and severity of post-operative pain 5.24.5.2.8 Discuss strategies for managing postoperative pain. pain5.24.5.2.9 Ability to assess/manage postoperative nausea and vomiting 5.24.5.2.10 Evaluate patient for safe discharge on the day of anesthesia. |
| **5.24.6Pharmacology** |  **5.24.6.1Pharmacologic practice**  |  5.24.6.1.1Identify drugs required for use by the anesthetist for elective and emergency surgery5.24.6.1.2 Prepare induction agents 5.24.6.1.3 Prepare inhalation agents 5.24.6.1.4 identify emergency drugs 5.24.6.1.5 prepare drugs of anesthesia  |
| **5.24.7Special cases** |  **5.24.7.1Obstetric**  |  5.24.7.1.1Identify indications for urgent delivery 5.24.7.1.2Identify techniques for analgesia in labor 5.24.7.1.3Identify indications for spinal, epidural and general anesthesia for common obstetric interventions 5.24.7.1.4Prepare medications for labor induction  5.24.7.1.5Prepare anesthetic gas for c/s  5.24.7.1.6Ability to participates in Rapid Sequence Induction.  5.24.7.1.7Recognize risk of regurgitation and its management.  5.24.7.1.8Identify use of muscle relaxants in the obstetric patient. 5.24.7.1.9Ability to participate in management of sudden life threatening major obstetric hemorrhage including the use of invasive monitoring, rapid infusion devices, warming devices and cell salvage equipment  |
|  **5.24.7.2Burns** |  5.24.7.2.1Recognize the impact of smoke inhalation to the provision of adequate ventilation.  5.24.7.2.2Identify strategies to improve ventilation. Discuss hypothermia in the burn’s patient 5.24.7.2.3Discuss the need for insertion of large bore venous access.  5.24.7.2.4Demonstrate ability to asses and manage the effects of: – patient controlled analgesia;– continuous opiate infusion.  |

**The examination competencies and indicators adopted from**

1-NHS Education for Scotland (2012). Portfolio of Core Competencies for Anaesthetic Assistants

2-NHS Education for Scotland (2020). Core Competency Framework for Anaesthetic Assistants