Standards for Urgent Care and Emergency Department Services

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INTRODUCTION

Health Regulation Sector (HRS) forms an integral part of Dubai Health Authority (DHA) and is mandated by DHA Law No. (6) of 2018 to undertake several functions including but not limited to:

- Developing regulation, policy, standards, guidelines to improve quality and patient safety and promote the growth and development of the health sector
- Licensure and inspection of health facilities as well as healthcare professionals and ensuring compliance to best practice
- Managing patient complaints and assuring patient and physician rights are upheld
- Managing health advertisement and marketing of healthcare products
- Governing the use of narcotics, controlled and semi-controlled medications
- Strengthening health tourism and assuring ongoing growth
- Assuring management of health informatics, e-health and promoting innovation

ACKNOWLEDGMENT

The Health Policy and Standards Department (HPSD) developed this Standard in collaboration with Subject Matter Experts. HPSD would like to acknowledge and thank these health professionals for their dedication toward improving quality and safety of healthcare services in the Emirate of Dubai.

Health Regulation Sector

Dubai Health Authority

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EXECUTIVE SUMMARY

The purpose of this document is to assure the provision of the highest levels of safety and quality in urgent care and emergency department services at all times. The standards have been developed to align with the evolving healthcare needs and international best practice. The standards include several aspects required to provide effective, efficient, safe and high-quality urgent care and emergency department services. The standards include the registration and licensure procedure requirements as well as the licensure of health facilities and professionals. The standards of urgent care and emergency department services provide clear insight into the differences between each health facility and the minimum requirements that should be met for the establishment of urgent care services and/or emergency department services.

The standard focuses on the following:

- The health care professional requirements and permitted services for urgent care and emergency departments.
- The health facility design requirements for urgent care and emergency services aligned with the DHA Health facility guidelines.
- The policies, procedures, protocols and clinical governance that should be in place for the provision of urgent care and emergency department services.
- The general requirements for patient triage, assessment, stabilisation, admission, referral and management.

The following documents should be read in conjunction with this standard:

a. DHA, Health Facility Guidelines (HFG), 120 Emergency Unit

b. DHA, Health Facility Guidelines (HFG), 360 Outpatient Unit

c. Unified Professional Qualification Requirement

d. Patient Referral and Inter-Facility Transfer Policy

e. DHA Brain Death Determination Policy

f. DHA Guidelines for Managing Health Records

g. DHA Guidelines for Patient Consent

h. DHA Clinical Privileging Policy

i. Federal Law no. (2) of 2019 on Information and Communication Technology in the Health Field

j. Pharmacy Guidelines

k. Relevant DHA COVID-19 related policies, standards or guidelines.

DEFINITIONS

AMA (Against medical Advice): When a patient decides to leave the DHC facility after an examination has been completed and a treatment plan recommended, whether it is an inpatient or an outpatient, this is identified as "leaving against medical advice." AMA also includes refusal of all or specific treatment or procedure.

Canadian Emergency Department Triage and Acuity Scale: Five level assessment tool used when many patients present to the emergency department simultaneously. ED triage ensures that patients are prioritized according to the severity of their presentation. CTAS acuity ranges from one that requires immediate attention to five, which are the walk in non-urgent patients who does not require emergency attention.

Emergency Department: Health facilities that are open 24 hours, 7 days a week. Approximately 85-95% of patients shall be admitted, transferred or discharged within 4 hours. An emergency department is consultant-led (onsite emergency trained physician), with a multidisciplinary team and nursing support, and possess diagnostic, surgical and pharmacy capabilities to manage an emergency or life-threatening patients such as and not limited to the following conditions:

- Chest pain or pressure;
- Difficulty breathing;
- Stroke;
- Pneumonia;
- Sudden severe headache, paralysis or weakness;
- Head, Neck and Back Trauma;

- Severe or uncontrolled bleeding;
- Loss of vision;
- Compound fracture;
- Moderate or severe bleeding;
- Convulsions, seizures or loss of consciousness;
- Blunt or knife wounds;
- Fever in newborn less than 3 months old;
- Moderate or severe upper and/or lower respiratory tract infections;
- Poisoning;
- Severe dehydration;
- Severe abdominal pain.
- Acute delirium or mental impairment; and
- Obs or Gynae-related problems.

Emergency Facility: Refers to DHA licensed Facility that provides emergency care to patients with injury and illness. These facilities are categorised into six groups:

1. Urgent Care Centres
2. Emergency Department
3. Paediatric Emergency Department
4. Maternity Emergency Department
5. Free Standing Emergency Department
6. Rural Emergency Department

Emergency Care: is patient care for a medical or surgical emergency condition.

Emergency condition: is a condition manifesting itself by acute symptoms of sufficient severity (including severe pain) such that the absence of immediate medical attention could reasonably be expected to result in:

- Placing the health of the individual (or, with respect to a pregnant woman, the health of the woman or her unborn child) in serious jeopardy,
    - Serious impairment to bodily functions, or
    - Serious dysfunction of any bodily organ or part;

Or

- With respect to a pregnant women who is having contractions:
    - That there is inadequate time to effect a safe transfer to another hospital before delivery, or
    - That transfer may pose a threat to the health or safety of the woman or the unborn child.

Emergency Medicine: is the specialty of providing medical care for unscheduled illness of injury of variable severity. Emergency Medicine includes coordination of patient care across multiple disciplines and final disposition for discharge or referral for admission further management. Emergency physicians are the foundation of the healthcare system. They oversee planning and community emergency responses and participate in disaster planning.

Emergency Severity Index (ESI): ESI is a five-level emergency triage tool to rapidly identify and manage patient with acute life or limb threatening conditions. ESI is a five-level emergency department triage program where ESI level 1 is the most urgent and ESI level five is the least urgent. ESI level depends on the patient's presentation acuity and the number of resources the patient requires to complete his or her assessment.

Freestanding Emergency Department: A Freestanding Emergency Department (FSED) is an emergency department, physically separate and distinct to its operating hospital, that is adequately staffed by emergency staff and physicians, and that provides comparable care to a wide range of patients 24 hours, 7 days a week. There are two models for freestanding emergency department:

- **Hospital–outpatient Department:** A type of freestanding emergency department (FSED) owned and operated by a hospital system. Also known as satellite emergency department, offsite emergency department. A HOPD will follow the same rules, regulations and licensing requirements of the hospital system that it affiliates.
- **Independent freestanding emergency centres:** a type of Freestanding Emergency Department (FSED) owned, in whole or in part, by independent groups or by individuals.

Hazard Vulnerability Analysis: A hazard vulnerability analysis is a process for identifying the hospital's highest vulnerabilities to natural and man-made hazards and the direct and indirect effect these hazards may have on the hospital and community.

Maternity Emergency Department: Facilities in a hospital devoted to providing comprehensive obstetric and maternity emergency care. The maternity emergency department should be open

24 hours, 7 days a week and is consultant-led (onsite obstetrics and gynaecology emergency trained physician), with a multidisciplinary team and nursing support, and possess diagnostic, surgical and pharmacy capabilities to manage an emergency or life-threatening maternity patients.

Medical Screening Examination: The medical screening examination aim to determine if the patient condition needs urgent attention or patient is stable and safe to seek treatment in another facility of their choice where they are covered and is to be performed by a licensed medical practitioner or equivalent. Medical screening examination may include some testing to reach the conclusion of medical stability.

Paediatric Emergency Department: Facilities situated in a hospital devoted to providing paediatric emergency medical care for children up to the age of 18. The paediatric emergency department should be open 24 hours, 7 days a week and is consultant-led (onsite paediatric emergency trained physician), with a multidisciplinary team and nursing support, and possess diagnostic, surgical and pharmacy capabilities to manage an emergency or life-threatening paediatric patients.

Picture archiving and communication system (PACS) is a modality of imaging technology, which helps in image transmission from the site of image acquisition to multiple physically disparate locations. This technology is convenient to access multiple modalities (radiographs, CT, MR, ultrasound and others) simultaneously at multiple locations within hospitals.

Rural Emergency Departments: Also known as remote emergency departments. Emergency departments that provide urgent or emergent care to a community with low population density (defined as being less than 15,000 individuals) or, operate in area of greater physical distance from urban city centres (distance measured as being more than 100 kilometres).

Stable: is with respect to an emergency medical condition, to provide such medical treatment of the condition as may be necessary to assure, within reasonable medical probability that no material deterioration of the condition or delivery of an unborn child/placenta is likely to result from or occur during the transfer of the individual from a facility.

Thromboelastographic analyser: Haemostasis Analyser System to continuously monitor a patient's haemostasis during surgery, which reduces blood product usage and decreases thrombotic complications.

Transfer: is the movement (including the discharge) of an individual outside a hospital's facilities at the direction of any person employed by (or affiliated or associated, directly or indirectly, with) the hospital, but does not include such a movement of an individual who:

- Has been declared dead, or
- Leaves the facility without the permission of any such person.

Urgent Care Centres: It is a walk in ambulatory clinic providing medical care for minor non-urgent illnesses or injuries. Urgent Care Centers provides care outside the acute emergency environment; it is easily accessible and opens 10 - 12 hours, minimum 6 days a week. Urgent care centres

include basic diagnostic, surgical and pharmacy services, are capable of treating minor symptoms and illnesses such as, and not limited to:

- Muscle pain;
- Mild upper or lower respiratory tract infections;
- Headache;
- Mild pain such as headache/ear ache/abdominal pain;
- Mild Bleeding;
- Minor injuries;
- Sprains and joint conditions;
- Cuts that do not involve much blood but might need stitches;
- Breathing difficulties, such as mild to moderate asthma;
- Diagnostic services, including X-rays and laboratory tests;
- Eye irritation and redness;
- Fever or flu;
- Minor broken bones and fractures in fingers or toes;
- Moderate back problems;
- Severe sore throat or cough;
- Skin rashes and infections;
- Urinary tract infections; and
- Vomiting, diarrhea, or dehydration.

ABBREVIATIONS

ACLS	:	Advanced Cardiac Life Support.
ACT	:	Activated Clotting Time
ATLS	:	Advanced Trauma Life Support.
BLS	:	Basic Life Support
CCU	:	Cardiac Care Unit
CPR	:	Cardio Pulmonary Resuscitation
CTAS	:	Canadian Emergency Department Triage and Acuity Scale
ECG	:	Electrocardiogram
ED	:	Emergency Department
EMR	:	Electronic Medical Record
EMS	:	Emergency Medical Services
ESI	:	Emergency Severity Index
FSED	:	Freestanding Emergency Department
HOPD	:	Hospital–outpatient department
HLS	:	Helicopter Landing Site
ICU	:	Intensive Care Unit

IPPV	:	Intermittent Positive Pressure Ventilation
NRP	:	Neonatal Resuscitation Program
NIBP	:	Non-Invasive Blood Pressure
NICU	:	Neonatal Intensive Care Unit
PACS	:	Picture Archiving Communication Systems
PALS	:	Paediatric Advanced Life Support.
PHTLS	:	Prehospital Trauma Life Support
PIPS	:	Performance Improvement and Patient Safety
PPE	:	Personal Protective Equipment
SIMV	:	Synchronized Intermittent Mandatory Ventilation
SSU	:	Sterile Supply Unit
TEG	:	Thromboelastographic analyser

1. BACKGROUND

Emergency facility department's form part of an essential part of the health system and can be segmented into Urgent Care Centres, and Emergency Departments. Urgent care and Emergency services play a key role in ensuring patients that require emergency services are efficiently and effectively manage according to their needs by the right healthcare professional.

Patients that require urgent care generally suffer from an illness or injury that requires urgent attention. Functions of primary healthcare providers would be to guide the patient to the correct level of care and treatment and be provide clarity as to which services are provided where, along with providing pathways to access these services reliably. The function of the emergency department is to receive, stabilise and manage patients (adults and children) who present with a large variety of urgent and non-urgent conditions whether self or otherwise referred.

The vision statement for Emergency Care strategy in Dubai was to collaboratively develop and lead on the Strategic direction with the view to be the "best in class and ensure integration for all emergency care services". These standards were developed and implemented by the Dubai Health Authority (DHA) in order to provide the highest quality of emergency and urgent care. DHA uses this opportunity to provide clear standards for the provision of urgent care and emergency department services. Furthermore, the standards define the minimum service specifications and requirements for urgent care and emergency department services in the Emirate of Dubai.

2. SCOPE

2.1. The management of urgent care and emergency department services in DHA licensed health facilities.

3. PURPOSE

3.1. To assure provision of the highest levels of safety and quality in urgent care and emergency department services in Dubai Health Authority (DHA) licensed health facilities.

4. APPLICABILITY

4.1. DHA licensed healthcare professionals and health facilities providing urgent care and emergency department services.

5. **STANDARD ONE:** REGISTRATION AND LICENSURE PROCEDURES

5.1. All health facilities providing urgent and emergency services shall adhere to federal and local laws and regulations.

5.2. Health facilities aiming to provide urgent care and emergency department services shall comply with the DHA licensure and administrative procedures available on the DHA website https://www.dha.gov.ae.

5.3. Licensed health facilities opting to add urgent care and emergency department services shall submit an application to HRS to obtain permission to provide the required service.

5.4. The health facility shall develop the following policies and procedures including but not limited to:

5.4.1. Disaster management.

5.4.2. Emergency action plan.

5.4.3. Incident reporting.

5.4.4. Sentinel events.

5.4.5. Infection control measures and hazardous waste management.

5.4.6. Medication management.

5.4.7. Patient acceptance criteria.

5.4.8. Patient assessment and admission.

5.4.9. Patient discharge or transfer.

5.4.10. Patient education and Informed consent.

5.4.11. Patient health record.

5.4.12. Patient privacy.

5.4.13. Staff job description, qualification and education.

5.4.14. Triage and registration system.

5.5. The health facility shall maintain documented evidence of the following:

5.5.1. Transfer of critical or complicated cases when required.

5.5.2. Patient discharge.

5.5.3. Clinical laboratory services.

5.5.4. Equipment maintenance services.

5.5.5. Laundry services.

5.5.6. Medical waste management as per Dubai Municipality (DM) requirements.

5.5.7. Housekeeping services.

5.6. The health facility shall maintain charter of patients' rights and responsibilities posted at the entrance of the premise in two languages (Arabic and English).

5.7. The health facility shall have appropriate equipment and trained healthcare professionals to manage cases as per scope of service.

5.8. The health facility shall install and operate equipment required for provision of the proposed services in accordance to the manufacturer's specifications.

5.9. The health facility shall have in place a written plan for monitoring equipment for electrical and mechanical safety, with monthly visual inspections for apparent defects.

5.10. Hospitals should document a review of their Hazard Vulnerability Analysis every year and share it with DHA.

5.11. The health facility shall ensure it has in place adequate lighting and utilities, including the following:

5.11.1. Temperature controls.

5.11.2. Water taps, sinks and drains.

5.11.3. Medical gases.

5.11.4. Lighting.

5.11.5. Electrical outlets.

5.11.6. Communications.

5.12. The health facility shall be made to accommodate people of determination.

5.13. Patients from urgent care centres or emergency departments that require higher-level care shall be stabilised and transferred to the higher facility as per the requirements for DHA Policy for patient referral and transfer.

a. Health facilities should not encourage the patient and/or their legal guardian to sign Leaving Against Medical Advice (AMA), during life threatening or emergency, which require emergency medical intervention.

6. **STANDARD TWO:** URGENT CARE CENTER

6.1. Health Facility Design

6.1.1. The health facility shall provide assurance of patients and staff safety.

6.1.2. The health facility shall be open at least 10 - 12 hours a day, minimum 6 days a week, with access to comprehensive urgent care services.

6.1.3. There should be appropriate urgent care signage clearly visible at the entrance of health facility or urgent care section.

6.1.4. Health facilities providing urgent care services shall have designated isolation room available.

6.1.5. Health facilities providing urgent care services shall have the following specifically designed areas:

a. Examination room(s).

b. A separate waiting area.

c. Patient restroom(s).

6.1.6. Health facilities shall align with the DHA Guidelines for Heath facility design; section B, 360- Outpatients Unit for further guidance.

6.2. Permitted Services

6.2.1. Health facility providing urgent care services shall be able to undertake basic resuscitation; stabilisation and minor procedures along with medical services provided by General Practitioners or specialists and shall be supported by Registered Nurses.

6.3. Policies, Procedures and Protocols

6.3.1. Health facilities providing urgent care services shall have in place patient journey and management policy that includes the following:

a. Registration process.

b. Triage classification.

c. Patient assessment and management.

6.3.2. The health facility shall provide evidence of the following:

a. Disaster preparedness plan

b. Continuous quality improvement plans (strategic and operational plans).

c. Quality improvement policy reports of quantitative and qualitative performance data.

d. Complaints management policies.

e. Educational plan.

6.4. Medical Equipment and Supplies

6.4.1. Health facilities providing urgent care services shall have access to the following equipment and supplies:

a. Vital signs monitors.

b. Thermometer.

c. Otoscopes/fundoscopy/stethoscope.

d. Torch/tongue depressor.

e. Laceration repair kit with suturing material.

f. Nebulizer.

g. Splints, crepe bandage and arm sling.

h. ECG machine.

i. Automated external defibrillator.

6.4.2. Availability of bedside diagnostics and plain x-ray facilities, particularly of the chest and limbs, are desirable and considerably increase the assessment capability of urgent care.

6.5. Pharmacologic/ Therapeutic Drugs and Agents

6.5.1. UCC requires below minimum therapeutic agents and also align with the requirements of medication as per the DHA Pharmacy Guidelines for Outpatient facilities:

a. Analgesia.

b. Antibiotics.

c. Bronchodilator.

d. Steroid.

e. Antihistamine.

f. Antiemetic.

g. Epinephrine pen (child/adult).

h. IV fluid.

i. Dextrose fluid.

j. Tetanus vaccine/ant-rabies vaccine.

k. Proton pump inhibitor.

l. Lidocaine (local anaesthesia).

m. Fluorescent dyes.

n. Burn dressing.

6.6. Minimum Staffing Requirements

6.6.1. All healthcare professionals in the health facility shall hold an active DHA full time professional license and work within their scope of practice.

6.6.2. The urgent treatment centre will usually be a GP-led service.

6.6.3. Health facilities providing urgent care services shall ensure that at least one consultant, specialist, or GP per shift in the urgent care centre.

6.6.4. All healthcare professionals providing urgent care services shall have the following valid life support courses:

a. Basic life support (BLS).

b. Cardiopulmonary resuscitation (CPR) training.

c. Advanced cardiac life support (ACLS).

d. Paediatric advanced life support (PALS).

6.6.5. All the staff working in the urgent care center inclusive of physicians, nursing and non-clinical support staff shall report to the urgent care facility lead.

6.6.6. Scope of practice of urgent care services must include, but not limited to the following:

a. Minor illnesses and injuries in both adults and children of any age.

b. Wound management.

c. Removal of superficial foreign bodies.

d. The management of minor head and eye injuries.

6.6.7. Health professional requirements between in urgent is summarised in **Appendix 2.**

6.7. Clinical Governance

6.7.1. Health facilities providing urgent care services shall have in place policies for immediate transfer to other facilities where applicable.

6.8. Ancillary Services

6.8.1. Health facilities providing urgent care services shall have immediate access to advanced medical care and access to the following ancillary support services:

a. Plain radiology.

b. Laboratory.

Note: Access includes advice by telephone, telehealth, and referral hospital outreach services.

6.8.2. Health facilities with larger units may also have managers within these subgroups. For example, nursing may have a manager for outpatient services.

6.9. IT and Technology

6.9.1. All health facilities providing urgent care shall ensure the availability of electronic patient records and patient information systems.

6.9.2. Access to electronic forms and requests for investigations, pharmacy, catering, and supplies.

6.9.3. Urgent care centres and health facilities providing urgent care services shall do the following:

a. Develop a policy for the management of healthcare information.

b. Unify the process of documentation in patient medical file.

c. The facility shall develop a plan to integrate electronic medical system with NABIDH project.

6.10. Health Records

6.10.1. The electronic health record system (with nursing notes, laboratory results, pharmacy prescriptions and radiology outcomes) shall be available to support clinical management, patient tracking and departmental administration.

6.10.2. The health facility shall comply with the DHA Guidelines for Managing Health Records.

6.11. Access To Urgent Care

6.11.1. Urgent care services can be provided in:

a. Hospitals.

b. Day surgical centres.

c. Polyclinics.

d. Standalone urgent care centres.

6.11.2. Urgent care services can be provided via telehealth; and shall comply with the DHA standards for telehealth services.

6.11.3. Health facilities providing urgent care shall ensure the availability of an effective and consistent approach to prioritisation of walk-in and pre-booked urgent care appointment system.

6.11.4. Health facilities providing urgent care services shall have links to a network of local health services for patients that require more specialised care to be transferred to emergency department if required.

6.12. Requirements for Triage, Referral and Patient Transfer

6.12.1. Following clinical assessment, patients should be given an appointment slot, which should not be more than two hours after the time of arrival.

6.12.2. Patients who have a pre-booked appointment should be seen and treated within 30 minutes of their appointment time.

6.12.3. Patients who "walk-in" to an urgent treatment centre should be clinically assessed within 15 minutes of arrival.

a. Patients should only be prioritised for treatment, over pre-booked appointments, where it is clinically necessary.

6.12.4. Protocols should be in place to manage critically ill and injured patients who arrive at an urgent care facility unexpectedly.

a. This shall be coordinated with the ambulance service for transport to the correct facility.

6.12.5. All patients requiring urgent care services should be stabilized before a referral is made.

6.12.6. Indications for referral to another facility is based on the following criteria, but not limited to:

a. Patient's need for specialized care not available in the receiving facility in terms of expertise and services.

b. For second opinion.

c. Non-availability of hospital beds.

d. Ineligibility for treatment in receiving facility.

6.12.7. The urgent care facility shall adhere to the Patient Referral and Inter-Facility Transfer Policy.

6.12.8. Health facilities providing urgent care services shall have a Memorandum of understanding (MOUs) with multiple hospitals to continue patient care once the patient is stabilised.

6.13. Patient Safety, Quality Control and Assurance

6.13.1. The health facility should have organizational plans in place to avoid crowding in the health facility.

a. Crowding directly impacts on patient quality of care, morbidity and mortality.

6.13.2. The health facility shall undertake regular clinical audits and review.

6.13.3. Provision of patient care that is safe and high quality should be ensured by the following:

a. Trained emergency personnel should make patient-centred, timely and expert decisions to provide care.

b. Availability supported by systems, processes, diagnostics, appropriate equipment and facilities.

c. Enablers to high-quality care include:

i. Appropriate trained staff.

ii. Access to care (including financial).

iii. Coordinated emergency care through the entire patient journey.

iv. Monitoring of outcomes.

6.13.4. All healthcare practitioners working in urgent care services should receive training in the principles of safeguarding children, vulnerable and older adults and identification and management of child protection issues.

7. **STANDARD THREE:** EMERGENCY DEPARTMENT

7.1. Health Facility Design

7.1.1. Emergency Departments (ED) shall provide evaluation and management of patients whose condition might otherwise be compromised if not attended to immediately.

7.1.2. Emergency services shall only be provided in hospital settings with 24/7 unrestricted access to emergency medical care.

7.1.3. The health facility shall have a flow to ensure smooth transition of patients throughout the emergency assessment, stabilization, inpatient and outpatient care.

7.1.4. The health facility shall be equipped to provide services and manage case mix including to People of Determination and mental health patients.

7.1.5. Health facilities should align with the DHA Guidelines for Heath facility design; section B, 120- Emergency Unit to provide a safe environment for:

a. Patients,

b. ED staff, and

c. Visitors.

7.1.6. Health facility environment shall ensure ease of patient flow to ensure auditory and visual privacy (as applicable).

7.1.7. The emergency department shall have the following facility design standards:

a. Entrance and reception area, receiving of patients, visitors, and administration.

b. Patient waiting with areas for refreshments and amenities.

c. Security room.

d. Triage Assessment for ambulant and ambulance patients.

e. Health facilities providing emergency department services shall have designated isolation room available.

f. Patient Resuscitation and treatment areas which should include:

i. Resuscitation Bays.

ii. Acute Treatment Bays or rooms for assessment and treatment of severe conditions.

iii. Non-Acute Treatment Bay for patients awaiting test results or requiring observation prior to admission or discharge.

iv. Treatment and Procedure Rooms.

g. Fast Track/Primary Care/Consulting Area which should include:

i. Consult/Examination rooms.

ii. Patient Bed/Chair Bays.

iii. Vital signs room.

iv. Staff Station.

v. Access to patient amenities.

h. Support areas which should include:

i. Bays for Handwashing basins, Linen, Mobile Equipment and resuscitation trolleys.

ii. Clean Utility and Medication rooms.

iii. Cleaners Room.

iv. Dirty Utility and Disposal Rooms.

v. Meeting/Grieving Room.

vi. Store rooms.

i. Staff Areas such as:

i. Change Rooms with toilets, shower and lockers.

ii. Staff Room.

iii. Offices and Workstations.

iv. Meeting rooms that may be used for education and teaching functions.

j. Optional areas may include:

i. Paediatric Assessment/Short Stay.

ii. Mental Health Assessment Rooms.

iii. Short-Stay Unit/Emergency Medical Unit for extended observation and management of patients.

iv. Ambulance Base and facilities.

k. The Emergency Unit will require close and efficient access to the following units:

i. Medical Imaging Unit for the provision of general X-Ray diagnostic investigations and other diagnostic screening services such as:

- Fluoroscopy;
- Ultrasound;
- Computed tomography (CT);
- Magnetic resonance imaging (MRI); and
- Other interventional radiographic procedures.

ii. Clinical Information Unit for the provision of patients' previous medical records are required to provide all-inclusive care in the emergency department.

iii. 24/7 access to the clinical information unit is essential.

iv. Having newborn delivery kit (including equipment for initial resuscitation of a newborn infant: umbilical clamp, scissors, bulb syringe, and towel).

v. Emergency delivery kits that include sterile drapes, towels, gauze, surgical blades, Kelly clamps, Cord clamps, rubber suction bulbs, gauze sponges, haemostatic forceps/tissue forceps, placenta basins.

vi. Process to transfer to operating unit for patients requiring emergency surgical procedures.

vii. Investigation process for cardiac emergencies that include monitoring set-up for patients who require further cardiac services consultation, diagnostic procedures, and interventional treatments.

viii. Intensive care unit for admission of patients with severe conditions requiring close monitoring or life support as per scope of service.

l. Ready access is required to the following units:

i. Inpatient accommodation units for admissions of medical and surgical patients.

ii. Outpatients unit for patient follow-up and referrals for further investigation and ongoing review for non-admitted patients.

iii. Mortuary unit.

iv. Laboratory unit for sending patient specimen for testing and examination.

v. Pharmacy unit for the provision of pharmacy services for dispensing medications for discharged patient and enabling prescriptions to be filled by patients.

vi. Sterile supply unit (SSU) to obtain sterile equipment for surgical emergencies.

vii. Service units such as catering.

7.2. Permitted services

7.2.1. Health facilities providing emergency care shall ensure the provision of service to any age group from Paediatrics to Geriatrics.

7.2.2. The emergency physician is responsible for the medical care provided in the ED. This includes the following:

a. Medical evaluation.

b. Diagnosis.

c. Recommended treatment.

d. Disposition of the emergency patient.

e. The direction and coordination of all other care provided to the patient.

7.2.3. The responsibility of medical care for a particular patient in the ED may be transferred to another physician by referral/transfer to another health facility.

7.2.4. The health facility shall provide emergency medication to the patients after working hours of the pharmacy.

7.2.5. The health facility shall have crutches and wheel chairs available to patients who need them before or after treatment.

7.2.6. The ED should be able to manage conditions that have acute complex presentation and case mix including mental health.

7.2.7. The ED shall have the capacity for invasive monitoring and short-term assisted ventilation.

7.2.8. The health facility shall be prepared to provide minor surgical procedures such as but not limited to:

a. Removal of superficial foreign bodies, superficial wound suturing.

b. Burn dressing, wound debridement or washout incision and drainage of superficial abscess.

c. Emergency surgical interventions: chest drain insertion, needle thoracotomy.

7.3. Policies, Procedures and Protocols

7.3.1. The health facility shall provide evidence of the following:

a. Continuous quality improvement plans (strategic and operational plans).

b. Quality improvement policy reports of quantitative and qualitative performance data.

c. Complaints management policies.

d. Educational plan.

7.3.2. Staff shift scheduling must be designed for all health facilities to ensure safe handover.

7.3.3. All health facilities should have in place a patient referral and transfer process.

7.3.4. Emergency programs should include the following policies:

a. Interfacility patient transfer, transport and follow up policy aligned with the Patient Referral and Inter-Facility Transfer Policy.

b. Surge capacity and diversion policy.

c. Consultation policy.

d. Admission policy from the emergency service to an inpatient unit.

7.3.5. When transferring the hospital should have Memorandum of understanding (MOUs) with multiple hospitals to continue patient care once the patient is stabilised.

7.3.6. The health facility should develop plans for dealing with Internal and external disasters emergencies in the community.

7.4. Medical Equipment and Supplies

7.4.1. Equipment and supplies should be of high quality and appropriate to the needs of ED patients **Appendix 3**.

7.4.2. Immediate access to resuscitation medication.

7.4.3. The resuscitation room or bay shall only be specifically designed for the resuscitation and treatment of critically ill or injured patients. However, any patient can be managed in the resuscitation room.

7.4.4. The resuscitation room or bay shall ensure:

a. Availability of a specialised resuscitation bed.

b. Enough space is available for a 360-degree access to all parts of the patient for uninterrupted procedures.

c. Easy access from the ambulance entrance.

7.4.5. Each resuscitation bay shall be equipped with but not limited to the following:

a. A cardiac monitor machine equipped with an ECG, printing, NIBP, SpO2, temperature probe, invasive pressure, CO2 monitor.

b. A procedure light similar to a small, single arm operating light.

c. Equipment to hang IV fluids and attach infusion pumps.

d. Wall mounted diagnostic set (ophthalmoscope/auroscope).

e. Clinical scrub basin with paper towel and soap fittings.

f. Overhead X-ray or mobile digital x-ray.

7.4.6. The diagnostic are shall be equipped with but not limited to the following:

a. Conventional radiography.

b. Computed Tomography (CT) scan.

c. Immediate access to Magnetic Resonance Imaging (MRI).

d. Fluoroscopy, ultrasound, and other interventional radiographic procedures with immediate access to those modalities.

e. Cardiac services for Doppler studies and 12-Lead ECG and rhythm strips.

f. Foetal monitoring (non-stress test)/uterine monitoring in applicable facilities. For additional radiology requirements for an ED Refer to **Appendix 4.**

g. The Helicopter Landing Site (HLS), which shall conform to Civil Aviation Authority standards.

7.4.7. Emergency department shall be equipped with but not limited to the following:

a. An emergency or crash cart equipped with a plastic breakable seal that can be easily removed during emergency.

b. A defibrillator, necessary drugs and other CPR equipment and test strips.

c. A log book to indicate the maintenance of the crash cart and its components which include:

   i. Resuscitation Kit,

   ii. Cardiac board

   iii. Oral airways.

   iv. Laryngoscope with blades.

   v. X-ray viewer.

   vi. Nebulizer.

   vii. Pelvic binders.

   viii. Chest tubes.

   ix. Disposable supplies which shall include:

   - Suction tubes (all sizes);
   - Tracheotomy tube (all sizes);
   - Catheters (different sizes);
   - Intravenous sets;
   - Blood transfusion set;
   - Syringes (different sizes);

- Dressings (gauze, sofratulle);
- Crepe bandages (all sizes);
- Splints (Thomas splints, cervical collars, finger splints);
- All types of fluids (e.g. Dextrose, D10W, Lactated Ringers, Normosol R, Normosol M, Haemaccel, and others.);
- Glucometer; and
- Alcoholmeter.

x. Portable Vital Signs Monitor (ECG, Pulse-Oximetry, Temperature, NIBP, EtCO2).

xi. Portable transport ventilator with different ventilation mode (IPPV, SIMV, spontaneous, PS).

xii. Other apparatus such as:

- Suction apparatus that meets operating room standards;
- Rapid fluid infusers;
- Thermal control equipment for patients and resuscitation fluids;
- Intraoperative radiologic capabilities;
- Equipment for fracture fixation
- End-tidal carbon dioxide detection;

- Arterial pressure monitoring; and
- Patient rewarming.

7.4.8. For laboratory requirements in an ED, refer to **Appendix 5.**

7.4.9. Emergency drugs, devices, equipment and supplies should be available for immediate use in the emergency area for treating life-threatening conditions including O negative blood units.

7.4.10. Paediatric emergency departments should be fully equipped with appropriate paediatric sized equipment. Refer to the **Appendix 6.**

7.5. Pharmacologic/Therapeutic Drugs and Agents

7.5.1. Emergency Department requires Pharmacologic/Therapeutic Drugs and Agents that is aligned with the requirements of medication as per the DHA Pharmacy Guidelines for Hospitals and refer to **Appendix 7**.

7.6. Minimum Staffing Requirements

7.6.1. An Emergency Medicine Consultant should lead emergency departments.

7.6.2. All healthcare professionals in the health facility shall hold an active DHA full time professional license and work within their scope of practice.

7.6.3. The emergency department should be comprised of physicians, nurses, and non-clinical support staff.

7.6.4. All the healthcare professionals in the emergency department shall be privileged as per the DHA Clinical Privileging Policy.

7.6.5. The following physicians shall maintain active certification in adult, paediatric and trauma resuscitation (ACLS, PALS, and ATLS):

a. Emergency Medicine Consultant or Specialist, and

b. Physicians with a general practitioner license.

7.6.6. All obstetricians and neonatologists need to maintain active certification in adult and Neonatal Resuscitation (ACLS, NRP).

7.6.7. All staff providing emergency services that provide patient care maintain valid training or certification in basic Cardiopulmonary Resuscitation (CPR) or basic life support (BLS).

7.6.8. The following core specialities should be available to give advice for patients on a 24-hour basis as part of emergency care.

a. Paediatric surgeon.

b. Anaesthetist with paediatric skills.

c. Neonatologist.

d. Paediatric critical care specialist.

7.6.9. A Registered Nurse (RN) trained in paediatric care should be responsible, either directly or in a supervisory role, for the nursing care of paediatric patients.

7.6.10. Large EDs providing paediatric care shall employ allied health professionals dedicated to ED work such as:

a. Respiratory therapists.

b. Phlebotomists.

c. Plaster technicians.

d. In addition to any other ED work.

7.6.11. There should be at least one consultant or specialist in emergency medicine per shift in all emergency departments.

7.6.12. Availability of appropriate combination of multidisciplinary emergency team, its members possessing the requisite levels of knowledge and skills in accordance with their role in providing emergency care to patients of varied acuity levels, and that staff receive appropriate and up to date training to support quality and safe emergency care.

7.6.13. The difference in health professional requirements for emergency care is summarized in **Appendix 2.**

7.7. Clinical Governance

7.7.1. All Emergency departments should include representatives on the following hospital committees:

a. Quality improvement committee.

b. Disaster management committee.

c. Infection control committee.

d. Code blue committee.

e. Educational committees for physician.

f. Mortality and Morbidity committee.

7.8. Ancillary Services

7.8.1. All healthcare facilities proving emergency services shall ensure the availability of ancillary services such as:

a. Transportation.

b. Social worker.

c. Finance.

d. Purchasing.

e. Facility management.

f. Human resources.

7.9. IT and Technology

7.9.1. All health facilities providing emergency department services shall ensure the availability of electronic patient records and patient information systems.

a. The facility shall develop a plan to integrate electronic medical system with NABIDH project.

7.9.2. Access to electronic forms and requests for investigations of pharmacy, catering, and supplies.

7.9.3. Picture archiving communications systems (PACS) should be in place for access to patient imaging results.

7.9.4. Availability of Computers, laptops and tablets for physicians, nurses, and administrative staff.

7.9.5. Patient call, nurse assist call, emergency call systems should be in place.

7.9.6. Wireless network requirements for ease of communication.

7.9.7. The health facility shall have telehealth technology and support services where applicable.

7.9.8. Telephones should be available in all offices, at all staff stations, in the clerical area and in all consultation and other clinical rooms.

7.10. Health Records

7.10.1. The electronic health record system (with Medical file, nursing notes, laboratory notes, pharmacy prescriptions and radiology systems) should be available to support clinical management, patient tracking and departmental administration.

7.10.2. The health facility shall comply with the DHA Guidelines for Managing Health Records.

7.11. Surge and Disaster Preparedness

7.11.1. The availability of a safety management system that includes fire safety, hazardous waste management, emergency plans, security, and any other risks.

7.11.2. In the event of an incident, the health facility shall have in place the following:

a. A unified incident management structure.

b. Preliminary assessment of the incident and document initial resource needs and availability.

c. Provide health-related data to DHA or HRS will assist and prepare the facility for any necessary shifts into and out of conventional, contingency, and crisis standards of care.

7.11.3. The health facility should integrate effective emergency preparedness initiatives into their organisational, strategic and corporate plans that include:

a. Business continuity plans.

b. Emergency and Disaster preparedness and response system.

c. Risk Management.

d. Workplace Health and Safety.

e. Environmental Health and Safety.

f. Prevention and Control of infection and outbreaks.

7.11.4. Maintain surveillance systems to detect and monitor outbreaks of disease after any public health emergency.

7.12. Access to Emergency Care

7.12.1. Patients must not be denied emergency care and management based on their health insurance product; as this breaches UAE Federal Laws.

7.12.2. The health facility should be open 24/7 with access to comprehensive emergency services.

7.12.3. There should be appropriate emergency department signage clearly visible at the entrance of health facility.

7.13. Requirements for Patient Assessment, Diagnoses and Stabilisation

7.13.1. Patients who present with severe physiological and/or psychological disturbance shall receive immediate care.

7.13.2. The health facility should be capable to resuscitate patients with life-threatening condition or injury.

7.13.3. The health facility should be capable to assess and provide early treatment to patients with sudden serious illness or injury.

7.13.4. Patients who are waiting for consultation are reassessed every 15-60 minutes depending on the triage level to ensure changes to clinical condition are identified in a timely manner.

7.13.5. Within the health facility, they shall stabilize and transfer patients with an immediate risk or threat to life, limb, body function or long-term health to an emergency department by interfacility ambulance.

7.14. Requirements for Patient Triage, Admission, Discharge and Emergency

7.14.1. The emergency department should have a 24-hour consultant cover to oversee triage.

7.14.2. Emergency-trained nurses should perform triage in all EDs.

7.14.3. Health facilities providing ED services should have in place a process to stratify patients based on the urgency for medical attention. They can

refer to the Canadian emergency department triage and acuity scale (CTAS) or the emergency severity index (ESI) as reference.

7.14.4. The ED should provide medical screening examination and/or stabilizing treatment to all Level 1 and Level 2 patients immediately in order to inquire about payment status and ensure that assessment is documented on the patient's medical records.

a. Use the colour coded five levels of triage in **Appendix 8**.

7.14.5. The medical screening examination shall be performed by a DHA licensed healthcare professional aiming to determine if the patient condition needs urgent attention or patient is stable and safe to seek treatment in another facility of their choice where they are covered.

7.14.6. If a patient's insurance does not cover ongoing treatment at the receiving hospital but the patient requires further urgent medical or surgical intervention and is stable and safe to transfer to another hospital, the receiving hospital should seek advice and guidance from the patient's insurance company to identify an appropriate transfer location.

7.15. Referral to Secondary or Tertiary Care

7.15.1. All emergency patients should be stabilized before referral is made.

7.15.2. Indications for referral to another facility is based on the following criteria, but not limited to:

a. Patient's need for specialized care not available in the receiving facility in terms of expertise and facilities.

b. For second opinion.

c. Non-availability of hospital beds.

d. Ineligibility for treatment in receiving facility.

7.16. Emergency Service Transfer

7.16.1. Patient's safety during transfer must be ensured by the receiving facility which is reached by the provision of the following:

a. Available ambulance for transport with necessary equipment's.

b. Medical or nursing staff as escorts depends to the condition of patient.

c. The healthcare provider at the receiving facility should be prepared to receive patient along with the diagnosis or medical record. The physician from the current health facility should transfer patient information and health record in advance.

7.16.2. All other health facility categories must ensure they fulfil the BLS/ACLS requirements and contact emergency services for patients care as needed.

a. The facility shall communicate clearly with the receiving physician about the hemodynamic state of the patient (stable or unstable) at the time of acceptance. Update the receiving facility with any changes in patient status.

7.16.3. All health facilities transfer policies must comply with the DHA Patient referral and inter-facility transfer policy.

7.17. Patient Safety, Quality Control and Assurance

7.17.1. The health facility shall have a quality and safety committee to monitor, assess and improve performance and report on adverse incidents.

7.17.2. The health facility shall have organizational plans in place that avoid crowding in the emergency department.

a. Crowding directly impacts on patient quality of care, morbidity and mortality. For example, have in place separate waiting areas and clear signage.

7.17.3. The emergency department shall undertake regular clinical audits and review.

7.17.4. Provision of patient care that is safe and high quality shall be ensured by the following:

a. Trained emergency personnel shall make patient-centred, timely and expert decisions to provide care.

b. Availability of supported systems, processes, diagnostics, appropriate equipment and facilities.

7.17.5. Enablers to high-quality care include:

a. Appropriate trained staff.

b. Access to care (including financial).

c. Coordinated emergency care through the entire patient journey.

d. Monitoring of outcomes.

8. **STANDARD FOUR:** PEDIATRIC EMERGENCY DEPARTMENT

8.1. In addition to the requirements of the general ED, the paediatric ED must be staffed and equipped to deal with the full range of ages and clinical presentations of children that it normally receives.

8.2. All EDs must be always prepared to deal with the initial resuscitation of a child brought in unexpectedly.

8.3. The ED environment must be safe for children.

8.4. Paediatric EDs should be staffed by a multi-disciplinary team that includes:

8.4.1. Medical Director can be:

a. Paediatric Emergency Medicine Physician OR

b. Adult Emergency Medicine Physician OR

c. General Paediatric physician with minimum 5 years' experience in emergency.

8.4.2. At least one paediatric Specialist/Consultant per shift.

8.4.3. Anaesthesia specialist with active Paediatric Anaesthesiology certification.

8.4.4. Nursing staff that are trained in paediatric care or that are actively certified in advanced obstetric life support courses (ACLS, ALSO).

8.4.5. Registered nursing staff with a minimum requirement of current certification in advanced cardiac life support and paediatric advanced life support.

8.4.6. Emergency or Family Physician specialists who have completed Paediatric medicine training.

8.4.7. Radiographer.

8.4.8. Registration officer.

8.4.9. Quality officer.

8.4.10. Plaster technicians.

8.4.11. Ancillary services and allied health providers.

8.5. Permitted services for paediatric ED shall include the following:

8.5.1. A dedicated retrieval service or an access to one and the capability to transfer and receive critically ill pediatric patients to designated hospitals or centers.

8.5.2. Be able to manage pediatric patients with major trauma and/or life-threatening conditions.

8.5.3. Be able to manage acute complex presentation and case mix including mental health.

8.5.4. Have the capacity for invasive monitoring and short-term assisted ventilation.

8.5.5. Have the capacity to respond to local major incidents including a role in a formal disaster response plan.

8.6. Children must be separated from distressing sights and sounds of other patients, with some separation from the main waiting area for adults.

8.7. The option of family-member presence must be permitted and encouraged for all aspects of ED care.

8.8. The ED must contain enough child-orientated treatment rooms (depending on the proportion of child ED attenders) with sufficient space to accommodate family members.

8.9. Areas dedicated for children should be clearly designated, furnished, and decorated in a manner that is colourful, comfortable and safe for both patients and their parents or guardians.

8.10. Younger children must have access to nutrition and a suitable area should be available adjacent or within the ED for breast-feeding and nappy changing.

8.11. ED staff must give health advice and explanations in clear language and ensure they have been understood, considering that the family will usually have responsibility for delivering ongoing healthcare.

8.12. Guidelines for medical treatment should be available for balancing the wishes of the child, legal responsibility of the guardian and the child's best interests.

8.13. All emergency departments should be fully equipped with appropriate paediatric sized equipment, **Appendix 6.**

8.14. Paediatric ED staff should device a daily method to verify the proper location and functionality of all equipment and expiration of medications and supplies.

8.15. All staff in the prehospital setting should be trained in BLS, PALS and PHTLS.

8.16. Ambulances to be equipped with paediatric sized equipment as well as space to accommodate a parent or guardian during transportation.

8.17. All clinicians should be educated about child protection and child abuse including:

8.17.1. Clinical assessment of a child.

8.17.2. Recognition of possible child abuse.

8.17.3. Initial management of a child with possible or suspected abuse.

8.17.4. Notification of appropriate authorities about a case of possible or suspected child abuse.

8.18. Clinicians must be aware of local laws and guidelines regarding consent to undertake examinations of children. Refer to the DHA Guidelines for Patient Consent.

9. **STANDARD FIVE:** MATERNITY EMERGENCY DEPARTMENT

9.1. Maternity EDs should provide the following :

9.1.1. Care for women with obstetric or gynaecologic complaints on a 24/7 basis and should be able to address emergency obstetric care, early pregnancy complications, postnatal emergency care, as well as facilitate neonatal intensive care.

9.1.2. Care for women and neonates during the pregnancy period, during delivery, as well as in the postpartum period, defined as the six weeks after giving birth.

9.1.3. Observation of patients with low-mechanism trauma after being seen in a trauma level unit and cleared from life threatening trauma.

9.1.4. Screening for sexually transmitted diseases, reproductive counselling services and females presenting for breast and reproductive cancer screening.

9.1.5. Access to surgical consult services, labour and delivery suites.

9.2. Maternity EDs should be staffed by a multi-disciplinary team that includes:

9.2.1. Obstetrics and Gynaecology Physician as Medical Director.

9.2.2. At least one Obstetrics and Gynaecology (OBGYN) Specialist/Consultant per shift.

9.2.3. Consultant or specialist Neonatologist per shift.

9.2.4. Anaesthesia specialist with active Neonatal Resuscitation Program (NRP) certification.

9.2.5. Nursing staff that are trained in OBGYN care or that are actively certified in advanced obstetric life support courses (ACLS, ALSO).

9.2.6. Registered nursing staff with a minimum requirement of current certification in advanced cardiac life support and paediatric advanced life support.

9.2.7. Midwifes that are actively certified in advanced obstetrics life support courses.

9.2.8. Emergency or Family Physician specialists who have completed Obstetrics or Women's Health Fellowship training.

9.2.9. Radiographer.

9.2.10. Phlebotomist.

9.2.11. Registration officer.

9.2.12. Quality officer.

9.2.13. Plaster technicians.

9.2.14. Ancillary services and allied health providers.

9.3. All EMS staff in prehospital setting should have active advanced life support course certifications, (i.e. BLS, ACLS, NRP, ALSO).

9.4. Permitted services for maternity EDs shall include the following:

9.4.1. Be equipped to handle life-threatening gynaecologic and obstetric conditions.

9.4.2. Provide resuscitative and urgent care, including emergency surgical care, to their patients. These conditions may include but are not limited to:

a. Pre-eclampsia and eclampsia.

b. Sepsis, including pelvic inflammatory disease (PID), tubo-ovarian abscesses (TOA), endometritis.

c. Dysfunctional uterine bleeding, including life-threatening bleeding,

d. Premature rupture of membranes.

e. Suspected or ruptured ectopic pregnancies.

f. Complications of labour including prolonged or obstructed labour.

g. Post-partum haemorrhage.

h. Miscarriages.

i. Emergency Delivery.

j. Neonatal resuscitation following delivery.

k. Post-abortion care.

l. Family planning counselling.

m. Continuous foetal heart rate monitoring.

n. Breast disorders, including screening for cancer.

o. Female wellness screening, including Pap smears and reproductive cancer screening.

9.5. In the event of traumatic conditions, pregnant patients shall be first stabilized and treated in an appropriate trauma center, then observed, according to condition, in a maternity ED.

9.6. Maternity EDs should have x-ray, ultrasound, and computed tomography (CT) scanning available on-site.

9.7. Maternity EDs should be capable of observing pregnant patients including with continuous cardiotocographic (CTG) monitoring for signs of foetal or maternal distress.

9.8. A maternity ED should have laboratory capabilities for routine haematology, chemistry, and pathology studies.

9.9. A maternity ED should have Intravenous (IV) medications, including resuscitative medications, IV fluids, and narcotics available.

9.10. A maternity ED should be capable of treating all women with gynaecological and reproductive concerns, including females during pregnancy, during delivery and in their post-partum period.

9.11. Maternity EDs must be staffed with healthcare providers capable of delivering neonatal emergency services, gynaecological and obstetric care, mental health care, as well as anaesthesia and surgical services on a 24-hourly service.

9.12. If no surgical or medical services are available, on-site, maternity EDs should have clear policies in place for transfer of patients to other facilities if the need arises.

9.13. All maternity EDs should be adequately designed to receive patients with the layout and equipment as mentioned above in a general Emergency Department and aligned with the DHA Health facility Guidelines Emergency Unit.

9.14. There shall be appropriate equipment and supplies, including neonatal sized equipment, maintained for the Maternity Emergency department.

9.15. Vital sign monitoring equipment, including, but not limited to:

9.15.1. Thermometers.

9.15.2. Cardiac monitors for heart rate monitoring with defibrillating, pacing and cardioversion capabilities.

9.15.3. Oxygen saturation monitors, co-oximetry devices.

9.15.4. Blood pressure monitoring devices with adequately sized cuffs.

9.15.5. Weight Scale.

9.15.6. Point of care devices for rapid glucose and ketone levels check.

9.15.7. Immediately available oxygen with flow meters and masks or equivalent with available mechanical suction.

9.15.8. Cardiotocographic (CTG) machine.

9.15.9. Foetal stethoscope.

9.16. Airway maintenance and resuscitation equipment to include the following:

a. Resuscitation bags,

b. Laryngoscopies,

c. Blades of varying sizes and shapes,

d. Endotracheal tubes,

e. Cricothyrotomy tubes,

f. Adapters, and

g. Ventilation devices.

9.17. Neonatal airway kits that should include straight blades, adequately sized masks, bags (T-piece, flow inflating, self-inflating) with manometer, endotracheal tubes, meconium aspirator, bulb syringes.

9.18. Other equipment required are as follows:

9.18.1. Humidified heated oxygen source.

9.18.2. Compressed air source with oxygen blender.

9.18.3. Radiant warmers with temperature sensor.

9.18.4. Foam or hard wedge devices (i.e. Cardiff wedge device).

9.18.5. Complete intravenous infusion sets and cannulation equipment, with Intravenous catheter needles of multiple sizes (14 Gauge to 24 Gauge needles), and Intravenous poles and rapid infusers.

a. Neonatal cannulation and catheterization kits that include umbilical vein and artery access equipment in multiple sizes, umbilical tape.

9.18.6. Intraosseous cannulation equipment with adult and paediatric sizes available.

9.18.7. Adult and Paediatric crash carts fully equipped with different size equipment and periodically checked.

9.18.8. Foley's Catheters of multiple sizes, Coudé catheters, Nasogastric tubes

9.18.9. Newborn and paediatric resuscitation equipment.

9.18.10. Equipment for managing hypothermia (Blankets, warm humidifiers).

9.18.11. Lumbar Puncture sets, Central line cannulation kits, Thoracotomy tubes

9.18.12. Wheelchairs and mobility assistance devices.

9.18.13. ECG machine.

9.18.14. Infection-related swabs or assays (influenza swab, wound culture swab, vaginal swab).

9.18.15. Emergency delivery kits that include sterile drapes, towels, gauze, surgical blades, Kelly clamps, Cord clamps, rubber suction bulbs, gauze sponges, haemostatic forceps/tissue forceps, placenta basins.

9.18.16. Uterine-specific balloon devices (i.e. Bakri balloon, Rüsch balloon).

9.18.17. Equipment kits for emergency Caesarean section (perimortem C-section).

9.18.18. Ultrasonography machines with appropriate probes (vaginal, abdominal, vascular, and cardiac).

9.18.19. Vaginal Speculums.

9.18.20. Word Catheters.

9.18.21. Pelvic examination kits.

9.19. Mandatory services to be provided on-site include:

9.19.1. Laboratory.

9.19.2. Radiology.

9.19.3. Pathology.

9.19.4. Critical Care – ICU and NICU.

9.19.5. Anaesthesia.

9.19.6. Respiratory Therapy.

9.19.7. General surgical services.

9.19.8. General medicine.

9.19.9. Electrocardiography.

9.19.10. Pharmacy.

9.19.11. Patient transport.

9.19.12. Social workers and counsellors.

9.19.13. Mental health services.

9.19.14. Child protective services.

9.19.15. Physical Therapy.

9.19.16. Public Relation Officer.

9.19.17. Phlebotomy.

9.19.18. Security.

9.20. Policies, Procedures and Protocols other than the general mentioned above are as follows:

9.20.1. Triage patients in adherence to internationally accepted and validated modified triage acuity scores such as:

a. Modified Early Obstetric Warning Signs (MEOWS).

b. Maternal-Foetal Triage Index (MFTI), whenever applicable, in addition to Emergency Severity Index (ESI).

c. Canadian Triage and Acuity Scale (CTAS) to measure acuity.

9.20.2. Notifying authorities in cases of suspected maternal neglect, sexual abuse, and intimate partner violence.

9.21. If a maternity ED anticipates a disaster event, it must have plans set in place for the care of pregnant patients with anticipated induction or scheduled deliveries.

9.22. During disasters, maternity EDs must have policies for the appropriate triaging, referral or triaging away of patients depending on the available resources.

9.23. Maternity EDs must unify triage acuity tools for the pregnant patient utilized during disaster preparedness and activation. These may include CTAS, ESI, MFTI, MEOWS, as described above, or The Obstetric Triage by Resource Allocation for Inpatient tool (OB TRAIN).

9.24. In the case of disasters or evacuations, special care should be taken not to separate mothers from their new-borns.

10. **STANDARD SIX:** FREE-STANDING EMERGENCY DEPARTMENT

10.1. A Freestanding Emergency Departments (FSED) is an emergency department, physically separate and distinct to its operating hospital, that is adequately staffed by emergency staff and physicians, and that provides comparable care to a wide range of patients 24/7.

10.2. Broadly, there are two types of FSED:

10.2.1. Hospital-outpatient department: these FSED are affiliated with a Hospital. They are also known as satellite emergency departments, offsite emergency departments, or off-campus emergency departments.

10.2.2. Independent freestanding emergency departments: FSED operating independently and not affiliated to any health authority or hospital, but

have Memorandum of understanding (MOUs) with multiple hospitals to continue patient care once the patient is stabilised.

10.3. The purpose of FSED is to care for patients presenting to the emergency department; those who require lower acuity of care can be safely discharged. FSEM may also provide initial diagnostic procedures as well as stabilizing interventions to the patients who are acutely ill or injured prior to transfer to a hospital-based emergency department.

10.4. As FSED's do not have in-patient capabilities, patients who require further care will be transferred to appropriately sourced facilities through local ambulance and EMS systems.

10.5. FSEDs have the same scope of services as traditional emergency departments; however, they are not attached to a hospital.

10.6. Medical staff practicing at the off-campus ED must be part of the hospital's single organized medical staff as required locally.

10.7. In the case of HOPD, the hospital maintains the same monitoring and oversight of the off-campus emergency department as it does for any other of its departments.

10.8. FSEDs should have appropriate policies for referrals to primary and specialty physicians for aftercare and the same standards as hospital based EDs for the following:

a. Quality improvement.

b. Medical leadership.

c. Medical directors.

d. Credentialing.

10.9. An FSED should operate 24/7, and during public holidays.

10.10. An FSED should be staffed by emergency-trained physicians and staff nurses.

10.10.1. They may also be co-staffed by General Practitioners and nursing staff who have active certification in (BLS, ACLS, PALS, and ATLS).

10.10.2. They should work under at least one consultant or specialist per shift.

10.10.3. An FSED should also employ registration, ancillary support, and nursing staff as required.

10.11. Permitted services for FSED facilities shall include the following:

10.11.1. Should be equipped to handle high acuity cases and life-threatening emergencies.

10.11.2. Policies are set in place for the transfer of patients to on-campus or hospital-based emergency departments if the need arises.

10.11.3. EMS staff should adequately convey level of acuity for patient care and notify FSED staff prior to transfer to FSED facility to avoid delay in allocating appropriate care.

10.11.4. An FSED should have x-ray, ultrasound, and computed tomography (CT) scanning available on-site.

10.11.5. An FSED should have laboratory capabilities for routine haematology and chemistry studies, pregnancy testing, and cardiac enzymes.

10.11.6. An FSED should have Intravenous (IV) medications, including resuscitative medications, IV fluids, and narcotics available.

10.11.7. An FSED should be capable of treating all age range.

10.12. The health facility requirements shall align with DHA, Health Facility Guidelines (HFG), 120 Emergency Unit.

10.13. The ED should have the following healthcare professionals:

10.13.1. Licensed Emergency Physician as Medical Director.

10.13.2. Registration officer.

10.13.3. Quality officer.

10.13.4. Medical staff practicing at the off-campus ED must be part of the hospital's single organized medical staff as required locally.

10.13.5. In the case of HOPD, the hospital maintains the same monitoring and oversight of the off-campus emergency department as it does for any other of its departments.

10.13.6. FSEDs should have the same standards as hospital based EDs for quality improvement, medical leadership, medical directors, credentialing, and appropriate policies for referrals to primary and specialty physicians for aftercare.

10.14. All EMS staff in prehospital setting should have active advanced life support course certifications (i.e., BLS, ACLS, and PALS).

10.15. Medical and nursing personnel should be qualified in emergency care and staffed to a number that meets the needs anticipated by the facility. They should include:

10.15.1. Specialist Physicians licensed in emergency medicine care.

10.15.2. General practitioners with experience working in emergency departments, who have active certification in advanced life support courses, working under a licensed emergency specialist or a licensed emergency consultant.

10.15.3. Registered nursing staff with a minimum requirement of current certification in advanced cardiac life support and paediatric advanced life support.

10.15.4. Radiographer.

10.15.5. Phlebotomist.

10.15.6. Plaster technicians.

10.15.7. Housekeeping services and utility personnel must be available on site as well.

10.16. There shall be appropriate equipment and supplies maintained for the Free-Standing Emergency Center to include, but not limited to:

10.16.1. Vital sign monitoring equipment, including, but not limited to:

a. Thermometers.

b. Cardiac monitors for heart rate monitoring with defibrillating, pacing and cardioversion capabilities.

c. Oxygen saturation monitors, co-oximetry devices.

d. Blood pressure monitoring devices with adequately sized cuffs.

e. Weight Scale.

f. Point of care devices for rapid glucose and ketone levels check.

g. Immediately available oxygen with flow meters and masks or equivalent with available mechanical suction.

10.16.2. Airway maintenance and resuscitation equipment to include:

a. Resuscitation bags,

b. Laryngoscopies,

c. Blades of varying sizes and shapes,

d. Endotracheal tubes,

e. Cricothyrotomy tubes, and

f. Adapters.

10.16.3. FSED should include the following devices:

a. Ventilation devices.

b. Nebulization devices.

10.16.4. Spine immobilization equipment to include rigid and/or semi-rigid collars.

10.16.5. Complete intravenous infusion sets and cannulation equipment, with Intravenous catheter needles of multiple sizes (14 Gauge to 24 Gauge needles), and Intravenous poles and rapid infusers.

10.16.6. Intraosseous cannulation equipment with adult and paediatric sizes available.

10.16.7. Adult and Paediatric crash carts fully equipped with different size equipment and periodically checked.

10.16.8. Otoscope, fundoscopy device, stethoscope, torch and tongue depressors.

10.16.9. Different size splints, bandages and slings.

10.16.10. Laceration repair kit, suturing material, adhesive bandages.

10.16.11. Foley's Catheters of multiple sizes, Coude catheters, Nasogastric tubes.

10.16.12. Newborn and paediatric resuscitation equipment.

10.16.13. Equipment for managing hypothermia (Blankets, warm humidifiers).

10.16.14. Lumbar Puncture sets, Central line cannulation kits, Thoracotomy tubes.

10.16.15. Wheelchairs and mobility assistance devices.

10.16.16. ECG machine.

10.17. There shall be appropriate equipment and supplies maintained for the Free-Standing Emergency Department as mentioned in **Appendix 3**.

10.18. FSED should have access to ancillary services on-site. If a department lacks support services availability, it should ensure timely transfer to other facility for appropriate care.

10.19. Such services include but are not limited to:

10.19.1. Laboratory.

10.19.2. Radiology.

10.19.3. Respiratory Therapy.

10.19.4. Electrocardiography.

10.19.5. Pharmacy.

10.19.6. Social worker.

10.19.7. Public Relation Officer.

10.19.8. Phlebotomy.

10.19.9. Security.

10.19.10. Mental health services.

10.19.11. Community services.

10.20. If patient care mandates access to other medical services, such as surgical, orthopaedic, or medical sub-specialties, then an FSED should have a clear policy set forth for such patient disposition and transfer to other facility.

10.21. The FSED shall maintain all policies, procedures and protocol as in the general emergency department, mentioned above.

11. **STANDARD SEVEN:** RURAL EMERGENCY DEPARTMENT

11.1. Rural EDs typically serve smaller, remote communities and provides 24/7 emergency medicine services for urgent or emergent cases to the rural population.

11.2. Rural EDs must be able to provide adequate initial diagnostic, treatment and stabilization in life-threatening emergencies or acute injuries.

11.3. Rural EDs should employ trained emergency physicians and registered nurses.

11.4. They may also be co-staffed by General Practitioners and nursing staff who have active certification in (BLS, ACLS and PALS) and work under at least one Consultant/Specialist per shift.

11.5. Rural EDs should employ registration, ancillary support and nursing staff as required.

11.6. Facilities must dedicate at least one resuscitation area to provide advanced paediatric, adult, obstetric or trauma life support. Those areas must be fully prepared with equipment and medication.

11.7. Policies and agreements should be in place for the transfer of patients to higher level of care if required treatment is not available on-site.

11.8. Rural EDs must facilitate access to specialty care or consultation on a 24-hourly basis. Such services may be provided on-site, via transfer or via tele-health consultation at the discretion and capabilities of the concerned facility.

11.9. Permitted services for the rural ED shall include the following:

11.9.1. Diagnostic as well as laboratory services like x-ray, ultrasound, and computed tomography (CT) scanning, routine haematology, chemistry studies, pregnancy testing, and cardiac enzymes available on-site.

11.9.2. Intravenous (IV) medications, including resuscitative medications, IV fluids and narcotics available.

11.9.3. Should be capable of treating all age groups.

11.9.4. Rural EDs must be staffed with healthcare providers capable of delivering paediatric emergency services, gynaecological and obstetric care, mental health care, as well as anaesthesia services on a 24/7.

11.9.5. If no surgical or medical services are available on-site, tele-health consultation with specialized providers should be utilized.

11.10. The health facility requirements shall align with DHA, Health Facility Guidelines (HFG), 120 Emergency Unit

11.11. The ED should have the following healthcare professionals:

11.11.1. Emergency Medicine Specialist or Consultant as a Medical Director.

11.11.2. Specialist Paediatric Emergency Physicians or, Specialist Paediatric physicians with experience working in the ED with active PALS certification.

11.11.3. Enough Physicians like GPs, Registered Nurses with experience working in emergency departments and support staff like Radiographer,

Phlebotomist, Plaster technicians and others. to meet the volume and service needs by the health facility.

11.11.4. Registration Officer

11.11.5. Quality Officer.

11.12. All staff shall be qualified in emergency care and have active advanced life support course certifications (i.e., BLS, ACLS, and PALS).

11.13. There shall be appropriate equipment and supplies maintained for the Rural Emergency Department as mentioned in **Appendix 3**.

11.14. Departments should ensure adequate stocking, storage and dispensing mechanisms for medications in a proper storage unit adhering to local laws and DHA Pharmacy Guidelines.

11.15. Mandatory services to be provided on-site include:

11.15.1. Laboratory.

11.15.2. Radiology.

11.15.3. Respiratory Therapy.

11.15.4. Electrocardiography.

11.15.5. Pharmacy.

11.15.6. Social worker.

11.15.7. Public Relation Officer.

11.15.8. Phlebotomy.

11.15.9. Security.

11.15.10. Mental health services.

11.15.11. Community services.

11.16. Ancillary services may also be provided remotely via tele-health consultations, these may include:

11.16.1. Medical sub-specialties including (but not limited to) respiratory, gastroenterology, endocrinology, neurology, haematology, and oncology.

11.16.2. Cardiology.

11.16.3. Mental health services.

11.16.4. Community services.

11.16.5. Surgical sub-specialties for stable patients not requiring immediate intervention.

11.17. If patient care mandates immediate access to other medical services, EDs should have a clear policy set forth for such patient disposition and transfer to other facility.

11.18. Rural EDs must communicate with local health authorities in the case an outbreak of disease is detected.

11.19. In the case of disasters shall abide with standards for ED above.

11.20. Rural EDs must communicate with local EMS and tertiary care centres to facilitate flow of patients.

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APPENDICES

APPENDIX 1: COMPARISON OF MEDICAL EQUIPMENTS AND SUPPLIES IN URGENT CARE AND EMERGENCY DEPARTMENTS.

Urgent Care	Emergency Departments
Access to the following: • Laboratory tests; • Urine tests; • Ultrasound; • Catheters; • Gull resuscitation trolley; • Drugs/medication; and • Swabs.	Specialised resuscitation bed.
Access to Electrocardiograms (ECG): • Bedside diagnostics and plain x-ray facilities, particularly of the chest and limbs, are desirable and considerably increase the assessment capability of urgent care. • Defibrillator	Resuscitation bay be equipped with: • A cardiac monitor machine equipped with an ECG, printing, NIBP, SpO2, temperature probe, invasive pressure, CO2 monitor; • A procedure light similar to a small, single arm operating light; • Equipment to hang IV fluids and attach infusion pumps; • Resuscitation patient trolley (crash cart); • Wall mounted diagnostic set (ophthalmoscope/auroscope); • Clinical scrub basin with paper towel and soap fittings; and • Overhead X-ray or mobile digital x-ray.

	Access to the following: • Conventional radiography; • Computed tomography (CT) scan; • Magnetic resonance imaging (MRI); • Defibrillator; • CPR equipment; • Test strips; and • Drugs and medication.
	Resuscitation Kit comprised with the following: • Cardiac board; • Oral airways; • Laryngoscope with blades; • X-ray viewer; • Nebulizer; • Point of care testing Thromboelastographic analyser (TEG); • Point of care testing Activated Clotting time (ACT) machine to monitor high-dose heparin anticoagulation; • Pelvic binders; and • Chest tubes.
	Disposable supplies which shall include: • Suction tubes (all sizes); • Tracheotomy tube (all sizes); • Catheters (different sizes); • Intravenous sets;

	• Blood transfusion set; • Syringes (different sizes); • Dressings (gauze, sofratulle, and others); • Crepe bandages (all sizes); • All types of fluids (e.g. D5W, D10W, Lactated Ringers, Normosol R, Normosol M, Haemaccel, and others.); • Glucometer; and • Alcoholmeter.

APPENDIX 2: COMPARISON OF HEALTHCARE PROFESSIONALS IN URGENT CARE AND EMERGENCY DEPARTMENTS.

Urgent Care Services	Emergency Department
The urgent treatment centre will usually be a GP-led service	An Emergency Medicine Consultant should lead emergency departments.
All healthcare professionals providing urgent care services should have the following: BLS, ACLS, PALS, CPR	The following physicians shall maintain active certification in adult, paediatric and trauma resuscitation (ACLS, PALS, and ATLS): • Physicians with an emergency medicine license, • Physicians with a general practitioner license, and • Physicians with a specialist license in Internal medicine or general surgery.
All the staff working in the urgent care center inclusive of physicians, nursing and non-clinical support staff shall report to the urgent care facility lead.	There should be at least one consultant or specialist in emergency medicine per shift in all emergency departments, apart from the required physicians, nursing and non-clinical support staff like social workers, clinical emergency pharmacist, Occupational therapist, and others.
	The paediatric emergency department shall be led by a paediatric emergency medical consultant; or emergency medical consultant; or paediatric consultant with five (5) years

	emergency experience if no paediatric emergency medicine consultant can be found.
	The maternity emergency department shall be led by an obstetric consultant. All the staff working in the maternity emergency department inclusive of physicians, nursing and non-clinical support staff shall report to the emergency department lead.

APPENDIX 3: EQUIPMENT AND SUPPLIES FOR THE EMERGENCY DEPARTMENT

The items mentioned below should be available for instant use. The list does not include routine medical or surgical supplies such adhesive bandages, gauze pads and suture material. It does not also include routine office items such as paper, desks, paper clips, and chairs.

Location in Emergency Department	Equipment and supplies
Entire Department	• Central station monitoring capability; • Appropriate physiological monitors, including but not limited to temperature, blood pressure, heart rate, blood oxygen saturation; • Defibrillator with monitor and power source; • Nurse-call system for patient use; • Supplies for venipuncture and blood cultures; • Supplies for the administration of IV therapies; • Portable suction regulator; • Infusion pumps including blood transfusion pumps; • IV poles; • Adult and pediatric bag-valve-masks; • Portable oxygen tanks and oxygen supply; • Blood/ fluid warmer and tubing; • Nasogastric suction supplies; • Nebulizer; • Urinary catheters, including but not limited to straight catheters, Foley catheters, Coude catheters, in addition to appropriate means for urine sample collection; • Intraosseous needles and placement equipment; • Lumbar puncture sets;

	• Blanket warmer; • Blanket cooler; • Tonometer; • Slip lamp; • Wheelchairs and other appropriate mobility devices and transfer-assist devices; • Medication dispensing system with locking capabilities; • Sterile separately wrapped instruments (specifics vary by department); • Weight scales (adult and infant); • Pediatric treatment and dosing table (pediatric emergency tape); • Ear irrigation and cerumen removal equipment; • Vascular Doppler; • Anoscope; • Adult and pediatric “code” cart; • Suture or minor surgical procedure sets (generic); • Portable sonogram equipment; • ECG (EKG) machine; • Point of care testing; • Influenza swabs; • Other necessary infection-related swabs or assays; • X-ray viewing capabilities; • Secure, modern and reliable computer system with access to electronic health/medical record; • High-speed, reliable and secure internet connection; • Patient tracking system;

	• Radio or other reliable means for communication with the pre-hospital care providers; • Patient discharged information system; • Patient registration system/information services; • Inter- and intradepartmental staff communication system – pagers, mobile phones; • ED charting system for physician, nursing, and attending physician documentation equipment; • Reference material (subscriptions) including toxicology information; • Appropriate personal protective equipment (PPE) based on the local infectious disease authorities; • Linen (e.g., pillows, towels, wash cloths, gowns, blankets); • Patient belongings or clothing bag with secure means of temporary storage; and • Equipment for adequate housekeeping.
General Examination Rooms	• Examination tables or stretchers appropriate to the area (for any area in which seriously ill patients are managed, a stretcher with capability for changes in position, attached IV poles, and a holder for portable oxygen tank should be used); • Step stool; • Equipment to perform pelvic exam; • Chair/ stool for emergency staff; • Seating for family members or visitors; • Adequate lighting, including procedure lights as indicated;

	• Adequate sinks for hand washing, including dispensers for germicidal soap and paper towels; • Wall mounted oxygen supplies and equipment, including nasal cannulas, face masks, and venturi masks; • Wall mounted suction capability, including both tracheal cannulas and larger cannulas; • Wall mounted or portable otoscope/ophthalmoscope; • Sphygmomanometer/stethoscope; • Biohazard-disposal receptacles, including for sharps; and • Garbage receptacles for non-contaminated materials.

Resuscitation Room	All items listed for general examination rooms plus:
	• Access to adult and pediatric "code" cart to include appropriate medication charts;
	• Capabilities for direct communication with the nursing station (preferable hands free);
	• Radiography equipment;
	• Portable ultrasound;
	• Radiographic viewing capabilities;
	• Airway needs:
	  ○ Adult, pediatric and infants' bag-valve masks.
	  ○ Cricothyroidotomy instruments and supplies.
	  ○ Endotracheal tubes, size 2.5 to 8.5 mm.
	  ○ Fiberoptic laryngoscope, video laryngoscope, or alternative rescue intubation equipment.
	  ○ Laryngoscopes, straight and curved blades and stylets.
	  ○ Laryngoscope mirror and supplies.
	  ○ Laryngeal Mask Airway (LMA).

	○ Oral and nasal airways. ○ Tracheostomy instruments and supplies. • Breathing: ○ Noninvasive Ventilation System (BIPAP/CPAP). ○ Closed-chest drainage device. ○ Chest tube instruments and supplies. ○ Emergency thoracotomy instruments and supplies. ○ End-tidal CO2 monitor. ○ Nebulizer. ○ Peak flow meter. ○ Pulse oximetry. ○ Volume cycle ventilator. • Circulation ○ Automatic noninvasive physiological monitor. ○ Blood/fluid infusion pumps and tubing. ○ Cardiac compression board. ○ Central venous catheter setups/kits. ○ Central venous pressure monitoring equipment. ○ Cut down instruments and supplies. ○ Intraosseous needles. ○ IV catheters, sets, tubing, poles. ○ Monitor/defibrillator with pediatric paddle, internal paddles, appropriate pads and other supplies. ○ Pericardiocentesis instruments. ○ Rapid infusion equipment. ○ Temporary external pacemaker.

	○ Trans venous and/or transthoracic pacemaker setup and supplies. ○ 12-Lead ECG machine.
Trauma and Miscellaneous Resuscitation	• Blood salvage/auto transfusion device; • Emergency obstetric instruments and supplies; • Hypothermia thermometer; • Infant warming equipment; • Peritoneal lavage instruments and supplies; • Spine stabilization equipment to include cervical collars, short and long boards; • Therapeutic hypothermia modalities; and • Warming/cooling blankets.
Other Special Rooms	All items listed for general examination rooms plus: • Orthopedic ○ Cast cutter. ○ Cast and splint application supplies and equipment. ○ Crutches. ○ External splinting and stabilization devices. ○ Radiographic viewing capabilities. ○ Traction equipment, including hanging weights and finger straps. • Eye/ENT ○ Eye chart. ○ Ophthalmic tonometry device (applanation, Schiotz, or other). ○ Other ophthalmic supplies as indicated, including eye spud, rust ring remover, cobalt blue light.

	○ Slit lamp. ○ Ear irrigation and cerumen removal equipment. ○ Epistaxis instrument and supplies, including balloon posterior packs. ○ Frazier suction tips. ○ Headlight. ○ Laryngoscopy mirror. ○ Plastic suture instruments and supplies. • OB-GYN ○ Fetal Doppler and ultrasound equipment. ○ Obstetrics/ gynecology examination light. ○ Vaginal specula in various sizes. ○ Sexual assault evidence-collection kits (as appropriate). ○ Access to baby warmer.

APPENDIX 4: RADIOLOGIC, IMAGING AND OTHER DIAGNOSTIC SERVICES IN EMERGENCY DEPARTMENTS

The timeliness and the availability of these services for the emergency patients is determined by the medical director of the ED in collaboration with the directors of the diagnostic services and other involved departments.

Duration and availability	Services

The following should be available 24 hours a day for emergency patients	• Standard radiologic studies of bony and soft-tissue structures;
	• Emergency ultrasound services for the diagnosis of obstetrics/gynecologic, cardiac and hemodynamic problems and other urgent conditions;
	• Cardiac services;
	  ○ Doppler studies.
	  ○ 12-Lead ECG and rhythm strips.
	• Computed tomography;
	• Pulmonary services;
	  ○ Arterial blood gas determination.
	  ○ CO oximetry.
	  ○ Peak flow determination.
	  ○ Pulse oximetry.
	  ○ Venous blood gasses
	• Fetal monitoring (nonstress test)/uterine monitoring in applicable facilities.

The following services should be available on an urgent basis, provided by staff in the	• Radiographic: ○ Arteriography/venography.

hospital or by staff who is on call and responds within reasonable period.	○ Dye-contrast studies (intravenous pyelography, gastrointestinal contrasts, and others). ○ Magnetic resonance imaging services or the ability to arrange for urgent MRI.

APPENDIX 5: SUGGESTED LABORATORY CAPABILITIES

The medical director of the ED and the director of the laboratory services should develop guidelines for the availability of services in timely manner for the ED patients.

Below laboratory, capabilities are suggested for an ED that operates 24 hours a day. This list is not comprehensive and can be modifies as guidelines and requirements changes.

Laboratory capabilities	Services
Blood Bank	• Bank products availability; and • Type and cross matching capabilities.
Chemistry	• Ammonia; • Anticonvulsants and other therapeutic drug levels; • Arterial blood gases; • Bilirubin (total and direct); • B-type natriuretic peptides (BNP); • Calcium; • Carboxyhemoglobin; • Cardiac enzymes; • Creatinine; • Electrolytes (blood and CSF); • Ethanol (as applicable); • Glucose (blood and CSF); • Lactate; • Lipase; • Liver function test (ALT, AST, alkaline phosphatase); • Methemoglobin; • Osmolality;

	• Protein (CSF); • Serum magnesium; and • Urea nitrogen.
Haematology	• Cell count and differential (blood, CSF, joint and other body fluid analysis); • Coagulation studies; • Erythrocyte sedimentation rate; • Platelet count; • Reticulocyte count; and • Sickle cell prep.
Microbiology	• Acid fast smear/staining; • Chlamydia and gonorrhea testing; • Counter immune electrophoresis for bacterial identification; • Gram staining and culture/sensitivities; • Herpes testing; • Rapid viral testing (COVID, Influenza, and others); • Strep screening; • Viral culture; and • Wright stain.
Other	• Hepatitis screening; • HIV screening; • Mononucleosis spot; • Serology (syphilis, recombinant immunoassay); • Pregnancy testing (qualitative and quantitative); • Toxicology drug screening levels; and • Urinalysis.

APPENDIX 6: EQUIPMENT AND SUPPLIES FOR THE PEDIATRIC EMERGENCY DEPARTMENT

Type of Equipment	Equipment and Supplies
General Equipment	• Weight scale in kilograms; • Blood pressure cuffs (Neonatal, Infant, Child); • Electrocardiography monitor/defibrillator with pediatric capabilities including pads/paddles; • Pulse oximeter with pediatric attachment; and • Pediatric stethoscopes.
Essential Equipment	• Pediatric airway and ventilation equipment including; ○ Appropriate oxygen delivery devices. ○ Bag valve masks: infant/adult with proper fitting masks. ○ Nnasopharyngeal and oropharyngeal airways. ○ Endotracheal tubes of appropriate sizes. ○ Pediatric laryngoscopes with straight and curved blades. • Suction catheters; • Pediatric nasogastric tubes; • Pediatric infusion sets and catheters; • Intraosseous access devices; • Appropriate vascular access devices; and • Central line catheters (4, 5, 6, 7 F).
Additional/special Equipment	• Lumbar-puncture tray with different lumbar puncture needles; • Supplies/kit for patients with difficult airway (Supraglottic airways of all sizes, laryngeal mask airway,

	needle cricothyrotomy supplies, surgical cricothyrotomy kit; • Chest tubes to include: 10, 12, 16, 24 F; • Newborn delivery kit, including equipment for resuscitation of an infant (umbilical clamp, scissors, bulb syringe, and towel); and • Urinary catheterization kits and urinary (indwelling) catheters (6F–22F).

APPENDIX 7: SUGGESTED PHARMACOLOGICAL/THERAPEUTIC DRUGS FOR EMERGENCY DEPARTMENTS

These classes of drugs and agents are only suggested and will evolve as new therapies become available. The ED medical director and a pharmacy representative should develop a formulary of specific agents for use in an individual hospital's ED. These items should be available in timely manner or arrangement should be in place to access them if they are not available in the ED.

List of suggested pharmacological drugs for emergency departments:

• Analgesics;
  ○ Narcotics and non-narcotic.
• Anesthetics;
  ○ Topical, infiltrative, general.
• Anticonvulsants;
• Antidiabetic agents;
• Antidotes;
  ○ Antivenins.
• Antihistamines;
• Anti-infective agents;
  ○ Systemic/topical/post-exposure prophylaxis.
• Anti-inflammatories;
  ○ Steroidal/non-steroidal.
• Antipyretics;
• Bicarbonates;
• Blood Modifiers;
  ○ Anticoagulants, including thrombolytic.
  ○ Hemostatic.

- Systemic.
- Topical.
- Plasma expanders/ extenders.

- Burn Preparations;
- Cardiovascular agents;
  - ACE inhibitors.
  - Adrenergic blockers.
  - Adrenergic stimulants.
  - Alpha/Beta blockers.
  - Antiarrhythmic agents.
  - Calcium channel blockers.
  - Digoxin antagonist.
  - Diuretics.
  - Vasodilators.
  - Vasopressors.
- Cholinesterase Inhibitors;
- Electrolytes;
  - Electrolyte replacements, parenteral and oral.
  - Fluid replacement solutions.
  - Medications to reverse electrolytes derangements.
- Gastrointestinal agents;
  - Antacids.
  - Anti-diarrheal.
  - Anti-emetics.
  - Antispasmodics.
  - Bowel evacuants/laxatives.
  - Histamine's receptor antagonists.

- Proton pump inhibitors.

- Glucose elevating agents;
- Hormonal agents;
  - Oral contraceptives.
  - Steroid preparations.
  - Thyroid preparations.
  - Hypocalcemia and hypercalcemia management agents.
  - Oxytocin and tocolytics.
- Lubricants;
- Migraine preparations;
- Muscle relaxants;
- Narcotic antagonist;
- Nasal preparation;
- Neuromuscular blocking agents;
- Ophthalmic preparations;
- Optic preparations;
- Psychotherapeutic agents;
- Respiratory agents;
  - Bronchodilators.
  - Decongestants.
  - Leukotriene antagonist.
- Rh0(D) immune globulin;
- Salicylates;
- Sedatives and Hypnotics;
- Vaccinations; and
- Vitamins and minerals.

APPENDIX 8: THE 5-LEVEL TRIAGE SYSTEM FOR EMERGENCY DEPARTMENT

Level	Status	Time to assessment
Level I	Resuscitation	See patient immediately
Level II	Emergency	Within 15 minutes
Level III	Urgency	Within 30 minutes
Level IV	Less Urgency	Within 60 minutes
Level V	Non Urgency	Within 120 minutes