

Annex 68.A Essential Resources for the Delivery of Emergency Care in Hospitals

Resources	Major emergency care center	Regional emergency care center	District emergency care center	Primary emergency care center
<i>Organization and administration</i>				
Multidisciplinary emergency care team	✓	✓		
Maintenance of statistical data	✓	✓	✓	
<i>Resources</i>				
Immediate access to radiology or CT and ultrasound scan facility on site	✓	✓		
Blood bank on site	✓			
Access to blood bank		✓	✓	
Radiological technician on site 24 hours a day	✓	✓		
Radiological services available promptly			✓	
<i>Clinical laboratory services</i>				
Laboratory services on site available 24 hours a day (including, but not limited to, the following tests)	✓	✓		
Hemoglobin, glucose, gram stain, blood slide test	✓	✓	✓	
Bacterial cultures	✓	✓		
<i>Quality improvement</i>				
Evidence of quality improvement program in accident and emergency department	✓	✓	✓	
Monthly morbidity and mortality review	✓	✓		
Medical nursing audit and utilization review	✓	✓		
<i>Personnel</i>				
Designated doctor in charge, member of the emergency care team, with special competence in care of critically ill and injured patients, present in the emergency care unit 24 hours a day	✓	✓		
Designated doctor in charge, member of the emergency care team, with special competence in care of critically ill and injured patients, available on call			✓	
Nursing personnel with special competence in the care of the critically ill and injured patients, designated member of the emergency care team, present in the emergency unit 24 hours a day	✓	✓	✓	
All personnel trained in airway, breathing, and circulatory support techniques	✓	✓	✓	✓
<i>Equipment required for resuscitation per station shall include but not be limited to</i>				
Bag valve resuscitator with reservoir	✓	✓	✓	
Sphygmomanometer (blood pressure cuff)	✓	✓	✓	
Cervical collars	✓	✓	✓	✓
Chest decompression set	✓	✓	✓	

(Continues on the following page.)

Annex 68.A Continued

Resources	Major emergency care center	Regional emergency care center	District emergency care center	Primary emergency care center
Cut down set	✓	✓	✓	
Delivery pack	✓	✓	✓	✓
Diagnostic peritoneal lavage set open (1)	✓	✓		
Dressing trolley	✓	✓	✓	✓
Drip stand	✓	✓	✓	
Laryngoscope and blades (adult)	✓	✓	✓	
Laryngoscope and blades (pediatric)	✓	✓	✓	
McGills forceps (adult and pediatric)	✓	✓	✓	
Ophthalmoscope	✓	✓	✓	
Overhead x-ray gantry (full access to all beds)	✓			
Portable ventilator capable of pediatric vent	✓			
Resuscitation patient trolley	✓	✓	✓	
Scissors to cut clothing	✓	✓	✓	✓
Scoop stretcher (1)	✓	✓	✓	✓
Spine board (1)	✓	✓	✓	✓
Spot lamp (1)	✓	✓		
Sterile basic packs (2 per station)	✓	✓	✓	
Stethoscope	✓	✓	✓	✓
Suction apparatus	✓	✓	✓	✓
Wheelchair (1)	✓	✓	✓	✓
X-ray gowns (staff)	✓	✓		
X-ray viewing box	✓	✓	✓	
<i>Consumables (adult and pediatric)</i>				
Catheters (all sizes)	✓	✓	✓	
Central lines	✓	✓		
Chest drains	✓	✓	✓	
Diathermy	✓			
Endotracheal tubes	✓	✓	✓	
Eye protection for staff	✓	✓	✓	✓
Gloves	✓	✓	✓	✓
Humidification filters	✓	✓	✓	
Intraosseous needles	✓	✓		
Intravenous cannulas, fluids, lines	✓	✓	✓	
Introducers and endotracheal tubes (all sizes)	✓	✓		
Lumbar puncture set	✓	✓	✓	

Annex 68.A Continued

Resources	Major emergency care center	Regional emergency care center	District emergency care center	Primary emergency care center
Malaria test kits	✓	✓	✓	✓
Masks	✓	✓	✓	✓
Medical waste disposal systems	✓	✓	✓	✓
Nasal cannula	✓	✓	✓	✓
Nasogastric tubes (all sizes)	✓	✓	✓	✓
Nebulization masks	✓	✓	✓	
Oropharyngeal airways	✓	✓	✓	
Oxygen mask	✓	✓	✓	✓
Suction catheters	✓	✓	✓	✓
Syringes (assorted)	✓	✓	✓	✓
Tracheotomy tubes	✓	✓		
Urine dipstick				✓
Wound care products	✓	✓	✓	✓
<i>Drugs shall include but not be limited to the following</i>				
Activated charcoal	✓	✓	✓	✓
Adrenaline	✓	✓		
Flumazenil (or similar benzodiazepine)	✓	✓	✓	
Antihistamine (such as diphenhydramine)	✓	✓	✓	✓
Atropine	✓	✓	✓	✓
Ciprofloxacin or equivalent	✓	✓	✓	
Beta-2 antagonist (such as propranolol)	✓	✓	✓	✓
Calcium chloride	✓	✓	✓	✓
Calcium gluconate	✓	✓	✓	✓
Dextrose, 50 percent	✓	✓	✓	✓
Diazepam	✓	✓	✓	
Dopamine	✓	✓		
Emetic (ipecac)	✓	✓	✓	✓
Metronidazole IV	✓	✓	✓	
Furosemide or equivalent	✓	✓	✓	
Heparin, 1,000 µg/ml	✓	✓	✓	
Hydrocortisone	✓	✓	✓	✓
Lidocaine IV	✓	✓	✓	✓
Magnesium sulfate IV	✓	✓	✓	
Midazolam	✓	✓	✓	
Morphine	✓	✓	✓	

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Annex 68.A Continued

Resources	Major emergency care center	Regional emergency care center	District emergency care center	Primary emergency care center
Naloxone	✓	✓	✓	
Nitroglycerin	✓	✓	✓	✓
Crystalloids (such as normal saline)	✓	✓	✓	✓
Phenytoin	✓	✓	✓	
Polyvalent snake venom	✓	✓		
Potassium chloride	✓	✓	✓	
Scoline (suxamethonium chloride)	✓	✓		
Sodium bicarbonate	✓	✓	✓	✓
Streptokinase	✓	✓		
Tetanus toxoid	✓	✓	✓	✓
Vitamin K	✓	✓	✓	✓

Note: Additional information on recommended drugs is available in the *Model List of Essential Medicines* (WHO 2002) and the WHO's *Complementary Model List*.

NOTES

1. There are 4,715,000 trauma deaths in low- and middle-income countries per population of 5,219,401,000; thus, there are 9.033 trauma deaths per 10,000 people.

2. There are 5,699,000 ischemic heart disease deaths per 5,219,401,000 population; thus, there are 10.9 ischemic heart disease deaths per 10,000 people.

3. There are 2,000 to 4,000 births among 10,000 people based on crude birth rates of 26 (South Asia), 39 (Sub-Saharan Africa), 22 (Latin America), and 17 (East Asia). Maternal mortality runs at 1 per 1,000 people.

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