

Annex A to SNMAS 08.03 Medic Training Course Syllabus

Personnel attending the Field Medic course should have completed at minimum nursing training through a recognized national medical institute and have experience in assessing and treating casualties and patients. Minimum ratio instructor per student should be 1 instructor for 10 students in classroom and 1 for 5 in practice. In the practical phase, some of the practice drills should be conducted after the theoretical lecture that applies to this drill. *It should be noted that the focus of medical training should be practical scenario-based training where the medic is called on to treat different pathologies in a calm, systematic, clinical based approach. These scenario-based exercises shall best prepare the medic for provision of advanced life support assistance to a casualty in the pre-hospital setting.*

Subject	Description	Duration
Introduction to Humanitarian Demining	Medical support in humanitarian demining operations, IMAS and the NTSG chapter 10, basic outline of structure of national demining programme, Role of NMAC, QA procedures	60 min
Anatomy and Physiology of Systems of the Human Body	Cardiovascular system	60 min
	Musculoskeletal System	60 min
	Respiratory System	60 min
	Nervous System	60 min
	Endocrine System	60 min
	Endocrine System	60 min
	Integumentary System	60 min
	Reproductive System	60 min
Universal Precautions	Barrier Protection. HIV, HBV, HCV transmission and prevention, procedures following possible accidental exposure to these viruses	60 min
Principles of First Aid	What is first aid, what are the responsibilities of the medic, communicating with a casualty and gaining his / her trust, reassurance techniques, calling for help	60 min
DRABC Algorithm – Controlling Life Threats	Danger, Response, Airway, Breathing, Circulation (immediate control of life threats)	60 min
Casualty Assessment and Normal Adult Physiological parameters	Assessment techniques and understanding of normal physiological parameters for pulse, BP, respiration, temperature, skin perfusion, conscious status for an adult. Medics shall be taught to assess skin perfusion, blood pressure, pulse rate, respiratory (rate, rhythm & effort), conscious status (using the AVPU scale or Glasgow Coma Scale) (physiological assessment), Full body examination (anatomical assessment)	120 min
Obtaining an A.M.P.L.E History	Obtaining an adequate history is vital for safe and effective treatment, this history includes: Allergies, Medications, Past Medical History, Last Meal, Event (including assessment of Mechanism of Injury)	60 min
Mechanism of Injury & Kinematics	Assessment and understanding of Kinematics and Mechanism of Injury for blunt and penetrating injury. Quick assessment of an accident scene for clues to establish Mechanism of Injury and suspicion for occult injuries.	60 min

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Basic Airway Maintenance	Introduction of airway equipment and demonstration of basic airway maintenance techniques, Head positioning, suctioning, airway adjuncts, oxygen administration for trauma and medical emergencies	120 min
Management of a Choking Patient	Signs and Symptoms of choking, airway clearance techniques using finger sweeps, back slaps, Heimlich manoeuvres, (laryngoscopy and magil forceps, and cryothyroidotomy (optional – not NTSG requirement))	60 min
Ventilation Techniques	Ventilation techniques using expired air resuscitation and bag/mask ventilation techniques for intermittent positive pressure ventilation and assisted positive pressure ventilation including frequency of ventilation and tidal volume	60 min
Cardiopulmonary Resuscitation Theory	Techniques for single and two responders for adult CPR as a minimum	120 min
Developing a Systematic Approach for Casualty Management (Drill)	Immediate control of life threats, assessment of perfusion status, respiratory status, conscious status, full body examination, obtain AMPLE history and commence appropriate treatment in a calm efficient and systematic manner – “The Clinical Approach”	60 min
Respiratory pathology	Recognition and treatment of respiratory distress, use of accessory muscles, narcotic analgesia administration as a precaution in respiratory distress, positioning techniques for casualties with respiratory distress, oxygen administration	180 min
Asthma	Signs and Symptoms, pathology, trigger factors and treatment of asthma	60 min
Accidental Narcotic Overdose	Recognition of signs and symptoms of accidental narcotic overdose, treatment using Naloxone Hydrochloride and oxygen therapy (ventilation if necessary)	60 min
CVS Pathology	Heart attack, pathology, risk factors, signs and symptoms, treatment fluid resuscitation	240 min
	Causes of shock, signs and Symptoms of Shock, Compensation and decompensation, treatment of Shock	120 min
Fluid Resuscitation	Fluid resuscitation protocols – I.V fluid suitability for different pathologies, crystalloids and colloids, fluid compartments.	60 min
Wound Management	Mine injury: mechanism of injury, blast mine injury, fragmentation mine injury, cavitation, basic ballistics concepts, compartment syndrome, wound infection, blood vessel damage, limb preservation, management. Amputation, laceration, avulsions, abrasions, penetrating trauma, haematoma etc, facial injury, scalp injury, haematemesis, dislodged teeth, wound debridement	120 min
Head Injury	Head injury: signs & symptoms, management of open and closed head injury, primary and secondary head injury	120 min
Other Causes of Unconsciousness	Overdose / poisoning, metabolic disorders, hypoglycaemia, hyperglycaemia, apoplexia (C.V.A), convulsions, syncope, infection, tumours	60 min

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Spinal Injury	Spinal injury: mechanism of spinal injury, signs and symptoms, spinal immobilization techniques, log roll, application of cervical collar application, use of head block, use of spinal board, transportation of spine injured casualty	120 min
Chest Injury	Chest injury: Signs and Symptoms, Penetrating and Blunt Chest Trauma, Pneumothorax, Hemothorax, Tension Pneumothorax, cardiac tamponade, flail chest. Treatment of Chest Injury, ((chest decompression (optional ATLS skill – not a requirement of NTSG))	120 min
Abdominal Injury	Abdominal injury: Signs & Symptoms, penetrating and blunt abdominal trauma, evisceration of organs, treatment of abdominal Injury	60 min
Pelvis and Limb Injury	Pelvis and limb injury including traumatic amputation. Signs and Symptoms, vessel damage, Nerve Damage, Compartment Syndrome. Management of Pelvis and Limb Injury, limb assessment	60 min
Embedded Objects	Embedded Objects: Signs and Symptoms. Management of a casualty with an embedded object.	60 min
Soft Tissue Injury	Signs and Symptoms, sprains, strains, (Rest. Ice application. Compression. Elevation) treatment following injury, treatment in the recovery phase. Use of NSAIDS	60 min
Burn Injury	Signs and Symptoms: Thermal burn injury, chemical burn injury, electrical burn injury and white phosphorous burns. Burn Depth assessment and categories of burns, Assessment of Burn Size, critical burns, management of burns, safety when dealing with thermal, chemical, electrical and phosphorous burns. Dangers of smoke / CO inhalation, S&S of CO poisoning, inhalation injury	120 min
Management of Bites and Stings	Outline of types of snakes and scorpions in Sudan, mechanism of venom types, Signs and Symptoms of Snake bite and scorpion sting. Management of snake bite and scorpion sting	60 min
Fractures and Dislocation Theory	Signs and Symptoms of fractures and dislocations, types of fractures, complications of fractures and dislocations, principles of splinting	
Allergic Reactions and Anaphylaxis	Basic understanding of allergy, anaphylaxis. Causes of anaphylaxis, signs and symptoms and management	60 min
Eye Injury	Anatomy of the eye, causes of eye injury including penetrating eye injury, chemical burns, and blunt trauma. Prophylactic use of anti-emetic, Considerations for air evacuation, Signs & Symptoms of eye injury and treatment	60 min
Emergency Field Drugs	Medics shall completely understand all emergency drugs they are carrying to ensure safe administration (including presentation, indications, contraindications, side effects, dose, routes of administration, precautions). Pre-administration drug checks and safe drug administration, Correct storage and drug accounting procedures.	120 min

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Heat Disorders	Medics shall understand environmental hazards and be able to recognize disorders related to heat and treat hyperthermia (heat exhaustion, heat stroke) and hypothermia	60 min
Endemic diseases	Medics shall have an understanding of the pathology of common endemic diseases, causes, avoidance and treatment	120 min
Emergency (CASEVAC) SOP	Medics shall have a complete understanding of the emergency CASEVAC procedures and understand the roles of all responsible persons following an accident. Students shall understand the NMAC evacuation plan and the role of the AME teams and sector hospitals.	120 min
Triage and Multiple Casualty Incident Management	Medics shall be taught the principles of triage and management of accidents involving multiple casualties, Triage priorities, role of triage officer, role of supervisor, use and completion of casualty triage tags	60 min
Aviation Physiology & Principles of Air Medical Evacuation	Medics shall be taught the basic principles of aviation physiology and the principles of air medical evacuation	60 min
Mine Awareness & Mine Field Marking	Medics shall have a basic mine awareness and shall understand the minefield marking system used by the organization, Indications Of Mine / UXO Presence, Basic Introduction to make up of a Mine, Basic UXO recognition, Minefield Marking System, The Layout of the Minefield, On-Site Requirements, On Site Work Routine, The Concept of Integrated Operations, The Organization of a Demining Team	60 min
Radio Communications	Basic radio communications procedures shall be taught for VHF and HF	60 min
Field Medic Documentation	Medics shall be able to complete a treatment log of a casualty and should record a daily morbidity report and drug register, they shall be trained in the completion of basic field medical documentation.	60 min
Pain Assessment and Management	Assessment of pain using for example mnemonic DOLOR (Description, Onset, Location, Other signs and symptoms, Relief) and severity assessment using a verbal pain scoring system (0 – 10 pain scale or severe – moderate – mild) and pain management through titration of analgesia to reduce pain to comfortable level. Students shall be taught the analgesia administration protocol of the organization for the drug they shall use in the field	60 min
Patient Handover	Medics are taught how to conduct a concise patient handover. Commencing with introductions of medic and casualty to medical officer, AMPLE history, injuries, initial vital signs, casualty status during transport, last vital signs taken prior to handover. Role playing exercises are helpful in this class	60 min
Health and Safety		
Safe Lifting	Prevention of Back injury, Safe Lifting techniques	60 min

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Health and Hygiene	Health and Hygiene Measures, Disease transmission routes, Prevention measures, health and hygiene monitoring	60 min
Oxygen Handling and Storage	Oxygen handling, storage and administration	60 min
Healthy Living	Mental Health, Stress management, Healthy Living	60 min
Helicopter Safety & HLS Requirements	Helicopter safety and HLS requirements	15 min
Practical phase		
Minefield Visit	Where possible following the theory class on minefield marking and MRE, the students should visit a clearance operation to see the operational set up and should receive a site brief from the supervisor and medic/s	120 min
Emergency Medical Equipment	Medics shall be familiar with all emergency medical equipment that they shall use in an emergency, trauma kit layout, ambulance set up, stretcher function. Medics shall be able to disassemble and reassemble Ambubag and suction equipment, connect oxygen equipment and administer oxygen, disassemble and reassemble laryngoscope.	120 min
Airway Management	Placing a casualty in lateral position, jaw thrust, chin lift, insertion of OP & NP airway, airway suctioning, finger sweeps, treating a choking patient. It is the choice of some organizations to teach endotracheal intubation, cricothyroidotomy (these are ATLS skills and not a requirement for NTSG)	120 min
Ventilation Practical	Medics shall be taught bag – mask ventilation (both intermittent positive pressure ventilation and assisted positive pressure ventilation techniques), oxygen administration using a face mask	120 min
Wound Management and Bleeding Control	Use of pressure point, pressure dressings, elevation, management of different types of wound.	120 min
Mine Injury Management	Specific management of blast mine injury and Fragmentation mine injury, assessment for compartment injury, fragmentation wounds, vascular injury, fractures, ballistics, groin injury, blast wave	
CPR Practical	Single responder and two – responder CPR techniques	120 min
Assessment Techniques	Physiological (skin, pulse, Blood pressure, respiratory status, conscious status) and anatomical assessment (full body examination / secondary survey)	120 min
Bandaging	Bandaging and slings for injuries to different anatomical regions	120 min
Fracture and Dislocation Management	Management of open and closed fractures using splints and anatomical splinting techniques	60 min
Chest Injury Practical	Management of Open Pneumothorax, Decompression of Tension Pneumothorax, flail chest management	60 min

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Head Injury Management - Practical	Management of open and closed head Injury (Primary and secondary brain injury)	60 min
Spinal Immobilization Techniques	In line spinal immobilization, cervical collar application, log roll, use of spine board, use of head block	120 min
Safe Lifting and Transport Techniques	Fore and aft lift, flat lift, chair lift, blanket lift, spinal board lift, stretcher carry, fireman carry, lift and drag method, safe ambulance and (where appropriate) helicopter approach, loading and transport of a casualty	60 min
Parenteral Administration	Aseptic technique, Universal precautions, parenteral drug preparation, safe sharp handling and disposal, I.M injection, I.V injection, S.C injection, Giving set preparation, securing IV line and changing IV soft pack, IV cannulation should be practiced on I.V arm where possible. Medics should demonstrate IV cannulation of a person as well during the course	180 min
Communications Procedures	Radio communications procedures and handing over a casualty to doctor – practical scenario training	60 min
CASEVAC Scenario Exercises	The majority of practical training should be spent doing scenario-based training combining all of the skills learnt over the course to assess and treat a casualty appropriately. In the scenario-based training a casualty is assigned injuries and a conscious level. The medic shall then be called to control life threats, assess and provide appropriate treatment for the assigned pathology (medical or trauma emergency)	3000 min