



OPERATIONAL GUIDELINES

MANAGEMENT OF COMMON EMERGENCIES, BURNS AND TRAUMA AT PRIMARY CARE LEVEL





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I. Introduction

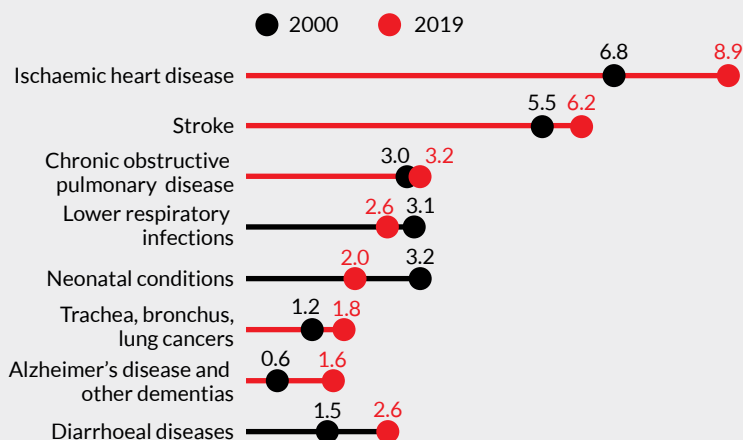
India is the seventh largest country in the world and is home to nearly 1.3 billion people. With 28 states and 8 union territories spread over a vast geographic area with varying economic resources and infrastructure, it is the world's most populous democracy. India is still a developing country, and due to rapid economic growth and urbanization, it faces the ills of both an under-developed as well as a developed economy. Every day, the country faces dual challenges posed by emergencies in health, related to infections and communicable diseases and those related to chronic diseases and trauma.

There is no empirical data available on the number of lives or disability-adjusted life-years (DALYs) saved through emergency medical care. Nevertheless, it is clear that many of the conditions that contribute to the burden of disease in low-income and middle-income countries can be mitigated through prompt treatment.

According to the Global Burden of Disease (GBD) estimates for the country, 62% of deaths in 2016 were due to non-communicable diseases, 11% to injuries and the remaining 27% due to other diseases (communicable, maternal, perinatal and nutritional conditions).

The World's Leading Causes of Death

Total number of people who died from the following conditions (in millions)



Source: World Health Organization

Road Traffic Injuries (RTIs), Acute Myocardial Infarctions (AMIs) and Cerebrovascular Accidents (CVAs) are the most commonly cited causes of death and disability in India. In 2016 nearly 1.5 lakh lives were lost to road traffic injuries alone, costing almost 3% of the GDP².

Emergency services are defined as acute medical/surgical/trauma care that is delivered within the first few hours of the onset of a condition which threatens the life or well-being of a patient, can help better manage the most commonly presenting injuries and diseases to ensure better clinical outcomes. However, currently in India, emergency services are confined to tertiary level only with limited access to secondary care and assured advanced referral transport system. The absence of organized emergency care at primary and secondary health care level further worsens the situation. Therefore, to ensure timely intervention for better survival, comprehensive emergency services should be made available round the clock at the primary level with assured referral linkages wherever required.

Emergency management at primary level can be initiated even with limited resources by ensuring community preparedness and awareness. Provision of a proper platform including infrastructure, capacity building of human resource which would keep the community organized and trained on a regular/permanent basis, is essential to enable them to respond in an effective and organized manner.

Hence, the present guideline explains the scope, objective, community preparedness and awareness required to prevent and rehabilitate such emergencies. Service delivery expected at Health and Wellness Centre/ Sub Centre along with its upward and downward linkages up to family and community levels along with roles and responsibilities of various service providers and program officers are also explained in the guideline.

II. Aims & Objectives

- ▶ To develop operational guidelines for **Emergency Services** at primary health care aligning with National Health Policy 2017.
- ▶ To specify the required **knowledge & skill** for identification and delivering basic services for management of medical/surgical/burn emergencies and acute injuries at family & community level by **frontline workers**.
- ▶ To specify the **additional knowledge and skill** for a Mid-level service provider at **Health & Wellness Center** for identification and delivering assured basic services with quality for management of medical/surgical/ burn emergencies and acute injuries and timely referral.
- ▶ To specify the **roles and responsibilities of program officers** at various levels for placing efficient management of emergency conditions in health.
- ▶ To develop a systematic referral system protocol for the patients from the community to the First Referral Unit sufficing all the requirements in terms of facility, skilled manpower and other protocols.

AIM

- ▶ To strengthen the delivery of integrated Primary Care Management of common emergencies. Establishment of Ayushman Bharat Health and Wellness Centres (Sub Health Center/Primary Health Centre/

Urban Primary Health Centre) provide an opportunity to ensure early identification, prompt stabilization and safe transport to higher centres of care, of critically ill patients, thus saving lives.

- ▶ These Operational Guidelines are intended for State and District Program Managers and service providers to strengthen Emergency Medical services. Other companion documents include training manuals and standard treatment guidelines would be updated and disseminated on a periodic basis.
- ▶ This guideline does not provide protocols or details on the management of specific emergencies. **Information on clinical care and standard protocols for capacity building of front-line workers in emergency care will be provided in an accompanying training manuals for Primary Health Care Team on emergency management in primary care.**

III. Guiding Principles

The following principles represent the essence of the operational guidelines outlined in this document:

1. Evidence-based interventions
2. Collaborative, coordinated, continued service delivery processes
3. User-centric care
4. Protection of Human Rights
5. Systems approach and implementation support
6. Availability, accessibility, quality and acceptability

IV. Platforms of Care/Service Delivery

The platforms of care are categorized as social institution (family/community) and structural institution level care (Health and Wellness Center [HWC], Primary Health Center [PHC], Urban Primary Health Centre [UPHC] and Community Health Centre [CHC]).

The front-line workers (Accredited Social Health Activists [ASHA], Auxiliary Nurse Midwife [ANM]) will provide care at the family and community level, along with community participation. Mid-Level Providers (MLP)/Community Health Officer (CHO) and ANMs will manage service provision through HWC, Medical Officers (MOs) will provide care at PHC/UPHC/CHC, and specialists (Medicine, Surgery) will provide care at the secondary level upon referrals and otherwise provide ongoing support to the MO at the PHC.

It is important to practice certain technical protocols at HWC (SC/PHC/UPHC) which help in efficient delivery of emergency services and minimize the risk of acquired infections while managing the patients during emergency. Some of the important components for this are good ambience, patient friendly facilities, computerized registration, infection control practices, biomedical waste management, autoclave and laundry.

Efficient and timely Health Systems Strengthening is essential for smooth operationalization of services. So, to effectively respond and manage emergency medical services it is important to ensure assured ambulance services (BLS/ALS), trained manpower, equipment, drugs etc.

V. Services Delivery Framework

The emergency conditions in health, which will require timely identification and management, can be largely categorized into 3 types:

- ▶ **Trauma/Accidental/Injuries:** This refers to any sudden physical injury caused by an external force.
- ▶ **Burns:** Depending on the cause, burns can be of different types like Thermal, Electrical, and Chemical etc. The burns should be also categorized based on the extent of the burn and the management for the same should be guided taking into consideration the extent and also separately for the pediatric and adult cases.
- ▶ **Medical and Surgical Emergency:** Medical emergency is “the sudden onset of a medical or surgical 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 patient’s health in serious jeopardy.”

These services to handle the emergency health conditions require information and awareness to recognize the need and urgent supportive actions. Management of various conditions, as per the level of competencies at community or facility level, they are broadly explained below:

A. Community Awareness and Participation

The outcome of acute illness or injury is strongly influenced by early recognition of its severity and the need for medical intervention.

Since most emergencies start at home, any system to promote the early recognition of emergency conditions should be based in the community.

Community action aims to empower people to gain control over decisions affecting their lives in their community and larger society. They need to have knowledge and awareness to identify emergencies and support the actions required to save lives and in getting the continuum of care. Initiatives for health education and health promotion help in sensitizing the community for this.

Discussion on the prevention and safety measures in case of emergency conditions like accidents, fire etc. and generating awareness regarding when and how to seek medical care, including engaging referral transport are key activities.

The approaches for promoting emergency health care at community may include the following:

- ▶ **Community awareness (Promotive):** identification and response to critical emergencies both traumatic and non-traumatic (chest pain, stroke, respiratory problems etc.)
- ▶ **Medical (Preventive and curative):** Directed at early identification of risk factors like high blood pressure, obesity, high cholesterol levels, deranged blood sugar levels etc.
- ▶ **Behavioral (or lifestyle):** Directed at behavioral risk factors such as smoking, poor nutrition, physical inactivity, drunk driving etc.
- ▶ **Socio-environmental:** Directed at risk conditions such as poverty, low education, insufficient income, unemployment, inadequate housing etc.
- ▶ **Medico legal:** Directed at institutionalizing the medico legal aspect of the conditions like MLC reporting to the concerned Police Station, forensic knowledge for categorization and identification of the injury.

The platforms and ways to generate awareness among the community can be:

- ▶ Village Health & Nutrition Days (VHNDs), schools and public places: through mock drills in school/work place, nuked natak, puppet shows, etc.
- ▶ Guidance to school teachers, volunteers, VHNSC and other self-help groups for imparting preventive and promotive education on management of emergency health conditions.

B. Management of Emergency Health Conditions Including

- ▶ Assessment and triaging of the emergency conditions.
- ▶ Early transport, (preferably through ALS/BLS) after possible first aid and stabilization.
- ▶ ABCDE management if first responder or trained personnel available.
- ▶ Follow up of the emergency cases treated at higher centers.
- ▶ Facility/community based rehabilitation (Palliative care).
- ▶ Mock drills of the staff at regular intervals to be conducted by the concerned institute to handle the emergency conditions.
- ▶ Development of Digital Referral Directory for ease of coordination and to reduce the time period.

VI. Services to be Delivered at Various Levels

A. At Village Level (Family, Community and FLWs)

The Front-line workers – ASHA, Multi-Purpose Workers (MPW)/ Auxiliary Nurse Midwife (ANM), Community Health Workers (CHW), where available, will provide care via the community platforms. Community participation for prevention and as first responders will be crucial for the management of emergency situations in health. Primary School teacher at rural level will also act as a link between community and family level via educating the children. Adequate training should be provided to Primary School Teachers. Primary Health Care team at the HWC – SHC led by a Community Health Officers (CHO), Medical Officers at PHC/UPHC/CHC would ensure the primary care management of common emergencies. Specialists will provide care at the place where they are available (/FRU-CHC/SDH/DH) upon referrals.

Identification and Management of traumatic injuries, burns and other medical and surgical emergencies:

The front line health worker after suitable training, should be capable for initial assessment, identifying life-threatening conditions, seeking medical care and arranging for referral transport. He/She should be trained in identifying emergency conditions that need priority referral and provide at least basic management before referral to assured care at higher level.

Following emergency conditions need priority referral after providing possible initial management and stabilization as per the level and capacity of service providers

- ▶ Chest pain
- ▶ Breathing problems (difficult breathing, shortness of breath)
- ▶ Unconsciousness/Fainting, Disorientation
- ▶ Any other life threatening condition
- ▶ Life threatening Burns:
 - *Cases with more than 5% body surface area(assessment of burns by rule of palm, **Annexure 2**), Burn of face and neck, hands (not minor), genital and perianal area and major joints, burns and concomitant trauma, presence of debilitating diseases like cardiovascular conditions, diabetes and renal failure, Epilepsy patients, pregnant women and all persons below 10 years and above 60 years.*
 - *Burn caused by pressurized steam, chemical acid, electric burn.*
 - *The person has inhaled smoke or is not able to speak.*
- ▶ Stab wounds/penetrating injury (head, neck, chest, abdomen, upper thigh)
- ▶ Massive crush injury of Thigh/Leg/Arm/Forearm injury with massive bleed. absent distal pulse
- ▶ Fracture of Thigh/Leg/Arm/Forearm with exposed bone
- ▶ Two or more long bone (Thigh/Leg/Arm/Forearm) fracture
- ▶ Abnormal chest wall movement during breathing
- ▶ Suspected Neck injury
- ▶ Multiple injuries
- ▶ Spinal injuries
- ▶ Suspected sexual assault
- ▶ Uncontrollable bleeding, nosebleed
- ▶ Acute abdominal pain
- ▶ Choking
- ▶ Cyanosed infant/child
- ▶ Epileptic Seizures
- ▶ Acute febrile illnesses
- ▶ Animal bites, etc.

Some of the other medical and surgical emergencies which benefit from early intervention and management are placed in Annexure 10.

The effective management of emergencies requires a comprehensive range of preventive, curative and rehabilitation services. This includes raising awareness among community members to recognize and prevent emergencies in the home, workplace and other settings, e.g., falls at home, injuries from equipment at the work place, road accidents.

The services expected at community level are:

General measures at community level

- ▶ Scene safety: Ensure safety of self, patients and the public. Provide reassurance at all times. Remove the patient from the source of emergency situation safely.

EARLY IDENTIFICATION

1. Quick initial assessment of patients coming for Emergency is vital for saving lives and reducing morbidity and call for help including transport/
2. Triage the patient to assess the type and severity of illness/injury. 'Red' and 'Yellow' category patients will need referral to a higher facility (as per Referral protocols- **Annexure 1**)

Triage is a process of sorting patients after their initial assessment and prioritizing them for treatment according to their clinical acuity.

The most common triaging method is the 4-level colour coded system

- ▶ Red - Immediate
- ▶ Yellow – Urgent
- ▶ Green - Non- Urgent
- ▶ Black- Dead

At village or community level the ideal color coding by four levels may not be possible due to non-availability of trained human resource, so a quick triaging for life saving emergencies, other emergencies and those

who are dead need to be undertaken for ensuring quick referral and transport to appropriate facility. A tag indicating the same helps the facilities in responding quickly.

PROMPT STABILISATION

1. Call for help and transport (preferably ALS/BLS).
2. Remove any possible threat aggravating injuries, and provide possible first aid.
3. While emergency services are reaching, use the ABCDE approach (if trained providers are available). (Details in **Annexure 6**):
 - A: Airway control and Neck immobilization (if required) by avoiding unnecessary movement and jerks to the person.
 - B: Breathing and ventilation e.g.: ensure no foreign body is in the nose/mouth, may give rescue breaths if trained in CPR.
 - C: Circulation- e.g.: check for heart beat, give Cardiac compressions if needed and trained in CPR.
 - D: Disability (neurological status): e.g.: check for responsiveness to stimuli; Use AVPU scale/Glasgow Coma Scale/Assessing conscious level of the patient (**Annexure 5**).
 - E: Exposure: e.g. maintaining ambient temperature, adequate air circulation, and removal of any hazardous material around the patient and ensuring a patient friendly environment with care of patient privacy.
4. In case of trauma control of life threatening external arterial bleeding.
5. Ensure safe transport.

Specific measures at community level

Specific measures will depend on the presenting condition.

*SOPs for management of common emergencies in the community & at Health and Wellness centers are at **Annexure 10**.*

The management of specific emergency situation/conditions will be explained in detail in the training modules for health workers. (immobilization, bleeding control etc. in detail to be covered in training modules)

B. At Health & Wellness Centre/Sub-Centre Level Information & Awareness

Health workers should provide all information and awareness expected to be delivered to the community for handling emergencies in health. In addition, they should also be trained in counseling skills, both interpersonal and group counseling to influence the individual and community for the desired behavioral change and adopting healthy lifestyle and taking preventive and promotive measures to avoid emergencies and also for avoiding various lifestyle illnesses. HWC ambassadors like schoolteachers, community leaders etc should be involved for IEC and awareness generation in the community.

Activities like hand washing, wearing of gloves and PPE, segregation of biomedical waste are important practices for preventing infections. Such critical practices need to be included in the HWC activity calendar (Fit India Movement).

General measures at SHC-HWC level

1. Appropriate history taking (suggestive format for history taking is placed at **Annexure 3**).
2. Examine the patient and record vitals- level of consciousness (using AVPU scale), pulse rate, blood pressure, respiratory rate and temperature.
3. Triage, examine and assess the type and severity of injury. Red and yellow category patients are referred to higher facility as high priority. (Refer **Annexure 4**).
4. Stabilization and Maintenance by ABCDE (Annexure 6), **actions to be taken at HWC:**

In cases of traumatic injuries, where “visible bleeding” is present, the first action should be hemorrhage (bleeding) control.

- a. Airway control- Neck immobilization by use of cervical collars (if required).
 - b. Breathing and ventilation- Administration of Oxygen.
 - c. Circulation-, Secure IV line and administer IV fluids- Ringer Lactate.
 - d. Disability (neurological status), Check for AVPU (as per **Annexure 5**).
 - e. Exposure with environmental control, keeping ambient temperature, adequate air circulation, removal of any hazardous material around the patient and ensuring patient friendly environment.
5. Urinary catheterization (only if required), be cautious for certain conditions like pelvic injuries.
 6. Administer Td if not immunized.

Specific measures at SHC-HWC

- a. Facilitate referral after basic management with communication to higher centre.
- b. Maintain records with complete and correct documentation. The list of records to be maintained are mentioned in subsequent sections.
- c. ***The management of specific emergency situation/conditions will be explained in detail in the training modules for Primary Health Care Team.***

C. At Health & Wellness Centre/PHC/UPHC Level

As per the IPHS norms, 24 hours emergency services including appropriate management of injuries and accidents, first aid, suturing of

wounds, incision and drainage of abscess, stabilization of the condition before referral will be provided at Health & Wellness Centre- PHC/PHC/UPHC Level.

Approach to emergency management at PHC/UPHC and CHC/UHC

These include both (1) common interventions and (2) specific activities, (depending on the nature of the emergency and level of facility) which are listed below:

Common activities for PHC/UPHC and CHC/UHC

In addition to activities listed in General Measures to be undertaken at SHC-HWC like below which are necessary for all patients directly reporting to PHC/UPHC Health and Wellness Centre:

- a. Triage
- b. Initial assessment & management with the ABCDE approach
- c. Clinical interventions such as insertion of IV line(s)
- d. Catheterization, as indicated
- e. Frequent monitoring of the patient's vitals

The Medical Officer at the PHC/UPHC Health and Wellness Centre shall carry out:

1. Cardio-Pulmonary Resuscitation including usage of Automated External Defibrillator, endotracheal intubation as needed
2. Management of presenting emergencies
3. Relevant laboratory investigations
4. Stabilization of the patient before referral (for cases which cannot be adequately managed at that level) e.g. head, spinal and pelvic injury; cardiac/neurological emergencies, Obstetrics and paediatric emergencies requiring specialist intervention at higher centres
5. Record keeping and maintenance of registers.

D. At CHC/UHC Level

Following additional emergency services should also be provided 24 hours at the CHC level:

- ▶ Surgery for strangulated hernia, acute appendicitis, perforated bowel, intestinal obstruction.
- ▶ Conditions requiring nasal packing, tracheostomy, foreign body removal etc. Fracture reduction and putting splints/plaster cast.
- ▶ Handling of all emergencies like Dengue Haemorrhagic Fever, cerebral malaria, poisoning, pneumonia, meningoen­cephalitis, acute respiratory conditions, status epilepticus, burns, shock, acute dehydration etc.
- ▶ Obstetric emergencies like eclampsia, post-partum haemorrhage, ruptured ectopic pregnancy, ante-partum haemorrhage, puerperal sepsis etc.
- ▶ Neonatal Emergencies like choking, respiratory distress etc.

Specific activities for PHC/UPHC and CHC/UHC

At PHC/UPHC	At CHC/UHC
<p>Following emergency services should be provided 24 hours at the PHC/UPHC level:</p> <ul style="list-style-type: none">▶ CPR for resuscitation▶ ASV (Anti Snake Venom) in case of snake bite cases.▶ Anti-Rabies vaccine and immunoglobulin in dog bite/animal bite cases.▶ Appropriate management of injuries and accident, including First Aid,▶ Suturing of wounds▶ Incision and drainage of abscess	<p>All the services, including the general measures for case management, that are expected at the PHC, following additional emergency services should also be provided 24 hours at the CHC level:</p> <ul style="list-style-type: none">▶ Handling of all medical emergencies like chest pain (acute myocardial infarction), stroke, sepsis, injuries, poisoning, Dengue Haemorrhagic Fever, cerebral malaria, animal/insect bite cases, poisonings, congestive heart failure, left ventricular failure, pneumonias, meningoen­cephalitis,

At PHC/UPHC	At CHC/UHC
<ul style="list-style-type: none"> ▶ Sterile dressing of wounds ▶ Handling of all medical emergencies like chest pain (acute myocardial infarction), stroke, sepsis, injuries, poisoning, Dengue Haemorrhagic Fever, cerebral malaria, animal/ insect bite cases, poisonings, congestive heart failure, left ventricular failure, pneumonias, meningoencephalitis, acute respiratory conditions, status epilepticus, burns, shock, acute dehydration, urinary retention etc. ▶ Other management including nasal packing, cricothyroidotomy, tracheostomy, foreign body removal etc. Fracture reduction and putting splints/plaster cast. 	<ul style="list-style-type: none"> acute respiratory conditions, status epilepticus, burns, shock, acute dehydration, urinary retention etc. ▶ Handling of all surgical emergencies like strangulated hernia, perforated appendicitis, acute fissure in ano, perforation peritonitis, intestinal obstruction, bleeding (nasal, per vaginal, external etc) etc. ▶ Other management including nasal packing, cricothyroidotomy, tracheostomy, foreign body removal etc. Fracture reduction and putting splints/plaster cast.

****This is an indicative and not an exhaustive list.***

The management of the above conditions will depend on the facilities available (including infra-structure, HR, drugs, diagnostics and equipment).

V. Referral and Continuum of Care

Every facility while referring a patient to higher facility will ensure that the referred patient gets an ambulance, a phone call is made to the referred facility to be in readiness for receiving this case, a discharge summary is given and if the patient is critically ill, the EMT of the ambulance will be explained about the case by the first responder so that he/she can maintain the vitals till reaching to referred facility.

Front line health workers should be aware of the referral facilities in their area. They should be oriented about the referral process. Some of the salient points for effective referral are as follows:

- ▶ Nearest referral centres and available referral transports to be identified and mapped across HWCs. Being unaware of when and where to refer is a common barrier to timely access to specialty care. Thus, mapping of facilities and the services that are provided at those facilities should be undertaken. A Directory of contact details of facilities should also be maintained at the health facility. Referral linkages may be strengthened to ensure timely referral to appropriate facilities, depending on the severity of the condition.
- ▶ For handling emergency cases at secondary care facilities, availability of physician, paediatrician, obstetrician, anaesthesiologist, orthopaedic surgeon, general surgeon is of vital importance. Such secondary care facilities with specialized services and skilled personnel should be identified and mapped at the HWCs (SHC/PHC/UPHC) for ensuring appropriate referral.

- ▶ When referral is made to another institution, initial treatment must be given to the patient at the referring facility and all the efforts should be made to monitor the case till the patient reaches the referred facility.
- ▶ The referrals should be coordinated for assured services. It is important to communicate with the receiving facility to ensure their readiness to receive the patient.
- ▶ Monitoring registers and records for internal and external referrals at regular intervals is crucial to avoid undue referrals. To instill accountability of referral, it is essential that a senior person examines and takes decisions on referral.
- ▶ Feedback from the referred facility to the referring facility for ensuring continuation of management is essential.
- ▶ For every referral event, there must be a counter-referral. For all individuals referred to a higher center, a follow up is to be done at the level of HWCs. Once the reason for referral has been resolved, the patient should be referred back to the provider who made the referral for follow-up. The Counter Referral Section of the Patient Referral Form must be completed with as much information as necessary for the adequate care of the patient. In case of death of the patient, the Counter-Referral form should reflect the Cause of Death.

Procedure to be Followed for Referred-out cases

- ▶ At the HWC-SHC, CHO would be trained to identify cases that need to be referred to higher center, and also to give primary care where applicable.
- ▶ Once doctor on duty decides that the patient requires referral to higher center for further treatment they should contact the concerned specialist on telephone. The handover information should be documented in the locally retained patient case sheet.

- ▶ It is important to confirm that the facility is capable of handling the type of emergency for which the patient is being referred. Inform the facility about referral and to be in readiness for receiving the patient.
- ▶ If the condition of the patient requires, resuscitation and initial basic management must be provided before referral.
- ▶ At community and HWC-SC, the patient should be stabilized to the extent possible before transfer. At PHC and CHC, the doctor and critical care staff should be trained appropriately for quick identification, triaging, stabilization and referral for such cases which cannot be managed here.
- ▶ A filled referral card should be provided to the patient at the time of referral with details of the reason for referral, investigations done etc. (attached as **Annexure 6**).
- ▶ The details should be entered in the 'refer-out' register.
- ▶ The transfer is complete once the patient is received at the referred unit.
- ▶ **Monitoring and evaluation** of the internal and external referrals at regular intervals is crucial. This is important to assess needs and priorities of the system. To avoid undue referrals and to instill accountability of referral it is essential that a senior person examines and undertakes a daily or monthly audit of the emergency referrals.
- ▶ This will help in understanding the gaps so that required corrective actions can be taken. A monthly report on the gaps and actions required along with suggestive responsible person, time line for filling the gaps needs to be submitted to the CMO.

(Note:

- i. During emergency, the nearest appropriate facility should be used for referral.
- ii. Disease specific referral pathway placed at **Annexure 1**).

VI. Support Services

- ▶ Responsive Call Centre 108 and 102 – a 24x7 working Call Centre can ensure timely availability of transport for attending to emergency.
- ▶ A well-equipped transport ambulance with Emergency Medical Technician will ensure prompt and continuous care of the patient during transport to a Higher Health Care Centre.
- ▶ Teleconsultation linkage with Higher Health Care Centre would enable appropriate guidance from the Higher Centre in stabilizing the patient and timely referral.
- ▶ District level Program Officers – for operationalizing emergency care services in Health and Wellness Centers. Capacity building of staff, establishing referral network and performance monitoring.

VII. Roles & Responsibilities

A. Emergency Medical Technician (EMT) as Part of National Ambulance Service

All the cases which are being transferred from the site of emergency condition to the health facility, should be trained in triage, basic management and resuscitation given first aid by the EMT at the site of emergency condition or during transportation.

Their qualification should be as per the National Ambulance Service guidelines. A brief of his/her TOR and qualification is placed below:

TOR of EMT

- ▶ The EMTs should be trained and oriented for tackling emergencies both at the site or during transportation.
- ▶ The EMT should be able to perform the following:
 - Patient assessment, adult, child and infant cardiopulmonary resuscitation, Cardio Pulmonary Resuscitation (CPR).
 - Oxygen therapy.
 - Measure blood pressure by palpation and auscultation.
 - Oral suctioning.
 - Spinal immobilization.
 - The use of the automated external defibrillators, epinephrine auto-injectors, and inhaler bronchodilator.
 - Maintaining ventilatory support during transportation.
 - First aid care to the injury, accident or burn cases at the site of mishap.
 - Capability to safely pick up and transport the case from the site of mishap.

B. Service Providers

Type of provider	Role
ASHA/ANM/MPW	<ul style="list-style-type: none"> ▶ Family level- IEC and Social Behaviour Change Communication (SBCC) activities for awareness generation on the preventive aspects of emergency health conditions and preparedness for disaster management will be a key role of the frontline workers like ASHA/AF, ANM/MPW-M and AWWs. Various modalities for awareness generation like Prabhat Pheri and display of video clippings at Health and Wellness Centre should be used. ▶ Using Community based platforms - demonstration of preventive and promotive practices and to educate the community to undertake first aid measures for management of trauma, burns, medical& surgical emergency conditions. Mobilization of community members to attend camps or use of VHSND to raise awareness on Dos and Don'ts for prevention and primary action in case of emergencies. ▶ AWW- Orient and educate the children (3-6 years), promote positive intervention so that it becomes part of their practice. ▶ School level- Generating awareness for road safety and prevention of accidents. Facilitate training in first aid. Leverage the existence of Scouts& Guides and NCC for generating awareness and preparedness of students and lay public for emergency situations. ▶ Guide patients to nearest health facilities/Referral centre. ▶ Guide the community to undertake first aid measures for management of trauma, burn, medical& surgical emergency conditions. ▶ Co-ordinate and participate in the outreach activities of SHC/PHC. ▶ Sensitize Panchayat and ULB leaders on the role and responsibility of Panchayats in:

Type of provider	Role
	<ul style="list-style-type: none"> ○ Emergency conditions including disaster risk reduction and rehabilitation. ○ Coordinating with the Panchayat and ULB leaders to undertake activities for risk reduction through NREGA (like covering manholes, steps to minimize water logging etc.) ▶ Survey of the area to identify loose electricity wires, potential fire hazards, outbreak situations etc. and identify risk factors for Drowning, poisoning, snake bite etc. and take corrective action as appropriate. ▶ Initial assessment, identification of life-threatening conditions, initial management including Basic Care Life Support and arrangement of referral transport as needed.
CHO	<ul style="list-style-type: none"> ▶ Assessment, triaging, initial management and stabilisation of all emergencies care patients. ▶ Referral of cases requiring specialized care. This will include facilitation of referral i.e. arrangement for transport, documentation and prior communication to the receiving/referred facility. ▶ Follow up of patients referred to higher centre for emergency care. ▶ Record maintenance, reporting on the appropriate portal, e.g. IDSP. ▶ Maintenance of emergency drugs and equipment. ▶ Co-ordinate and participate in outreach activities. Supportive supervision through joint visits with ASHA/ ANM/MPW-M, as needed. ▶ Special focus on addressing prevalent taboos, myths and other harmful superstitious practices. ▶ Organizing Focus Group Discussions (FGDs) involving Panchayati Raj Institutions. ▶ (PRIs), Self Help Groups, school teachers etc.

Type of provider	Role
MO I/C at HWC – PHC/ UPHC	<ul style="list-style-type: none"> ▶ Supervise, support and co-ordinate all the activities at CHC/PHC/Health & Wellness Centre/Village level. ▶ Provide appropriate Preventive/Promotive/Curative/ Rehabilitative activities at the health facility (District Hospital/CHC/PHC) for emergency cases. ▶ Should be adequately trained in emergency and trauma care. ▶ Ensure timely provision of high quality services, appropriate sterilization, cleanliness and sanitation at health care facility, proper handling and management of Bio-Medical Waste, record keeping, trainings for health workers, school teachers, volunteers and self-help groups. ▶ Ensure adequate referral and timely follow up. ▶ Assessment of the type, frequency and outcome of emergencies managed at the health facility so to address the gaps in the emergency service provision. ▶ Medico – legal records, reporting and documentation during transfer. ▶ Monthly review, assessment of functionality of equipment and adequacy of referral transport arrangements. ▶ Ensuring adherence to referral protocols and standard treatment guidelines. ▶ Training and skill building of the front-line workers and MLHPs for handling emergencies.
Program Officer	<ul style="list-style-type: none"> ▶ The Programme Manager for HWCs may also be the Programme manager for Emergency Services at Primary level. ▶ May coordinate with other Programme managers at both block and district level for implementation. ▶ Monitor the operationalisation of emergency services at primary level. ▶ Facilitate in gap analysis and filling. ▶ Identify various sources for resource generation.

Type of provider	Role
	<ul style="list-style-type: none"> ▶ Ensure, facilitate registration and re addressal of grievances due to emergency services at HWCs. ▶ Preparing an action plan for operationalizing the emergency services in the district with special focus on primary care facilities. ▶ Undertake the mapping of district hospital and FRU for finding the gaps in existing Emergency/Casualty department trauma and other emergencies also as per GOI guideline. ▶ To orient District program officer for GOI guidelines including the technical protocols in existing processes. ▶ Planning and organizing capacity building of service providers. ▶ To propose hiring of architect/engineer either in house or through outsourcing for preparing a DPR and cost estimation. ▶ To reflect the cost in state/central government PIP. ▶ Dispersal of funds to district. ▶ Monitoring the work accomplished.

VIII. Records and Registers

Following manual or computerized records shall be maintained:

- ▶ **OPD/Treatment Register:** One common register for patients of OPD/Emergency containing demographic details along with clinical findings, chief complaint (if any), and provisional diagnosis along with treatment provided.
- ▶ **Inventory Register:** Should contain information about drugs, consumables, equipment, instruments and consumables available in the health facility with details about their maintenance, consumption and indent.
- ▶ **Referral Register:** should contain information on referral in/out with reason for referral. Information of follow up of cases also to be recorded.
- ▶ **Record for handing over and taking over of critical care equipment at all levels.**
- ▶ **Medico legal register**
- ▶ **Patient/Community feedback register**
- ▶ **At Risk Register for vulnerable patients in the catchment area**
- ▶ **Emergency Register:** One register for patients of Emergency containing demographic details along with clinical findings, chief complaint (if any), and provisional diagnosis along with treatment provided.
- ▶ **Mapping of the Facilities based on the preference of the patients from the community and the healthcare facilities.**

IX. Capacity Building & Competencies Required for HWC Staff in Emergency Care at Primary Care Settings

States are encouraged to develop their own training modules giving in detail knowledge and skills required for managing common emergencies within the scope of primary care. Technical help and support from NHSRC can be taken.

Capacity building of Primary Health Care team (ASHA/AF/ANM/AWW), CHO/, MO service providers (MO/CHO/SN/MPW) at HWCs particularly CHO is of paramount importance for effective management of common emergencies at and below HWCs. The design of the training should be such that the service provider acquires knowledge, skill and attitude for early recognition, prompt stabilization (resuscitation, initial management), timely referral (if required) and safe transport. Also, HWC team should be trained to provide rehabilitation support to patients, after the incident and appropriate treatment at the higher Health Care Centre. Besides these, the service providers should also know how raise awareness regarding preventive activities.

All the service providers dealing with emergencies need to follow protocols (established by the system) for communication among health care teams and also with patients and relatives. They will also require good counselling skills. So the capacity building needs to include training on soft skills like attitude, behaviour, communication and counselling. For provision of assured emergencies at community level, there is a need to create first responders who are trained in BLS/ ACLS and also aware of various protocols of emergency situations and

disasters. Besides frontline workers, such first responders could be PRIs, active community members, school teachers, scouts, guides and such volunteers who are available in the community. Some of the core knowledge and skills which are essentials to be acquired for the health workers at HWC are as below in the table. The training should be mostly scenario based and should be followed by evaluation and certification to assure learning of the skills.

Service Provider	Training Content	Duration
ASHA/ ANM/ MPW-M	<ul style="list-style-type: none"> ▶ To know what is a medical emergency ▶ To learn common medical emergencies ▶ Learn to apply critical thinking in an emergency ▶ Learn problem solving and communication skills ▶ To work as a team ▶ Ensuring Scene Safety ▶ Primary Assessment <ul style="list-style-type: none"> ○ Assess Consciousness: AVPU scale ○ Look, Feel: chest rise, breathing, carotid pulse ○ Is it Cardiac Arrest? ▶ Basic Care Life Support with ABCDE including Cardiac Resuscitation ▶ Save a patient (adult and child) with an obstructed airway ▶ FIRST AID in <ul style="list-style-type: none"> ○ Heart Attack ○ Diabetic collapses ○ Fits ○ Stroke (Cerebrovascular accident) ○ Snake Bite ○ Infections e.g. COVID-19 ○ Fractures, wounds, burns and Life Threatening Bleeding 	To be defined in training guidelines.

Service Provider	Training Content	Duration
	<ul style="list-style-type: none"> ▶ Safe Transport ▶ Decision making capacity to identify the right referral facility and right referral mode of transport 	
CHO	<ul style="list-style-type: none"> ▶ To know what is a medical emergency ▶ To learn common medical emergencies ▶ Learn to apply critical thinking in an emergency ▶ Learn problem solving and communication skills ▶ To work as a team and team leader ▶ Ensuring Scene Safety ▶ Primary Assessment <ul style="list-style-type: none"> ○ Assess Consciousness: AVPU scale ○ Look, Feel: chest rise, breathing, carotid pulse ○ Is it Cardiac Arrest? ▶ Triage and identifying life threatening conditions ▶ Basic Care Life Support with ABCDE including Cardiac Resuscitation, Usage of Automated External Defibrillator ▶ Save a patient (adult and child) with an obstructed airway ▶ Recognition, stabilization and/or initial management of common medical, surgical and trauma related emergencies (e.g. acute myocardial infarction, stroke, breathlessness, burns, acute abdomen, long bone fractures) ▶ Use of splints, immobilization of neck, handling patients with spinal injuries etc. ▶ Skills set: IV line/IO line, Urinary Catheterization, Bag & mask ventilation, ▶ Documentation 	

Service Provider	Training Content	Duration
	<ul style="list-style-type: none"> ▶ Decision making capacity to identify the right referral facility and right referral mode of transport ▶ Information of referring to the referral health care facility 	
Medical Officer at PHC/UPHC Health and Wellness Centres	<ul style="list-style-type: none"> ▶ To know what is a medical emergency. ▶ Learn to apply critical thinking in an emergency ▶ Learn problem solving and communication skills ▶ To work as a team and team leader ▶ Recognition of Critical Illness and Injury ▶ General Principles: Patient Stabilization and Safe Transfer ▶ Airway Management Principles & Skills of Endotracheal intubation, Ventilation with AMBU Bag and mask ▶ Trauma Care: Patient Assessment, Patient Stabilization ▶ Burn Care: Patient Assessment and Stabilization ▶ Tension pneumothorax management, Chest Tube, Cricothyrotomy, Intravenous and Intraosseous line. Insertion and management ▶ Acute Coronary Syndrome/CCF + Neuro ▶ OBG: PPH & ECLAMPSIA Principles of Emergency Management and skills ▶ Neonatal: Assessment, Resuscitation, Stabilization before transfer ▶ Pediatric: Sepsis/Meningitis, Respiratory Failure, Seizures ▶ Cardiac Care: Cardiac Arrest/Dysrhythmias, Cardiopulmonary Resuscitation including usage of Automated External Defibrillator 	

Service Provider	Training Content	Duration
	<ul style="list-style-type: none"> ▶ Toxicology: Poisoning and Animal Bites ▶ Referral, Communication with Higher Health Care Centre and Safe Transport including care during transport ▶ Medicolegal Documentation ▶ Training Facilitation skills to train SHC-HWC staff ▶ Decision making capacity to identify the right referral facility and right referral mode of transport ▶ Information of referring to the referral health care facility 	

** The content list above is minimal and not exhaustive. States are encouraged to expand the training content as necessary*

X. Practices and Protocols to be Followed

1. Careful hand washing practices
2. Use of PPE (Personal Protective Equipment)
3. Use of Standard precautions for triage
4. Segregation and safe transportation of biomedical waste
5. Cleaning methods (e.g. sequence of rooms, correct use of equipment, dilution of cleaning agents, cleaning process, frequency of cleaning etc.)
6. Post Exposure prophylaxis protocols
7. Record maintenance
8. Medico-Legal case sheet wherever required
9. Facilitating referral with appropriate documentation

XI. Quality Indicators (Observation)

To assess the quality of services being provided, following outcome indicators may be used:

Productivity

SHC-HWC level	PHC/UPHC level	CHC level
<p>1. Total no. of emergency cases received per month</p> <ul style="list-style-type: none"> ▶ Number of trauma cases per month ▶ Number of head injuries per month ▶ Number of RTAs per month ▶ Number of burn cases per month ▶ Number of other trauma cases per month ▶ Number of Poisoning cases managed per month ▶ Number of Acute heart disease cases managed per month ▶ Number of stroke (paralysis) cases managed per month 	<p>1. Total no. of emergency cases received per month</p> <ul style="list-style-type: none"> ▶ Number of trauma cases per month ▶ Number of head injuries per month ▶ Number of RTAs per month ▶ Number of burn cases per month ▶ Number of Obstetric emergencies managed per month ▶ Number of Poisoning cases managed per month ▶ Number of Acute heart disease cases managed per month ▶ Number of stroke (paralysis) cases managed per month ▶ Number of snake bite cases managed per month ▶ Number of animal bite cases managed per month. 	

SHC-HWC level	PHC/UPHC level	CHC level
<ul style="list-style-type: none"> ▶ Number of snake bite cases managed per month ▶ Number of animal bite cases managed per month. ▶ Number of Acute Respiratory Infection/Pneumonia cases managed per month ▶ Number of pain cases managed per month <p>2. Total number of cases referred to higher centre</p> <p>3. Total number of cases followed up after referral to higher centre as a part of continuum of care</p>	<ul style="list-style-type: none"> ▶ Number of Acute Respiratory Infection/Pneumonia cases managed per month ▶ Number of Resuscitations performed per month ▶ Number of emergency surgical procedures performed per month <p>2. Total number of referral cases received</p> <p>3. Total number of cases followed up after referral to higher centre as a part of continuum of care</p>	
No. of adverse events per thousand patients.		

Efficiency

- ▶ Response time for ambulance between placing of call and dispatch of ambulance
- ▶ Time between dispatch of ambulance to initiation of treatment
- ▶ Response time at emergency for initial assessment
- ▶ Number of complaints received (from 104/GRS) about emergency service provision per month.
- ▶ **Response time by the referral facility**
- ▶ **Rate of Referrals from the referral facility to higher facilities**
- ▶ **Rate of the Back referrals to the referring facilities for follow-up care.**

Service Quality Indicators at HWC- PHC, UPHC and PHC

- ▶ Leave Against Medical Advice Rate
- ▶ Absconding Rate
- ▶ Follow up rate (by SHC HWC team at the community level) or Revisit rate with 72 hours of treatment)
- ▶ Percentage Bed Occupancy rate
- ▶ Feedback from the patients/attendants managed at the HWC SHC-HWC
 - Follow up rate (Revisit rate with 72 hours of treatment)

XII. Financial Requirement

The Financial requirements would be broadly planned and divided for human resources, equipment and consumables, capacity building, infrastructure strengthening, monitoring and surveillance. Funds shall be disbursed as per GOI guideline for operationalizing HWCs.

XIII. Management & Police Intimation of Medico Legal Cases

The MO should handle medico legal cases as per the GOI or State manuals/ protocols. Handling of cases of rape/sexual violence against minors and women, should be done in conformity with MoHFW's "Guidelines and Protocols for Survivors/Victims of Sexual Violence" 2014 which has detailed provisions on treatment, examination, evidence collection, police intimation, consent, confidentiality and privacy. Some of the overarching and broad points related to medico-legal cases, are reinforced herein below:

1. If any medico-legal case is brought to a CHO at HWC, she/he should, if warranted, provide emergency first aid management to save life/ stabilize, and refer to MO at PHC without any delay, with proper documentation of first aid provided.
2. Types of cases that are to be treated as medico-legal are: (1) all cases of injuries and burns - the circumstances of which suggest commission of an offense by somebody (irrespective of suspicion of foul play); (2) all vehicular, factory, or other unnatural accident cases specially when there is a likelihood of patient's death or grievous hurt; (3) cases of suspected or evident rape/sexual violence; (4) cases of suspected or evident criminal abortion; (5) cases of unconsciousness where its cause is not natural or not clear; (6) all cases of suspected or evident poisoning; (7) cases referred from court or otherwise for age estimation; (8) cases brought dead with improper history creating suspicion of an offense; (9)

any other case not falling under the above categories but has legal implications

3. The first and foremost duty of a MO is to treat and save the life of the patient. Information to the police should be sent in a reasonable time, but under no circumstance, the treatment should be delayed because of non-arrival of the police.
4. As per law, the hospital/examining doctor is required to inform the police about a sexual offence. However, if the survivor does not wish to participate in the police investigation, it should not result in denial of treatment for sexual violence. Further, in case the survivor does not wish to inform the police, then in the MLC intimation being sent to the police, a clear note stating “informed refusal for police intimation” should be made.
5. Treatment for medico-legal cases would include both pharmacological/medical/surgical as well as psychosocial treatment, especially in cases of rape/sexual violence and child abuse.
6. MO to conduct medico-legal examination and prepare medico-legal report. In cases of rape/sexual violence of a girl or woman, every possible effort should be made to find a female MO, but unavailability of lady doctor should not deny or delay the treatment and examination. In case a female doctor is not available, a male doctor should conduct the examination in the presence of a female attendant.
7. Procedure:
 - ▶ The privacy and dignity of the patient/victim should be ensured
 - ▶ Take the consent of the injured person on the MLR Form. If the patient is less than 12 years, take the consent of the guardian/accompanying person and get his signature/thumb impression
 - ▶ The doctor on duty examines the patient and prepares medico legal report in computerized format. In case doctor is unable to provide computerized report immediately, manual report is provided to the patient and computerized report is provided within one week.

- ▶ The police are intimated giving brief details of the case in a written format.
 - ▶ The reporting time and date is also mentioned in the police information.
 - ▶ MLC police information form is filled in triplicate and one copy is handed over to the police person and one copy is retained in the hospital record.
 - ▶ Receiving is taken from police person who receives the information form.
 - ▶ Wherever required various specimens are collected, sealed and handed over to the police authorities after sealing the same. A receipt of the items sealed and handed over to the police is taken. Patient case file is stamped as medico-legal case.
8. Chain of custody: The hospital must designate certain staff responsible for handling evidence and no one other than these persons must have access to the samples. This is done to prevent mishandling and tampering. If a fool-proof chain of custody is not maintained, the evidence can be rendered inadmissible in the court of law. A log of handing over of evidence from one 'custodian' to the other must be maintained.
9. The collected samples for evidence may be preserved in the hospital till such time that police are able to complete their paper work for dispatch to forensic lab test including DNA.

The records should be kept under lock and key, in the custody of the doctor concerned or may be kept in the record room of hospitals, where such facility is available. Preserve all the inpatient records for a period of at least 5 years and outpatient department records for 3 years. All medico legal case records are to be retained as per state guidelines or by default for lifetime. The MO should receive regular trainings on medico legal examination, evidence collection, maintaining chain of custody of samples, age estimations, recording of dying declarations, and on advanced directives etc.

Monitoring and Supervision

The Operational Guidelines for management of common emergencies, burns and trauma is part of comprehensive primary care package for HWC. Its implementation, supervision and monitoring shall be undertaken as integral part of 12 primary care services. The Technical/Programme Officer, in-charge of HWC at State and District level should also be the nodal officer for emergency care guideline at primary level.

It is expected that program managers at State, District and Block level will conduct monthly review. The critical indicators given in the guideline shall be monitored and required corrective actions need to be taken.

The MD NHM at State level shall undertake quarterly review. The key findings and facilitations required at the level of MOHFW shall be shared by the States every quarter.

There should be display of the mapped facilities in the patient service areas and also in the Out Patient Department and Emergency Department.

The same should also be shared with concerned EMT of the emergency ambulance.

Annexures

Annexure 1: Sample Plan of Referral to be Adopted by the Community

Any emergency being received at primary care level needs to be quickly triaged and initial management including resuscitation if required should be provided. There after such cases which cannot be further managed needs to be referred to higher level of emergency care.

Following is the referral plan for such commonly presenting emergency conditions. To ensure appropriate management and timely referral to the appropriate health facility where assured care can be given to the case, the emergency conditions have been categorized into 3 types. First- the conditions which can be managed at the HWC- SC by HWC team, second- the conditions which can be managed at the HWC- PHC by MO and third the conditions which should be directly referred to FRU/DH/Tertiary Care Centre.

Sample plan of referral to be adopted by the Individual Community

Individual/Village/Community

Conditions to be referred to HWC – Sub Centre

- Fever (<101F)
- Minor symptoms of existing illness and low risk conditions (cough, cold etc)
- Simple skin rash
- Fresh scratches / wounds
- Choking
- Cyanosed infant/child
- Epileptic Seizures
- Acute febrile illnesses
- Animal bites, etc.
- First aid treatment and initial management for obstetric emergencies

HWC – Sub centre

Conditions to be referred to HWC – PHC

- If in a day after burns there is Bad smell/pus discharge / pain increases, there is swelling or fever or the condition becomes worse. Expectorating black sputum
- Active seizure
- Hanging / Drowning / Electrocutan/ Heat Stroke
- Ongoing bleeding (Blood in vomitus, Blood in cough, Blood in urine, Nose bleeding etc)
- Unconsciousness/ Fainting, Disorientation
- Acute abdominal pain
- Pain abdomen / Loose motions (>3episodes)
- Fever in patient Patients/Diabetic patients on chemotherapy/HIV Patients/Diabetic patients
- Headache, Feeling Giddiness
- Unable to pass urine
- Painful swelling / wound
- Fractures of hand & feet
- Minor Head Injury
- Pregnancy with injury

Conditions to be referred to HWC – PHC

- Expectorating black sputum
- If in a day after burns there is Bad smell/pus discharge / pain increases, there is swelling or fever or the condition becomes worse
- If the victim has any other medical condition like- Pregnancy, Hypertension, Diabetes, under influence of drugs / Alcohol, Kidney disease, asthma or associated trauma etc. status
- Active seizure
- H/o Fainting/Syncope
- High Grade fever with altered mental status
- Hanging / Drowning / Electrocutan / Heat Stroke
- Abnormal bleeding Per Vagina
- Ongoing bleeding (Blood in vomitus, Blood in cough, Blood in urine, Nose bleeding etc)
- Pallor with Breathlessness / Foot swelling

Conditions to be referred to FRU/DH/Tertiary Care Centre

- Child is below 5 years
- Elderly above 65 years of age.
- If the burn surface area is more than or equal to two palm area.
- Burn >20% BSA (Burns of special areas) in adults and >10% in pediatric age group
- Burns that involve the face, hands, feet, genitalia, perineum, or major joints or surrounding entire limb neck or body
- If the person has decreased or no pain
- Burn caused by pressurized steam, chemical acid.
- The person has inhaled smoke or is not able to speak.
- Stab wounds / penetrating injury (head, neck, chest, abdomen, upper thigh)
- Crush injury of Thigh / Leg / Arm / Forearm injury with massive bleed.
- Fracture of Thigh/Leg/Arm/Forearm with exposed bone
- Two or more long bone (Thigh / Leg / Arm / Forearm) fracture
- Abnormal chest wall movement during breathing
- Suspected Neck injury
- Multiple injuries
- Suspected sexual assault
- Spinal injuries,
- Suspected Poisoning with unstable vital sign*
- Chest pain*
- Cyanosed infant/child,
- Uncontrollable bleeding, nose bleed
- Animal bites and snake bites

FRU/District Hospital/Tertiary Care centre

HWC - PHC

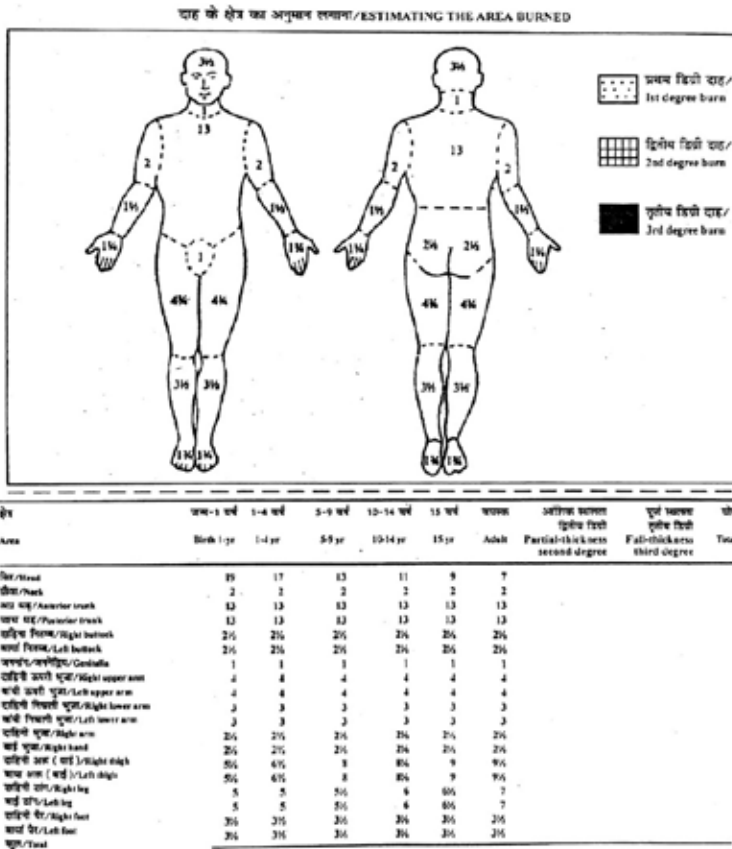
Annexure 2: Estimating the Burn Surface Area

The extent of burn injury is best described using the percentage of the **total body surface area (%TBSA)** that is affected by the burn. The measurement of burn surface area is important during the initial management of cases with burns for estimating fluid requirements and determining need for transfer to a burns service. The burn surface can be estimated by either:

i. Rule of Palm

The “**rule of palm**” is a way to estimate the size of a **burn**. The **palm** of the person who is burned (not fingers or wrist area) is about 1% of the body. Use the person’s **palm** to measure the body surface area burned.

ii. Percentage of burnt affected body surface area



Annexure 3: Elements of the SAMPLE History

The SAMPLE approach is a standard way of gathering the key history related to an illness or injury. Sources of information include: the ill/injured person, family members, friends, bystanders, or prior providers. SAMPLE stands for:

- ▶ S: Signs and symptoms
 - The patient/family's report of signs and symptoms is essential to assessment and management.
- ▶ A: Allergies
 - It is important to be aware of medication allergies so that treatments do not cause harm. Allergies may also suggest anaphylaxis as the cause of acute symptoms.
- ▶ M: Medications
 - Obtain a full list of medications that the person currently takes and ask about recent medication or dose changes. These may affect treatment decisions and are important to understanding the person's chronic conditions.
- ▶ P: Past medical history
 - Knowing prior medical conditions may help in understanding the current illness and may change management choices.
- ▶ L: Last oral intake
 - Record the time of last oral intake and whether solid or liquid. A full stomach increases the risk of vomiting and subsequent choking, especially with sedation or intubation that might be required for surgical procedures.
- ▶ E: Events surrounding the injury or illness
 - Knowing the circumstances around the injury or illness may be helpful in understanding the cause, progression and severity.

Annexure 4: Triage for Emergency Conditions at the Health and wellness Centre

Triage System

Triage means initial quick assessment followed by sorting out or categorizing patients as per their severity of illness/injury, so initiate resuscitation for saving life, if it is so required. Thereafter, right kind of care can be provided by right person at right place (Red, Yellow or Green) in right time (e.g. First hour “the Golden hour” for injured patients).

The colour coding is based on the urgency of medical attention required.

- a. **Red tag (Including FAST Track):** Those patients who present with abnormal vitals or have a problem which can be fatal (as guided by Triage form), very soon if not resuscitated/managed:
 - **For all Patients tagged as red: “DO URGENT RESUSCITATION”, undertake basic management & “EARLIEST APPROPRIATE REFERRAL”, if required.**
- b. **Yellow tag:** Those patients who presented with stable vital signs or has become stable in red zone, and have a problem (as guided by Triage form) which needs investigations or observation or both.
 - **For all Patients tagged as yellow: “DO NOT LET THEM DETERIORATE, APPROPRIATELY RESUSCITATE” & PLAN FOR TIMELY APPROPRIATE REFERRAL.**
- c. **Green tag:** Those patients who presented with stable vital signs and have a minor problem for example simple cough or fever, minor scratches or wounds (as guided by Triage form) which does not need any observation or investigation.

- **For all Patients tagged as green: manage them appropriately and discharge. Request to follow up in out-patient department if required.**

Re-triage

- ▶ If a YELLOW tagged patient deteriorates it should be re-triaged as RED
- ▶ If a GREEN tagged patient deteriorates it should be re-triaged as YELLOW
- ▶ Please document the date& time and reason for re-triage
- ▶ Red triaged patient should be given priority over other patients (Yellow & Green) and need to be transferred to higher/appropriate facility at the earliest.

Always remember “DO NO FURTHER HARM”

Follow 3 “R”:

- ▶ **Recognise** the problem/illness/condition patient is having (by history, examination, vital signs, investigation report (if any e.g Blood sugar).
- ▶ **Resuscitate** by giving appropriate available treatment in timely manner with idea to sustain life and or limb.
- ▶ **Refer** timely, in appropriate manner (proper communication, documentation, proper transportation with en-route care).

Triage Form for Medical Emergency at the Health and Wellness Centre

RED- Do urgent resuscitation, basic management & earliest appropriate referral		
MEDICAL	TRAUMA	PHYSIOLOGICAL CHANGES
FAST TRACK:		
<ol style="list-style-type: none"> 1. Chest Pain, 2. Altered Sensorium, 3. Stroke (FAST) 		
<ul style="list-style-type: none"> ▶ Suspected Poisoning with unstable vital sign* ▶ Active seizure ▶ H/o Fainting/Syncope ▶ High grade fever with altered mental status ▶ Hanging/near drowning/electrocution/heat stroke ▶ Snake/Scorpion bite ▶ Abnormal bleeding per Vagina ▶ Ongoing bleeding (blood in vomitus, blood in cough, blood in urine, nose bleeding etc) ▶ Pallor with Breathlessness/Foot swelling ▶ Burn >20% BSA (Burns of special areas) in adults and >10% in pediatric age group ▶ Burns of special area: Hands, face, perineum, airway/inhalational injury 	<p>Injuries identified</p> <ul style="list-style-type: none"> ▶ Stab wounds/ penetrating injury (head, neck, chest, abdomen, upper thigh) ▶ Thigh/Leg/Arm/Forearm injury with absent distal pulse ▶ Fracture of Thigh/Leg/Arm/Forearm with exposed bone ▶ Two or more long bone (Thigh/Leg/Arm/Forearm) fracture ▶ Abnormal chest wall movement during breathing ▶ Feeling of crackles below skin on pressing/seat belt mark ▶ Suspected Neck injury ▶ Multiple injuries ▶ Suspected sexual assault 	<ul style="list-style-type: none"> ▶ Noisy Breathing/ Stridor <p>*Unstable vital signs:</p> <ul style="list-style-type: none"> ▶ Respiratory Rate <10 or >24/min ▶ SpO₂ <92% ▶ Pulse Rate <60 or >100/min ▶ Systolic BP <90 or >180 mm Hg ▶ Diastolic BP >120 mm Hg ▶ Unresponsive or Responding to pain only (on AVPU, alert, voice, pain, unresponsive)

Management of FAST Track & patients with Red tags:

- A. Follow ABCD sequence of Assessment and management
- B. Secure IV line, Start Oxygen, start Monitoring vital functions
- C. Look for specific problem and manage
- D. Refer to higher centre/appropriate facility at the earliest (Give highest priority FASTtrack patient)

YELLOW tag: do not let them deteriorate, appropriately resuscitate& plan for timely appropriate referral.

MEDICAL

- ▶ Post-seizure stage
- ▶ Pain abdomen/Loose motions (>3episodes)
- ▶ Fever with Headache/ chest Pain/Jaundice
- ▶ Fever in patient on chemotherapy/HIV Patients/Diabetic patients
- ▶ Drug overdose, Poisoning with stable vital signs
- ▶ Headache, dizziness
- ▶ Unable to pass stool
- ▶ Unable to pass urine
- ▶ Painful Bleeding P/R
- ▶ Painful swelling/wound
- ▶ Pallor/Known Anemia for Transfusion

TRAUMA

Injuries identified

- ▶ Fractures of hand & feet
- ▶ Isolated long bone fracture
- ▶ Minor Head Injury
- ▶ Suspected spine Injury (any)
- ▶ Pregnancy with injury

PHYSIOLOGICAL

- ▶ Patent airway
- ▶ Respiratory Rate 10 to 24/min
- ▶ SpO₂ >92%
- ▶ Systolic BP >90
- ▶ Responding to verbal Commands

Management of YELLOW Tagged:

- E. Follow ABCD sequence of Assessment and management
- F. Secure IV line, Start Oxygen, start Monitoring vital functions
- G. Look for specific problem and manage
- H. Refer to higher center/appropriate facility if required

GREEN tagged- Manage Them Appropriately And Discharge

MEDICAL

- ▶ Fever (<101F)
- ▶ Minor symptoms of existing illness
- ▶ Minor symptoms and low risk conditions (cough, cold etc)
- ▶ Simple skin rash

TRAUMA

Injuries identified

- ▶ Fresh scratches/wounds

PHYSIOLOGICAL

- ▶ Patent airway
- ▶ Respiratory Rate 10 to 24/min
- ▶ SpO2 >95 (Trauma)
- ▶ Systolic BP >90
- ▶ Alert

Management of GREEN Triage patients:

Manage Green Patients appropriately and discharge. Request to follow up in out-patient department if required

Patient Name:

Age/Sex:

Date/Time of Triage:

Pulse:

BP:

SpO2:

Respiratory rate:

AVPU:

Sign:

Name & Designation of Triage officer:

Re-triage: (Please tick)

Yellow → Red

Green → Red

Red → Yellow

Green → Yellow

NO RED TO GREEN (ALWAYS RETRIAGE RED TO YELLOW AND REFER)

Date/Time of Re triage:

Sign:

Name & Designation of Triage officer:

SBC=Single Breath Count, SBP= Systolic Blood Pressure, DBP= Diastolic Blood Pressure

Annexure 5: Assessing conscious level of the patient

At Community and HWC level: AVPU scale is used

A - Alert

V- Responds to **V**erbal stimuli

P- Responds to **P**ainful stimuli

U- Unresponsive (unconscious)

If patient is at P or U then consider protecting airway and also intubation as needed

Medical Officers can also utilize Glasgow Coma Scale (GCS)

Glasgow Coma Scale

The Glasgow Coma Scale (GCS) is a neurological scale, which aims to give a reliable and objective way of recording the conscious state of a person for initial as well as subsequent assessment. A patient is assessed against the criteria of the scale, and the resulting points give a patient score between 3 (indicating deep unconsciousness) and 15 (indicating a fully awake patient).

GLASGOW COMA SCALE	
Eye opening (E)	
Spontaneous	4
To loud voice	3
To pain	2
Nil	1
Best Motor Response (M)	
Obeys	6
Localizes	5
Withdraws (flexion)	4

GLASGOW COMA SCALE	
Abnormal flexion posturing	3
Extension posturing	2
Nil	1
Verbal Response(V)	
Oriented	5
Confused, disoriented	4
Inappropriate words	3
Incomprehensible sounds	2
Nil	1
Coma Score= E + M + V	
Minimum	3
Maximum	15

Reference: Longo Dan L., Fauci AS, Kasper Dennis L., House Stephen L., Jameson Larry L, Loscalzo Joseph et al Harrison's Manual of Medicine 18th ed. New York: McGraw Hill; 2011

Annexure 6: Short ABCDE Table*

	Assess	Act/Intervene/treat
Airway	Patency Protection	Assess & maintain patency by-Simple measures- Position of comfort, head tilt-chin lift, jaw thrust (if cervical injury), suction, airway adjuncts (oropharyngeal/nasopharyngeal airway)
Breathing	Oxygenation - Spo2 Ventilation	Assess Respiratory rate, effort, chest expansion & air movement, lung & airway sounds & SpO2 Assist ventilation if required Commence CPR if patient is unconscious and absence of normal breathing Apply O2 to maintain SpO2 > 95%
Circulation	Perfusion to tissues CRT, Pulse, BP	Assess Skin temperature, color Heart Rate , rhythm Peripheral & central pulses Capillary refill BP Urine Output Monitor vital signs frequently by multi para monitor Action IV cannulation, If SBP < 5th percentile for age in children or < 90 mm of Hg in adults- IV/IO RL or NS 20ml/kg bolus in children or 500ml bolus in adults
Disability	AVPU/GCS, Pupils Blood glucose	Assess & monitor AVPU/GCS + pupils If GCS< 9 &/or rapidly deteriorating- ET intubation by emergency physician for airway protection Assess & monitor Blood Glucose level by finger prick test If BGL< 40 mg/dl or unconscious/confused- Administer IV 50% Glucose 50 ml (if NA- 25% D 100 ml IV) in adults and IV/IO 0.5-1 g/kg (2-4 ml/kg of 25%D or 5-10 ml/kg of 10%D) in children
Exposure	Expose patient for examination	After examination and initial treatment, cover the patient back to prevent hypothermia

*The above table needs to be customized for first responders and community volunteers removing such resources and facilities which are available only at a health care facility. This should be part of training guideline.

Annexure 7: Drugs for Management of Emergencies at HWCs

The following list of drugs is indicative and not exhaustive of emergency drugs and consumables that should be available at the facility. (Kindly refer to 'Operational Guideline of Comprehensive Primary Health Care through Health and Wellness Centre' for further details and drug prescription/dispensation protocols.).

Emergency Drugs Available at HWC-SC as per Essential Drug List for SHC & PHC level

S. No.	Drug	Formulation	Strength
1.	Oxygen Medicinal Gas	Inhalation	2-15 liters per minute
2.	Lignocaine Hydrochloride	Jelly sterile/Injection	2%
3.	Atropine.	Injection (sulphate)	0.5 mg/ml
4.	Diazepam	Tablet	5 mg/10mg
5.	Diazepam rectal suppository	Suppository	
6.	Paracetamol	Tablet	500 mg/650 mg
7.	Paracetamol	Syrup	100 mg/5 ml
8.	Cetirizine	Tablet	10 mg
9.	Cetirizine	Suspension	5 mg/ml,60 ml
10.	Pheniramine maleate	Injection	22.75 mg/ml
11.	Hydrocortisone Sodium Succinate	Powder for injection	100 mg vial
12.	Adrenaline	Injection	1 mg/ml (1:1000)
13.	Charcoal activated	Tablet	250 mg
14.	Magnesium sulphate	Injection	500mg/ml
15.	Midazolam	Nasal Spray	

S. No.	Drug	Formulation	Strength
16.	Gentamycin Sulphate	Injection	40 mg/ml, 2 ml vial
17.	Amoxicillin	Capsule	250 & 500 mg
18.	Amoxicillin	Oral liquid	250 mg/5 ml
19.	Metronidazole	Tablet	200 mg/400mg
20.	Plasma Volume Expander	Injection	500ml
21.	Glycerine trinitrate	Tablet (sublingual)	500 mcg
22.	Isosorbidedinitrate	Tablet (sublingual)	5 mg
23.	Potassium permanganate	Aqueous solution	1 : 10 000
24.	Calamine lotion	Lotion	8%
25.	Povidone iodine	Solution	5%
26.	Povidone iodine	Ointment	5%
27.	Oral Rehydration Salts	Powder for solution	As per IP
28.	Tetanus vaccine	Injection	0.5 ml Ampoule
29.	Anti-Rabies vaccine	Injection ID	
30.	Ciprofloxacin	Eye Drops	0.3%
31.	Saline	Nasal Drops	0.6%
32.	Salbutamol Sulphate	Nebulizer solution	5 mg/ml
33.	Budesonide	Nebulizer solution	15 ml vial
34.	Glucose/dextrose	Injectable solution	5%, isotonic
35.	Glucose/dextrose	Injectable solution	10% isotonic
36.	Ringer lactate	Injectable IV solution	
37.	Sodium chloride	Injectable solution	0.9% isotonic
38.	Ondansetron	Tablet	4mg
39.	Ondansetron	Liquid	2mg/5ml
40.	Ondansetron	Injection	2mg/ml

Emergency Drugs Available at HWC-PHC in Addition to HWC-SC as per Essential Drug List for SHC & PHC level

S. No.	Drug	Formulation	Strength
1.	Magnesium Sulphate	Injection	50% solution 2ml ampule
2.	Diclofenac	Injection	25 mg/ml
3.	Ibuprofen	Tablet	400 mg
4.	Paracetamol	Injection	150 mg/ml
5.	Ciprofloxacin	Injection IV	200 mg/100 ml
6.	Plasma Volume Expander	Injection	500ml
7.	Glycerine trinitrate	Tablet (sublingual)	500 mcg
8.	Calamine lotion	Lotion	8%
9.	Povidone iodine	Solution	5%
10.	Povidone iodine	Ointment	5%
11.	Oral Rehydration Salts	Powder for solution	As per IP
12.	Glucose/dextrose	Injectable	25%
13.	Glucose with sodium chloride/saline	Injectable solution	5% glucose + 0.9% sodium chloride
14.	Water for injection	Injection	5ml ampoule
15.	Quinine (Dihydrochloride)	Injection	300 mg/ml, 2ml ampoule
16.	Chloroquine phosphate	Injection	40 mg/ml
17.	Pantoprazole	Injection	40 mg
18.	Gentian violet	Topical preparation	0.25 to 0.2 %
19.	Midazolam	Injection	25mg/ml
20.	Aspirin	Tablet	75mg
21.	Clopidogrel	Tablet	75mg

S. No.	Drug	Formulation	Strength
22.	Morphine	Injection	
23.	Livetiracetam	Tablet	500mg
24.	Tranexamic Acid	Injection	500mg/5ml
25.	Aminophyllin	Injection	500mg (25mg/ml)
26.	Oxytocin	Injection	100 units/10ml
27.	Tramadol	Tablet	50mg
28.	Dexamethasone Disodium	Tablet Injection	0.5mg 4mg/ml
29.	Labetelol	Tablet Injection	100mg 5mg/ml

Annexure 8: List of Equipment for Management of Emergencies at HWCs

S. No.	Item	Number
1.	Oxygen cannula, mask, non-rebreather mask, airway adjuncts	1 set
2.	Suction equipment	1
3.	Pulse Oximeter	1
4.	AMBU Bag and mask Also paediatric and neonatal AMBU bag and masks and oral adjuncts	2
5.	Oxygen Cylinder (to be used during Transport of patients for investigation or shifting)	1
6.	IV cannula, drip set, IV fluids, IO needle	
7.	Pressure dressing, Tourniquet (Adult & paediatric)	
8.	Suturing set	
9.	Urinary catheter, Uro-bag	
10.	Philadelphia Cervical collar, Neck stabilization device, spine board	
11.	Temporary splints for fractures	
12.	Medicine Trolley with emergency drugs(e.g. Adrenaline, Hydrocortisone)	1
13.	IV Stand	1
14.	Warmer (warm air blower to prevent hypothermia)	1

OTHER EQUIPMENT'S-(NOTE: These equipments should be available at the level of Secondary care)

1. Multipara Monitor (to monitor Heart Rate, BP, SPO2, ECG, Temp.)
2. Manual Defibrillator with pacing capability

Annexure 9: Referral Slip

Standard referral form with all the required standard information. Along with minimum requirements for information that should be provided with all referral requests, additional information may be provided. This additional information may be based on agreement between the consulting and referred doctor or may be provided based on the need at the time of referral.

Name of the Referring Facility:

Address:

Telephone :

Name of Patient: Age: Yrs:

Next of kin or Person Responsible in cases involving minors –
(name, Address and Telephone Number):

.....

Address:

Unique identification No. :

Referred on/...../..... (d/m/yr) at (time) to
.....(Name of the facility) for management.

Provisional Diagnosis/Key symptoms:

Admitted in the referring facility on/...../..... (d/m/yr) at
..... (time) with **chief complaints** of :

.....

.....

.....

Summary of Management (Procedures, Critical Interventions, Drugs given for Management):

.....

.....

.....
.....
Investigations:

Blood Group:

Hb: Urine R/E:

Condition at time of Referral:

Consciousness:

Temp:

Pulse: BP:

Others (Specify):

Reason for referral:

.....
.....
.....
Information on Referral provided to the Institution Referred to: Yes /No

If yes, then name of the person spoken to:

Mode of Transport for Referral: Govt/Outsourced/EMRI/Personal/Others/
None.

**Signature of Referring Physician/MO
(Name/Designation/Stamp)**

Note:

- ▶ A copy of the referral form to be kept at the referring facility.
- ▶ Wherever possible, referrals must have prior communication to the receiving facility. This will be to ensure availability of the services, communication about the urgency and other information requirement.
- ▶ Information should also be conveyed to patients/patients' family members (e.g., why they are being referred, information about the specialist appointment, etc)

Counter Referral Slip (level of facility)

1. The patient (name) referred to us, was diagnosed as
2. A copy of discharge slip giving treatment, investigation and follow-up details has been given to the patients.
3. Following 'follow-up' advice needs to be carried out:
 - a. Periodic check-up (define weekly/fortnightly/monthly) on following (e.g. BP, Blood sugar etc.) is advised:
 - b. The patient can be issued the following drugs for a period of 15/30/45/60 days and monitor his/her..... condition/status every 15/30/45/60 days before issue of drugs.
4. Any other advice

Signature & contact no. of
Doctor referring the patient for follow-up

Annexure 10: SOP for Management of Common Medical Emergencies in Community & At Health and Wellness Centre

Common Medical Emergencies	Management in the Community	Management at Health and wellness Centre
Burns	<ul style="list-style-type: none"> ▶ Stay low on the floor and crawl to prevent inhalation of harmful gases. Breathing should be done through a wet handkerchief to filter out heat, carbon monoxide and other toxic gases. ▶ If blanket is used to douse the fire, should be removed immediately as it retains heat. ▶ Pour normal water on affected area ▶ All chemical burns (including Acid burns) should be treated with running tap water (NOT under high pressure) to the affected area ONLY, irrigation should continue on the way to hospital also. ▶ Prevent chemical contamination while irrigating. ▶ Dry chemicals should be removed using a brush taking care of unaffected body parts as Water is contraindicated for dry chemicals. ▶ Rescuer must use protective gloves and eye shield, all clothes; belts ornaments should be removed immediately and safely ▶ Don't use ice or ice packs on the affected area. 	<ul style="list-style-type: none"> ▶ Check for breathing ▶ Begin Chest compression, CPR only if not breathing or not showing any movement ▶ If patient is not breathing or not showing any chest movement, begin chest compression/CPR as per BLS algorithm ▶ Protect the neck (all burns should be assumed to have trauma) ▶ Start IV/IO line and initiate Normal saline (D5 absolutely not to be used) maintenance fluid if <ul style="list-style-type: none"> ○ Pulse >100 (per minute) ○ BP <110/70 (mm of Hg) ○ Has major bleeding ○ Severely injured ▶ Do not remove any burnt piece of clothing or any other item, if it is stuck to the skin due to the burn. Only a doctor should remove it.

Common Medical Emergencies	Management in the Community	Management at Health and wellness Centre
	<ul style="list-style-type: none"> ▶ Don't apply any oil such as butter, grease, toothpaste etc. on the burn. ▶ Don't burst blisters. ▶ Don't remove any burnt piece of clothing or any other item, if it is stuck to the skin due to the burn. Only a doctor should remove it. ▶ While doing mouth to mouth, watch that it should not further damage the patient. ▶ Avoid delay in referral ▶ In case of mass causality, avoid delay of the patients who need immediate care ▶ Rule 9-for assessment of degree of burn 	<ul style="list-style-type: none"> ▶ Apply a non-adhesive dressing. Don't remove any burnt piece of clothing or any other item, if it is stuck to the skin due to the burn. Only a doctor should remove it. ▶ Avoid delay in referral ▶ In case of mass causality, avoid delay of the patients who need immediate care
Electrocution	<ul style="list-style-type: none"> ▶ Turn power off, Touch with caution, and remove person from live wire ▶ Call ambulance ▶ Don't use a blanket or towel, because loose fibres can stick to the burns. ▶ Check for breathing ▶ Begin Chest compression CPR only if not breathing or not showing any movement 	<ul style="list-style-type: none"> ▶ CAB protocol (compressions, airway, breathing) ▶ Scene safety (if at site) <ul style="list-style-type: none"> ○ Primary assessment ○ Check for breathing ○ If patient is not breathing or not showing any chest movement, ○ Begin Chest compression/CPR as per BLS algorithm ▶ Connect AED if available

Common Medical Emergencies	Management in the Community	Management at Health and wellness Centre
		<ul style="list-style-type: none"> ▶ Start Monitoring vital functions. Commence IV line & start Oxygen ▶ Cover burnt areas with a sterile gauze bandage, if available, or a clean cloth. ▶ Refer to facility where cardiac monitoring can be done for arrhythmias
Transient loss of consciousness	<ul style="list-style-type: none"> ▶ Lay the victim down and elevate the feet. (DON'T MAKE HIM SIT) ▶ Check for breathing and pulse ▶ Begin Chest compression CPR only if not breathing or not showing any movement ▶ Call ambulance if fainting is for more than a few minutes 	<ul style="list-style-type: none"> ▶ Follow ABCDE as appropriate ▶ Begin Chest compression CPR only if not breathing or not showing any movement ▶ Start Monitoring vital functions, Put on IV line & Start Oxygen (if required) ▶ Check for Random Blood Sugar. ▶ Administer 50% IV Dextrose if Blood sugar < 60 mg/dl.
Epileptic fits (Seizures)	<ul style="list-style-type: none"> ▶ Remove victim from hazards ▶ Check for breathing ▶ Don't give anything by mouth, ▶ Keep comfortable ▶ Call ambulance if medical assistance is needed ▶ Recovery position 	<ul style="list-style-type: none"> ▶ Follow ABCDE sequence of Assessment and management ▶ Monitor vitals, Check for Random Blood Sugar ▶ Prevent self harm ▶ If suction is available, use to remove oral contents.

Common Medical Emergencies	Management in the Community	Management at Health and wellness Centre
		<ul style="list-style-type: none"> ▶ Call ambulance if medical assistance is needed. ▶ It is essential to place these patients in the recovery position when the convulsions have ended, to prevent aspiration.
Chest pain	<p>Call ambulance/See the doctor if you have:</p> <ul style="list-style-type: none"> ▶ Pain on centre or left side of chest lasting more than a few minutes ▶ It is spreading to the shoulders, back, neck, jaw or left arm ▶ If the pain is like Uncomfortable pressure, fullness or squeezing pain ▶ It is associated with Lightheadedness, fainting, cold sweating, nausea or shortness of breath ▶ Chew one Tablet of Aspirin. Take 1 tablet of Aspirin, if you are already taking it. (However, don't take aspirin if you are allergic to aspirin, have bleeding problems or take another blood-thinning medication, or if your doctor previously told you not to do so.) ▶ Take 1 tablet of nitroglycerine, if you are already taking it. ▶ Begin hands only CPR on the person having a heart attack, if patient is not breathing and 	<p>Call ambulance/See the doctor if you have:</p> <ul style="list-style-type: none"> ▶ Pain on centre or left side of chest lasting more than a few minutes ▶ It is spreading to the shoulders, back, neck, jaw or left arm ▶ If the pain is like Uncomfortable pressure, fullness or squeezing pain ▶ It is associated with Lightheadedness, fainting, cold sweating, nausea or shortness of breath ▶ Chew one Tablet of Aspirin. Take 1 tablet of Aspirin, if you are already taking it. (However, don't take aspirin if you are allergic to aspirin, have bleeding problems or take another blood-thinning medication, or if your doctor previously told you not to do so.)

Common Medical Emergencies	Management in the Community	Management at Health and wellness Centre
	<p>not moving (Visit a centre where ECG and cardiologist or Physician is available)</p>	<ul style="list-style-type: none"> ▶ Take 1 tablet of nitroglycerine, if you are already taking it. <p>Follow ABC sequence of Assessment and management</p> <p>Start Monitoring vital functions, Put on IV line & Start Oxygen (if required)</p> <p>Visit a centre where ECG and cardiologist or Physician is available</p>
Fever	<p>Fever is there if:</p> <ul style="list-style-type: none"> ▶ Oral temperature of 100 F (37.8 C) or higher ▶ Armpit temperature of 99 F (37.2 C) or higher <p>Management:</p> <p>Goal is to relieve discomfort and promote rest. Treating a fever neither shortens nor particularly prolongs the course of an illness:</p> <ul style="list-style-type: none"> ▶ Encourage to drink fluids ▶ Use cold sponging over forehead, chest, abdomen etc. (Avoid Ice cold water) ▶ Dress in lightweight clothing ▶ Use a light blanket if feels chilled, until the chills end ▶ Give 1 tablet(500mg) Paracetamol by mouth (if fever is more than 101°F) ▶ See the doctor ▶ Take to nearest emergency urgently if having: 	<ul style="list-style-type: none"> ▶ Encourage to drink fluids/ORS ▶ Use cold sponging over forehead, chest, abdomen etc.(Avoid Ice cold water) ▶ Give 1 tablet(500mg) Paracetamol by mouth (if fever is more than 101°F) ▶ Investigations: RDT for malaria. Complete Blood Count, Peripheral Blood Smear ▶ Start Monitoring vital functions, Put on IV line & Start Oxygen (if required) ▶ Take to nearest emergency urgently if having: <ul style="list-style-type: none"> ○ Difficulty breathing ○ Chest pain

Common Medical Emergencies	Management in the Community	Management at Health and wellness Centre
	<ul style="list-style-type: none"> ○ Difficulty breathing ○ Chest pain ○ Severe headache ○ Confusion or agitation ○ Abdominal pain ○ Repeated vomiting ○ Signs of dehydration, such as a dry mouth, decreased or dark colour urine, or refusal to drink fluids ○ Skin rashes ○ Difficulty swallowing fluids ○ Pain with urination or pain in the back 	<ul style="list-style-type: none"> ○ Severe headache ○ Altered sensorium, Confusion or agitation ○ Abdominal pain ○ Repeated vomiting ○ Signs of dehydration, such as a dry mouth, decreased or dark urine, or refusal to drink fluids ○ Skin rashes ○ Joint pain etc. ○ Difficulty swallowing fluids ○ Pain with urination or pain in the back
<p>Gas-troenteritis (Gut/stomach infection)</p>	<p>Suspect if someone is having:</p> <ol style="list-style-type: none"> 1. Nausea or vomiting 2. Loose motions 3. Cramps, Abdominal pain 4. Low-grade fever (sometimes) <p>If Positive:</p> <ul style="list-style-type: none"> ▶ Sip liquids (Take ORS) try to take small frequent sips over a couple of hours, instead of drinking a large amount at once. ▶ Take note of urination. should be at regular intervals, and colour should be light and clear. 	<ul style="list-style-type: none"> ▶ Sip liquids (Take ORS) try to take small frequent sips over a couple of hours, instead of drinking a large amount at once. ▶ Infrequent passage of dark colour urine is one of the signs of dehydration. Dizziness and light-headedness also are signs of dehydration. ▶ Start Monitoring vital functions, put on IV line and start IV fluids (Ringer Lactate)

Common Medical Emergencies	Management in the Community	Management at Health and wellness Centre
	<ul style="list-style-type: none"> ▶ Infrequent passage of dark colour urine is one of the signs of dehydration. Dizziness and light-headedness also are signs of dehydration. If any of these signs and symptoms occur and the patient can't drink enough fluids, seek medical attention. ▶ Try to eat small amounts of food frequently if patient experiences nausea ▶ Otherwise, gradually begin to eat bland, easy- to-digest foods, such as bananas, overcooked rice, Khichdi. ▶ Avoid milk and dairy products, caffeine, alcohol, nicotine, and fatty foods for a few days. ▶ Get plenty of rest <p>Visit Doctor if:</p> <ul style="list-style-type: none"> ▶ Vomiting/Diarrhoea persist more than two days ▶ Signs of dehydration, such as a dry mouth, decreased or dark colour urine, or refusal to drink fluids ▶ Diarrhoea turns bloody ▶ Fever is 101 F (38.3 C) or higher ▶ Confusion develops abdominal pain develops 	<ul style="list-style-type: none"> ▶ Antibiotics, anti amoebic, antacids (Pantoperazole), Antiemetic <p>Refer to higher centre if:</p> <ul style="list-style-type: none"> ▶ Vomiting/Diarrhoea persist more than two days ▶ Signs of dehydration, such as a dry mouth, decreased or dark colour urine, or refusal to drink fluids ▶ Diarrhoea turns bloody ▶ Fever is 101 F (38.3 C) or higher ▶ Confusion develops abdominal pain develops
<p>Epistaxis (nose bleed)</p>	<p>Sit upright and lean forward:</p> <ul style="list-style-type: none"> ▶ Pinch nose. Use thumb and index finger to pinch nostrils shut. Breathe through mouth. Continue to pinch for 10 to 15 minutes. 	<ul style="list-style-type: none"> ▶ Sit upright and lean forward ▶ Pinch nose. Use thumb and index finger to pinch nostrils shut. Breathe through mouth. Continue to pinch for 10 to 15 minutes.

Common Medical Emergencies	Management in the Community	Management at Health and wellness Centre
	<ul style="list-style-type: none"> ▶ If the bleeding continues after 10 to 15 minutes, repeat holding pressure for another 10 to 15 minutes. Avoid picking at nose. If the bleeding still continues, seek emergency care. ▶ To prevent re-bleeding, don't pick or blow nose and don't bend down for several hours after the bleeding episode. During this time remember to keep patient's head higher than the level of heart. You can also gently apply some petroleum jelly to the inside of nose using a cotton swab or finger. ▶ If re-bleeding occurs: Pinch nose again as described above and call ambulance/visit emergency. ▶ Seek medical advice if: <ul style="list-style-type: none"> ○ The bleeding lasts for more than 30 minutes ○ Associated with Fainting or light headedness ○ The nosebleed follows an accident, a fall or an injury. 	<ul style="list-style-type: none"> ▶ If the bleeding continues after 10 to 15 minutes, repeat holding pressure for another 10 to 15 minutes. If the bleeding still continues, seek emergency care. ▶ Don't pick or blow nose and don't bend down for several hours after the bleeding episode. Remember to keep patients' head higher than the level of heart. ▶ Start Monitoring vital functions ▶ Investigations: Bleeding Time, Clotting Time, Complete Blood Count <p>Refer to higher centre if:</p> <ul style="list-style-type: none"> ▶ The bleeding lasts for more than 30 minutes ▶ Associated with Fainting or light headedness ▶ The nosebleed follows an accident, a fall or an injury.
Poisoning	<p>Signs and symptoms of poisoning include:</p> <ul style="list-style-type: none"> ▶ Burns or redness around the mouth and lips ▶ Breath that smells like chemicals, such as petrol or paint thinner ▶ Vomiting 	<p>If poisoning is suspected:</p> <ul style="list-style-type: none"> ▶ Remove anything remaining in the person's mouth. ▶ Remove any contaminated clothing using gloves.

Common Medical Emergencies	Management in the Community	Management at Health and wellness Centre
	<ul style="list-style-type: none"> ▶ Difficult breathing ▶ Drowsiness/Confusion or altered mental status <p>If you suspect poisoning, be alert for clues such as empty pill bottles or packages, scattered pills, and burns, stains and odors on the person or nearby objects.</p> <p>Seek medical advice.</p> <p>Take the following actions until help arrives</p> <ul style="list-style-type: none"> ▶ Swallowed poison. Remove anything remaining in the person's mouth. If the suspected poison is a household cleaner or other chemical, read the container's label and follow instructions for accidental poisoning. ▶ Poison on the skin. Remove any contaminated clothing using gloves. Rinse the skin for 15 to 20 minutes with fresh running water. ▶ Poison in the eye. Gently flush the eye with cool or lukewarm water for 20 minutes or until help arrives. ▶ Inhaled poison. Get the person in fresh air as soon as possible. ▶ If the person vomits, turn his or her head to the side to prevent choking/aspiration. ▶ Begin CPR if the person shows no signs of life, such as body movement, breathing or coughing. 	<ul style="list-style-type: none"> ▶ Rinse the skin for 15 to 20 minutes with fresh running water. ▶ Poison in the eye. Gently flush the eye with cool or lukewarm water for 15- 20 minutes ▶ If the person vomits, turn his or her head to the side to prevent choking/aspiration. ▶ Start Monitoring vital functions, Put on IV line & Start Oxygen (if required) ▶ Follow ABCDE sequence of Assessment and management ▶ Referral to the higher centre with proper history and with evidence (pill bottles, packages or containers with labels, and any other information about the poison)

Common Medical Emergencies	Management in the Community	Management at Health and wellness Centre
	<ul style="list-style-type: none"> ▶ Have somebody gather pill bottles, packages or containers with labels, and any other information about the poison to send along with the ambulance team. 	
Headache	<ul style="list-style-type: none"> ▶ Don't ignore headache ▶ Take 1 tablet paracetamol (Adult- 500mg) if unbearable <p>Get immediate medical attention immediately if headache:</p> <ul style="list-style-type: none"> ▶ Develops suddenly and severely ▶ Accompanies a fever; stiff neck; rash; mental confusion; loss of consciousness; seizures; changes in vision, such as blurring or seeing halos around lights; dizziness; weakness or paralysis, such as in the arms or legs; loss of balance; a reddened eye; numbness; or difficulty speaking or any other facial weakness ▶ Is severe and follows a recent sore throat or respiratory infection ▶ Begins or worsens after a head injury or fall ▶ Is a different type of headache from usual ▶ Progressively worsens over the course of a single day or persists for several days 	<ul style="list-style-type: none"> ▶ Monitor vital signs ▶ Give 1 tablet Paracetamol (Adult-500mg) ▶ Try to identify the underlying cause ▶ Accompanies a fever; stiff neck; rash; mental confusion; loss of consciousness; seizures; <ul style="list-style-type: none"> ○ Treat as per fever SoPs ▶ Changes in vision, such as blurring or seeing halos around lights; dizziness; reddened eye: <ul style="list-style-type: none"> ○ Refer to higher facility ▶ Weakness or paralysis, such as in the arms or legs; loss of balance; numbness; or difficulty speaking or any other facial weakness ▶ Refer to higher facility immediately

Common Medical Emergencies	Management in the Community	Management at Health and wellness Centre
Shortness of breath	<ul style="list-style-type: none"> ▶ Adopt a comfortable position for breathing (e.g. propped up) ▶ Ensure that the room is well ventilated, loosen patient's clothing ▶ Remove the patient from any polluted setting (e.g. smoke etc.) ▶ Seek medical attention if symptoms worsen, can't get enough breath, chest pain or tightness, wheezing etc. ▶ If known asthmatic- administer bronchodilators, inhalers etc. ▶ If the patient is a known case of chronic cardiac condition or respiratory medication and has missed daily medication- administer missed drugs. ▶ Talk to physician and take advice and seek medical attention directly 	<ul style="list-style-type: none"> ▶ Adopt a comfortable position for breathing (e.g. propped up) ▶ Administer oxygen ▶ Management of the cause (e.g. bronchodilators; nebulisation for suspected asthma) or Diuretics in case of Congestive Heart Failure (only by Medical Officer) ▶ Refer on priority to PHC with MO
Altered mental status	<ul style="list-style-type: none"> ▶ Place the unresponsive patient in the recovery position after excluding possibility of spine trauma ▶ Seek early medical advice 	<ul style="list-style-type: none"> ▶ Assess & manage ABCDE. ▶ Place the unresponsive patient in the recovery position if the possibility of spine trauma is excluded. ▶ Check for airway patency and clear the mouth. Do not put anything into the patient's mouth, except an oral airway, if required.

Common Medical Emergencies	Management in the Community	Management at Health and wellness Centre
		<ul style="list-style-type: none"> ▶ Various airway adjuncts, including oral and nasal airways, suction, and oxygen can be used. ▶ Start Monitoring vital functions, Put on IV line & Start Oxygen (if required) ▶ Provide comfort, calm, and reassurance to the patient.
Stroke	Seek medical advice without delay	<ul style="list-style-type: none"> ▶ Identify stroke by FAST, which is an acronym for Facial Drooping, Arm weakness, Speech difficulties and Time to call emergency services. ▶ Start Monitoring vital functions, ensure patent IV line & start Oxygen (if required) Refer to higher centre
Animal bites (except Snakebite)	<ul style="list-style-type: none"> ▶ Wash the bite area with soap and water. ▶ If the bite is bleeding, put pressure on it using sterile gauze or a clean cloth. ▶ Cover the area with a bandage/clean cloth. In case of dog bite, leave the wound open after washing. If it bleeds profusely, apply pressure gauzing, but, avoid bandaging. Seek medical advice. 	<ul style="list-style-type: none"> ▶ Wash the bite area with soap and water. If the bite is bleeding, put pressure on it using sterile gauze or a clean cloth. ▶ Cover the area with a bandage/clean cloth. In case of dog bite, leave the wound uncovered after washing. If it bleeds profusely, apply pressure gauzing, but avoid bandaging.

Common Medical Emergencies	Management in the Community	Management at Health and wellness Centre
		<ul style="list-style-type: none"> ▶ Tetanus prophylaxis; analgesics; antibiotics as needed ▶ Administer Anti-rabies vaccine, as indicated Refer to higher facility for further management (e.g. Rabies immunoglobulin)
Near Drowning	<ul style="list-style-type: none"> ▶ Call ambulance for referral to higher centre ▶ Remove person from the source of water, ▶ Assess for breathing, if not breathing or not showing any movement: begin hands only CPR (if untrained) and CPR as per BLS algorithm (if trained) ▶ Prevent hypothermia- Remove wet clothes and cover with blanket ▶ Minimize neck movement because the victim might have neck injury ▶ Remove visible/obvious Foreign Body Seek medical advice 	<ul style="list-style-type: none"> ▶ Follow ABCDE approach for assessment and management <p>Referral after initial stabilization, to appropriate facility</p>
Trauma/ Injuries	<ul style="list-style-type: none"> ▶ Seek medical advice ▶ Ensure scene safety for self and victim- Remove from hazard ▶ Minimize movement of the victim, place in supine position 	<ul style="list-style-type: none"> ▶ HABCDE approach for assessment and management ▶ Haemorrhage control: direct pressure, pressure dressing, tourniquet or pressure packing

Common Medical Emergencies	Management in the Community	Management at Health and wellness Centre
	<ul style="list-style-type: none"> ▶ Immobilize the fractured limb (Temporary splintage) if fracture is suspected ▶ Apply direct pressure to stop bleeding, as suspected/ ▶ In case of copious bleeding-tourniquet may be used by those who have adequate training ▶ Avoid taking any new medication without prescription of doctor. ▶ Awareness about side effects of the drugs if taken without prescription. ▶ If previous history of reaction, avoid any self-medication. In case of sudden unconsciousness, breathlessness or any abnormal swelling followed by any medication, immediately remove any obstruction in airway, raise the legs, call for help and ensure transportation of the patient to the nearest health facility. 	<ul style="list-style-type: none"> ▶ Immobilize, if cervical injury is suspected. ▶ Airway ▶ Breathing ▶ Circulation: IV/IO line, permissive hypotension if internal haemorrhage suspected ▶ Pelvic binder, Spine board, neck stabilization for transfer ▶ If impact on injury is high refer to higher centre and obtain tele consultation before considering discharge (patient may be stable in spite of ongoing internal bleed) ▶ If mild injury Initial management of the specific cause (e.g. suturing of clean wounds)
Anaphylaxis	Due to drugs, food or insect bites	<ul style="list-style-type: none"> ▶ ABC approach for assessment and management ▶ A: Airway and Adrenaline IM (NOT IV or SC) ▶ B: bronchodilator, oxygen ▶ C: IV/IO line: saline (RL) bolus

Common Medical Emergencies	Management in the Community	Management at Health and wellness Centre
		<ul style="list-style-type: none"> ▶ D and E: stop the drug, remove the offending agent. ▶ Other treatment: hydrocortisone, Famotidine and Benadryl IV ▶ Ask for H/O of exposure to allergen or sudden onset itching/ skin rash/mucosal changes. Referral after initial stabilization, to appropriate facility
Snake Bite/ Scorpion	<ul style="list-style-type: none"> ▶ Look for obvious evidence of a bite (fang puncture marks, bleeding, swelling of the bitten part etc.). However, in krait bite no local marks may be seen. ▶ Reassure the patient (as around 70% of all snakebites are from non-venomous species) ▶ Immobilize the limb in the same way as a fractured limb (but do NOT block the blood supply or apply pressure) ▶ Arrange transport of the patient to medical care as quickly, safely and passively as possible by vehicle ambulance (toll free no. 102/108/etc.), boat, bicycle, motorbike, stretcher etc. ▶ Remove shoes, rings, watches, jewelry and tight clothing from the bitten area as they can act as a tourniquet when swelling occurs. ▶ Leave the blisters undisturbed. 	<ul style="list-style-type: none"> ▶ ABC ▶ Airway ▶ Breathing: Oxygen ▶ Circulation: Secure IV/ IO line in HWC-PHC itself and use normal saline to keep IV access open. ▶ Start fluids, if patient is in shock. ▶ Draw 20 ml blood for Whole Blood Clotting Time and send results to higher centre (if patient has already left the HWC-PHC) ▶ Do it RIGHT ▶ Evaluate and monitor for sign of poisoning, toxicity and early administration of anti-venom.

Common Medical Emergencies	Management in the Community	Management at Health and wellness Centre
	<p>Do it RIGHT</p> <ul style="list-style-type: none"> ▶ R: Reassure the patient ▶ 70% of snakebites are from non-venomous species ▶ Only 50% of bites by venomous species actually envenomate the patient ▶ I: Immobilize the injured extremity ▶ Splint as you would for a fracture ▶ No tourniquets or ligatures: they do not help and can do harm ▶ G, H: Get to the Hospital immediately! ▶ Traditional remedies have no proven benefit ▶ Don't waste valuable time: medical treatment is most effective when given early ▶ T: Tell the doctor about any symptoms you have developed 	<ul style="list-style-type: none"> ▶ Provide first-aid measures and supportive measures immediately. ▶ If anti venom serum not available refer immediately to higher health facility. ▶ If it is a PHC, or higher level of facility, where a medical officer is available, then, administer ASV therapy as soon as there is evidence of envenomation. Monitor as per the Snake bite protocols. ▶ If it is a HWC-HSC, then, after providing first aid, immediately refer to higher centre where medical officer and also ASV is available.
<p>Heat Illnesses (Heat cramps/heat exhaustion/heat stroke)</p>	<ul style="list-style-type: none"> ▶ Awareness generation amongst community for prevention against heat illness: <ul style="list-style-type: none"> ○ Wear loose fitting, light coloured clothes in summer, cover head. ○ Avoid direct sun heat (especially during 11 am to 3 pm) ○ Rest in shaded places. Take frequent mini breaks from work. 	<ul style="list-style-type: none"> ▶ In addition to all the step as mentioned in the community level, some actions to be done at HWC level can be: ▶ ABCD approach for assessment and management.

Common Medical Emergencies	Management in the Community	Management at Health and wellness Centre
	<ul style="list-style-type: none"> ○ Avoid vigorous physical activities in hot and humid weather. ○ Drink plenty of fluids and water intake.- stay hydrated. ○ Avoid coffee, tea beverage and other drinks containing caffeine. ▸ If the person is affected by heat, it can be in the form of heat rash, heat cramp, heat exhaustion, heat syncope and heat stroke. ▸ Recognize the signs of heat stroke, heat rash or heat cramps such as weakness, dizziness, headache, nausea, sweating and seizures. Distribute pamphlets and other awareness material to the community. ▸ After recognizing the exact heat wave illness, the following preventive/first aid steps can be undertaken at community level: <ul style="list-style-type: none"> ○ Heat Rash- Take shower using soap to remove oils that may block pores preventing the body from cooling naturally. If blisters occur, apply dry and Sterile dressings and seek medical attention. ○ Heat cramps- <ul style="list-style-type: none"> ● Move to cool or shaded place. 	

Common Medical Emergencies	Management in the Community	Management at Health and wellness Centre
	<ul style="list-style-type: none"> • Apply firm pressure on cramping muscles or gently massage to relieve spasm. • Give sips of water. • If nausea occurs, discontinue. ○ Heat exhaustion: <ul style="list-style-type: none"> • Get victim to lie down in a cool place. • Loosen clothing. • Apply cool, wet cloth. • Fan the victim. • Give sips of water slowly and if nausea occurs discontinue • If vomiting occurs, seek immediate medical attention, call 108 and 102 for ambulance. ○ Heat Stroke- it is a severe medical condition: <ul style="list-style-type: none"> • Arrange for ambulance or take the patient to the hospital, as delay can be fatal. • Start cool bath or sponging to reduce body temperature. Use extreme caution. • Remove clothing. Try to keep patient cool by fanning. • DO NOT GIVE FLUIDS ORALLY if the person is not conscious. 	

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Abbreviations

S. No.	Abbreviation	
1.	ABCDE	Airway, Breathing, Circulation, Disability, Exposure
2.	ACLS	Advanced Cardiovascular Life Support
3.	AED	Automated External Defibrillator
4.	AF	ASHA Facilitator
5.	ALS	Advanced Life support
6.	AMBU	Artificial Manual Breathing Unit
7.	AMIs	Acute myocardial infarctions
8.	ANM	Auxiliary Nurse Midwife
9.	ASHA	Accredited Social Health Activists
10.	ASV	Anti-Snake Venom
11.	AVPU	Alert, Voice, Pain, Unresponsive
12.	AWW	Anganwadi Worker
13.	BGL	Blood Glucose Levels
14.	BLS	Basic Life Support
15.	BP	Blood Pressure
16.	BSA	Burns of Special Areas
17.	CAB	compressions, airway, breathing
18.	CCF	Congestive Cardiac Failure
19.	CHC	Community Health Centre

S. No.	Abbreviation	
20.	CHO	Community Health Officers
21.	CHW	Community Health workers
22.	CMO	Chief Medical Officer
23.	COVID-19	Corona Virus Disease-19
24.	CPR	Cardio-Pulmonary Resuscitation
25.	CRT	Capillary Refill Time
26.	CVAs	Cerebrovascular accidents
27.	DALYs	disability-adjusted life-years
28.	DH	District Hospital
29.	DNA	Deoxyribonucleic Acid
30.	DPR	Detailed Project Report
31.	ECG	Electrocardiogram
32.	ECG	Electrocardiogram
33.	EMT	Emergency Medical Technician
34.	FAST	Focused Assessment with Sonography in Trauma
35.	FGD	Focussed Group Discussion
36.	FLWs	Front line workers
37.	FRU	First Referral Unit
38.	GBD	Global Burden of Disease
39.	GCS	Glasgow Coma Scale
40.	GDP	Gross Domestic Product
41.	GoI	Government of India
42.	GRS	Grievance Readressal System
43.	H/O	History of
44.	HR	Human Resource
45.	HWC	Health & Wellness Centre
46.	HWC-PHC	Health & Wellness Centre- Primary Health Centre
47.	HWC-SC	Health & Wellness Centre- Sub centre
48.	HWC-SHC	Health & Wellness Centre

S. No.	Abbreviation	
49.	IDSP	Integrated Disease Surveillance Programme
50.	IEC	Information Education Communication
51.	IV	Intravenous
52.	IV/IO	Intra-venous/ Intra-osseous line
53.	MD- NHM	Mission Director- National Health Mission
54.	MLC	Medico legal cases
55.	MLP	Mid-Level Providers
56.	MLR	Medico legal report
57.	MO	Medical Officer
58.	MoHFW	Ministry of Health & Family Welfare
59.	MPW	Multi-Purpose Workers
60.	MPW-M	Multipurpose Worker-Male
61.	NCC	National Cadet Corps
62.	NHSRC	National Health Systems Resource Centre
63.	NREGA	National Rural Employment Guarantee Act
64.	NS	Normal Saline
65.	OPD	Out Patient Department
66.	ORS	Oral Rehydration Therapy
67.	PHC	Primary Health Centre
68.	PIP	Program Implementation Plan
69.	PPE	Personal Protective Equipment
70.	PPH	Post- Partum Haemorrhage
71.	PR	Per-Rectally
72.	PRI	Panchayati Raj Institutions
73.	RDT	Rapid Diagnostic Test
74.	RL	Ringers Lactate
75.	RTA	Road Traffic Accident
76.	RTIs	Road Traffic Injuries

S. No.	Abbreviation	
77.	SAMPLE	Signs & Symptoms, Allergies, Medications, Past Medical History, Last Oral Intake, Events surrounding the injury or illness
78.	SBCC	Social Behaviour Change Communication
79.	SC	Sub Centre
80.	SHC	Sub- Health Centre
81.	SHC-HWC	Sub Health Centre - Health and Wellness centre
82.	SN	Staff Nurse
83.	SOP	Standard Operating Procedure
84.	SOPs	Standard operating protocols
85.	SpO2	Partial Pressure of Oxygen
86.	TBSA	Total Body Surface Area
87.	TOR	Terms of Reference
88.	ULB	Urban Local Bodies
89.	UPHC	Urban Primary Health Centre
90.	VHSND	Village Health Sanitation & Nutrition Days



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