

A photograph of a man with a beard and a white shirt pushing a stretcher. On the stretcher lies a person with a white bandage on their head and a cast on their arm, covered with a teal blanket. The background shows a paved path and green trees.

Integrated emergency, critical and operative care for Universal Health Coverage

Lee Wallis

Lead: Emergency & Critical Care
Clinical Services and Systems



FIFTY-NINTH WORLD HEALTH ASSEMBLY

WHA59.27

Agenda item

27 May 2006

Emergency preparedness and response

SIXTIETH WORLD HEALTH ASSEMBLY

WHA60.22

Agenda item 12.14

23 May 2007

Health systems: emergency-care systems

128th Session

EB128.R10

Agenda item 4.5

22 January 2011

Strengthening national health emergency and disaster management capacities and resilience of health systems

SIXTY-EIGHTH WORLD HEALTH ASSEMBLY

WHA68.15

Agenda item 17.1

26 May 2015

Strengthening emergency and essential surgical care and anaesthesia as a component of universal health coverage

SEVENTY-SECOND WORLD HEALTH ASSEMBLY

WHA72.16

Agenda item 12.9

28 May 2019

Emergency care systems for universal health coverage: ensuring timely care for the acutely ill and injured



**World Health
Organization**

SEVENTY-SIXTH WORLD HEALTH ASSEMBLY
Agenda item 13.1

WHA76.2
30 May 2023

**Integrated emergency, critical and operative care
for universal health coverage and protection
from health emergencies¹**



**World Health
Organization**

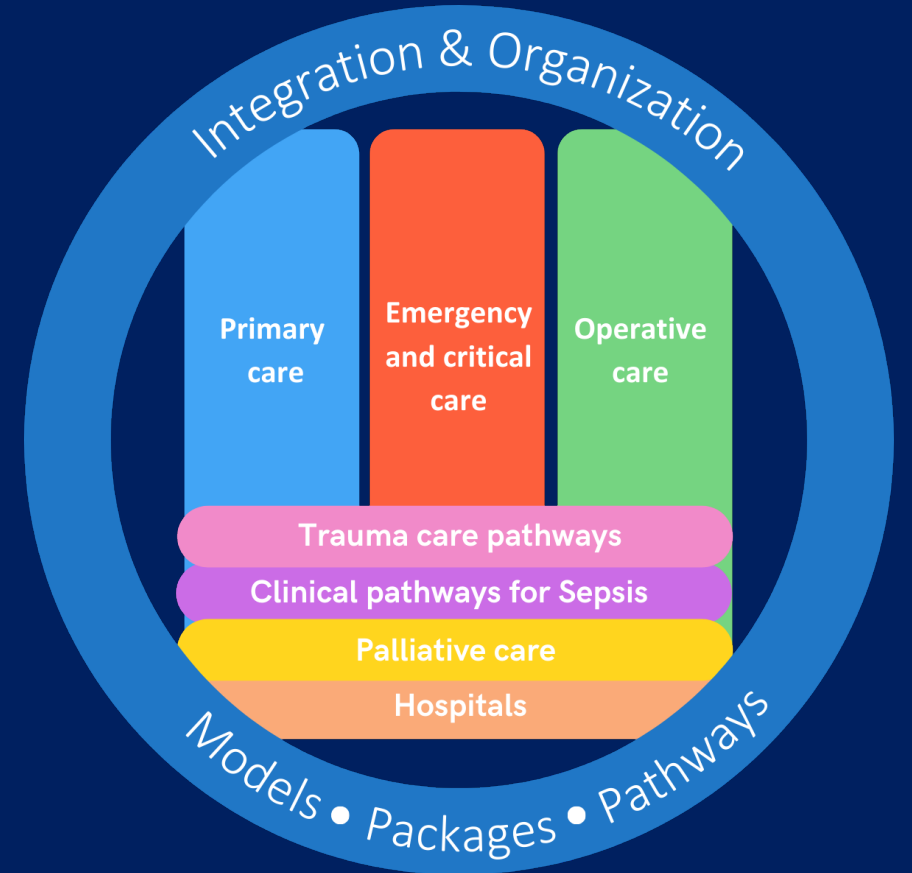
SEVENTY-SEVENTH WORLD HEALTH ASSEMBLY
Agenda item 11.1

WHA77(8)
1 June 2024

**Development of a global strategy
and action plan for integrated emergency,
critical and operative care, 2026–2035**

Clinical Services & Systems - CSY

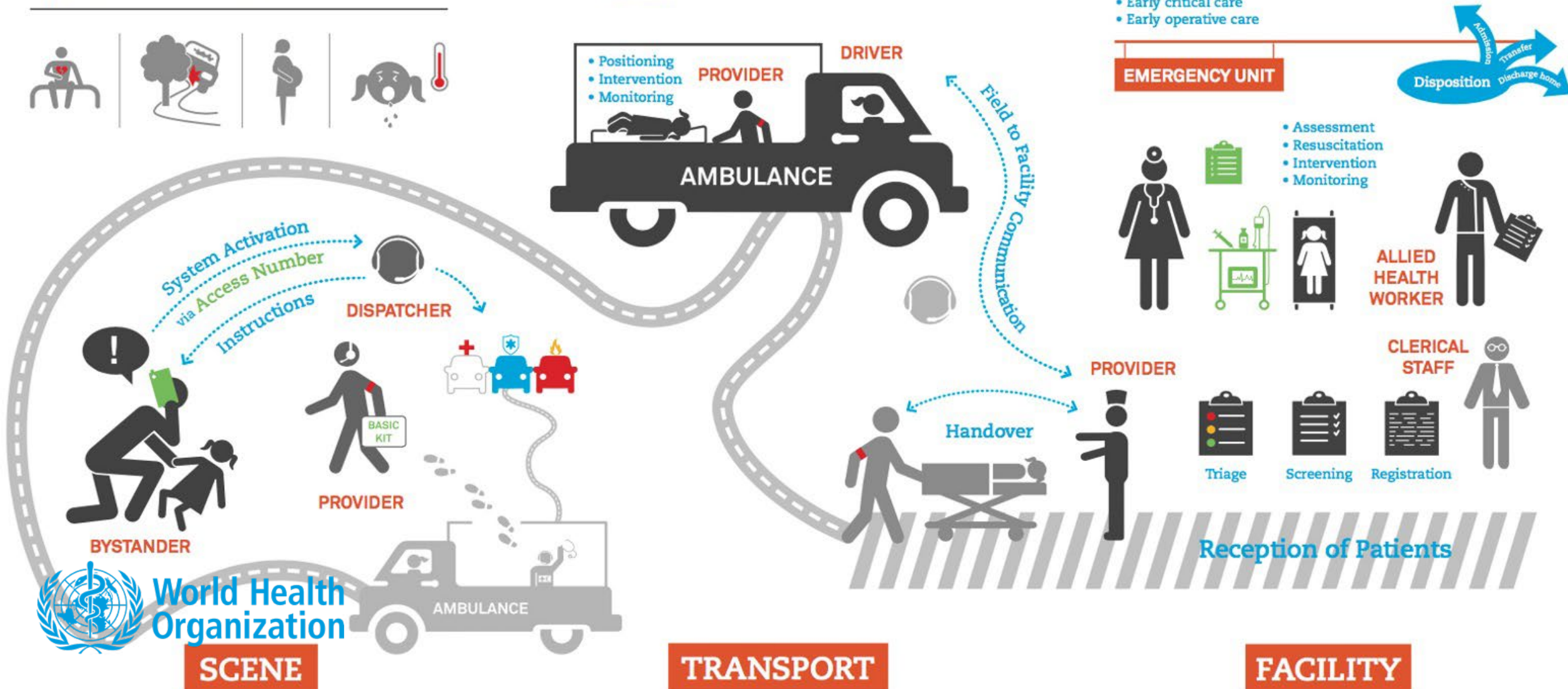
- We integrate WHO's work on promotion, prevention and treatment to support country implementation of primary, emergency, critical and operative care, emphasizing people's health needs and **a concrete approach to packages, pathways, planning and delivery.**
- CSY develops and supports country implementation of practical resources that empower clinical decision-making and processes, sustained by integrated national and sub-national planning.



EMERGENCY CARE SYSTEM FRAMEWORK

All around the world, acutely ill and injured people seek care every day. Frontline providers manage children and adults with injuries and infections, heart attacks and strokes, asthma and acute complications of pregnancy. An integrated approach to early recognition and management saves lives. This visual summary illustrates the essential functions of a responsive emergency care system, and the key human resources, equipment, and information technologies needed to execute them.

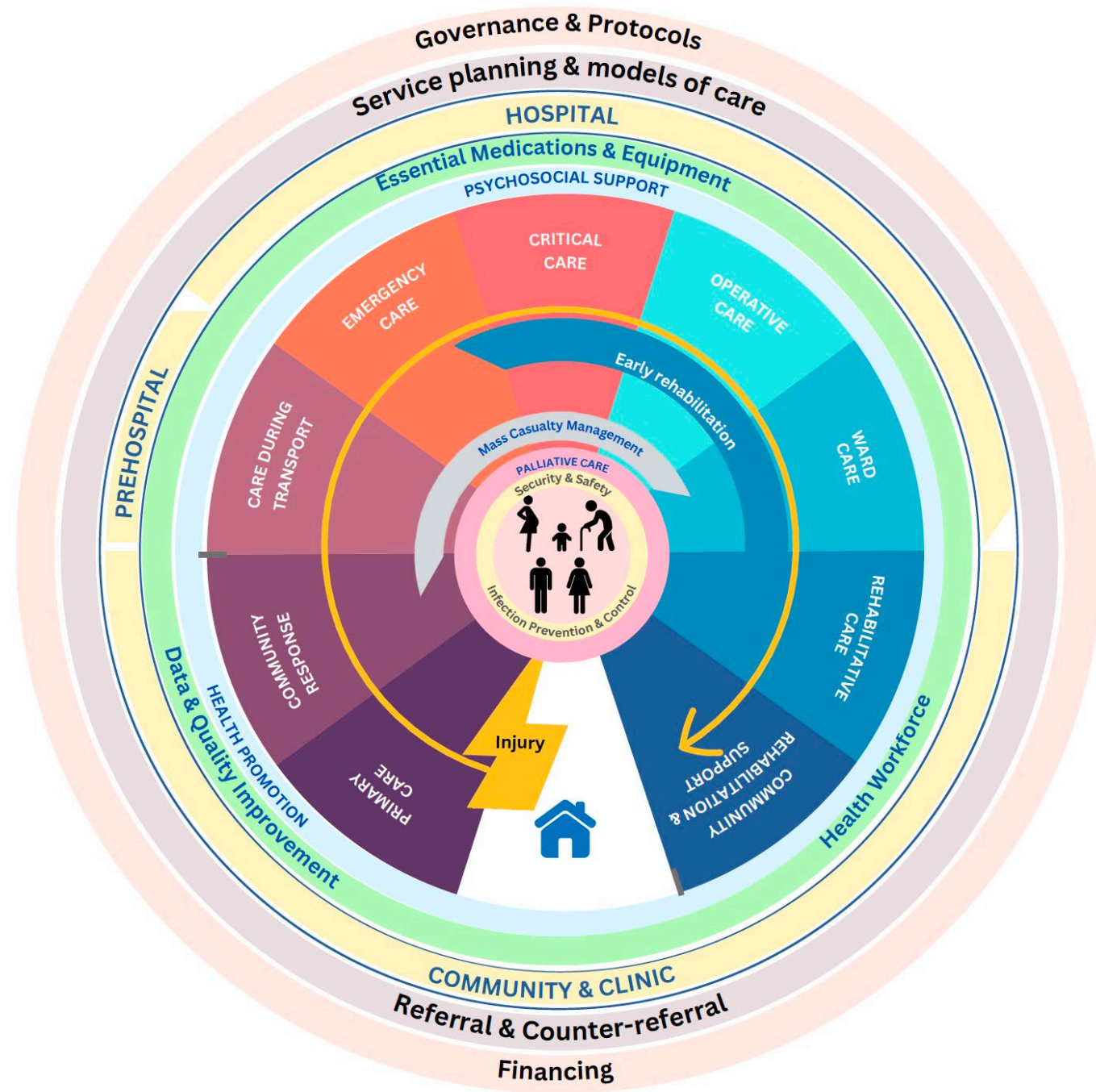
■ HUMAN RESOURCES
 ■ FUNCTIONS
 ■ EQUIPMENT, SUPPLIES, INFORMATION TECHNOLOGIES



SCENE

TRANSPORT

FACILITY



CSY key activities & networks

Areas targeted for priority action

Available tools & resources

Policy & planning

UHC packages

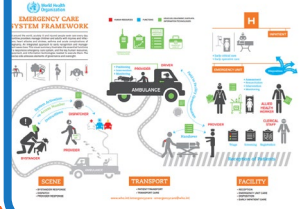


National roadmaps

Models of Care & Pathways

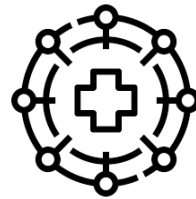
MoC Guidance

Referral/Counter-referral

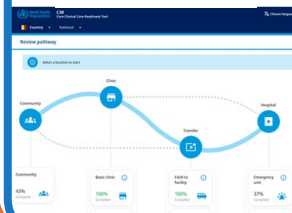
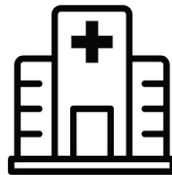


Assessment

System



Facility



Learning programmes

Primary, Emergency, Critical, Operative Care

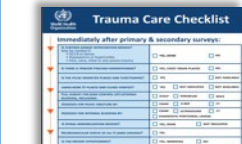


Clinical processes

Triage



Checklists



Quality of clinical care

WHO clinical forms



E-QUIP

WHO Clinical Registry

dhis2

Alliances & Networks (ACAN, GACI, Palliative care WG)

Integrating services into systems



Promoting sound UHC
policy & packages



Designing pathways
to care



Improving clinical
services

UHC Service Package Delivery & Implementation (SPDI) Tool

supports the development of UHC packages that fit country needs



World Health Organization

UHC Packages



Login



Build and implement UHC packages with SPDI.

[Explore UHCC data](#)


[Explore WHO packages](#)

[Contact us](#)



World Health Organization

Skin and hair diseases  

Inflammatory disorders of the skin 


Violence and injury  

Interpersonal violence (see also intimate partner and sexual violence section)  


Injury  

Communicable diseases  


Communicable disease prevention  

Vaccinations 

Neglected tropical diseases  

Dracunculiasis (Guinea worm disease) 

Yaws 

Trypanosomiasis (gambiense and rhodesiense) 

Structured planning & detail to support implementation

Preliminary guidance for a package of

**High-Priority
Health Services for
Humanitarian Response
(H3 Package)**

March 2023



World Health
Organization



HEALTH
CLUSTER

Linking to global
and regional
reference
packages,
including H3

Pathways to care



Foundations of care



Coming soon

Acute care

Acute care is considered all services responsive to life-threatening emergencies, acute exacerbations of chronic illnesses and many health problems that require prompt action. This tool allows a systematic assessment and planning of the provision of acute care services across key locations of the health system.

Join waitlist



Coming soon

Chronic care

Chronic care includes longitudinal care for those conditions which persist over time and require a systematic approach to coordinating health care interventions. This tool assesses the health system capacities to deliver care for chronic disease.

Join waitlist

Specific conditions and hazards



Covid-19

COVID-19 revealed many large gaps in health system's ability to care for acutely ill patients. This tool was developed in 2021 in collaboration with ACT-A partners and piloted in multiple countries and addresses specific clinical capacities for the care of COVID-19 patients.



Coming soon

High Risk Respiratory Pathogen

Preparation and readiness to deliver key clinical services for the next respiratory pandemic is high priority for all countries. Developed in collaboration with the Preparedness and Resilience for Emerging Threats (PRET) initiative, this tool focuses on a country's clinical capacity to respond to high-risk respiratory pathogens with epidemic and pandemic potential.



Sepsis

Sepsis causes over 11 million deaths every year and represents a large burden of disease in all countries. This tool addresses the ability provide care for sepsis at every level of the health system.



Coming soon

Injury

Injuries - both unintentional and violence-related - constitute nearly 8% of all deaths worldwide. This tool addresses a health system's ability to care for the injured from point of injury through rehabilitation.

Initial assessment and resuscitation.

Cancel

Mark the availability

- None Partial Adequate

Reset

Select applicable implementation barriers

- Failure to resuscitate critical patients

Select appropriate actions to address this barrier

- Establish standardised externally validated resuscitation guidelines
- Provide WHO Basic Emergency Care training (includes use of oxygen)
- Training on advanced emergency care (including early critical care)

Custom action name +

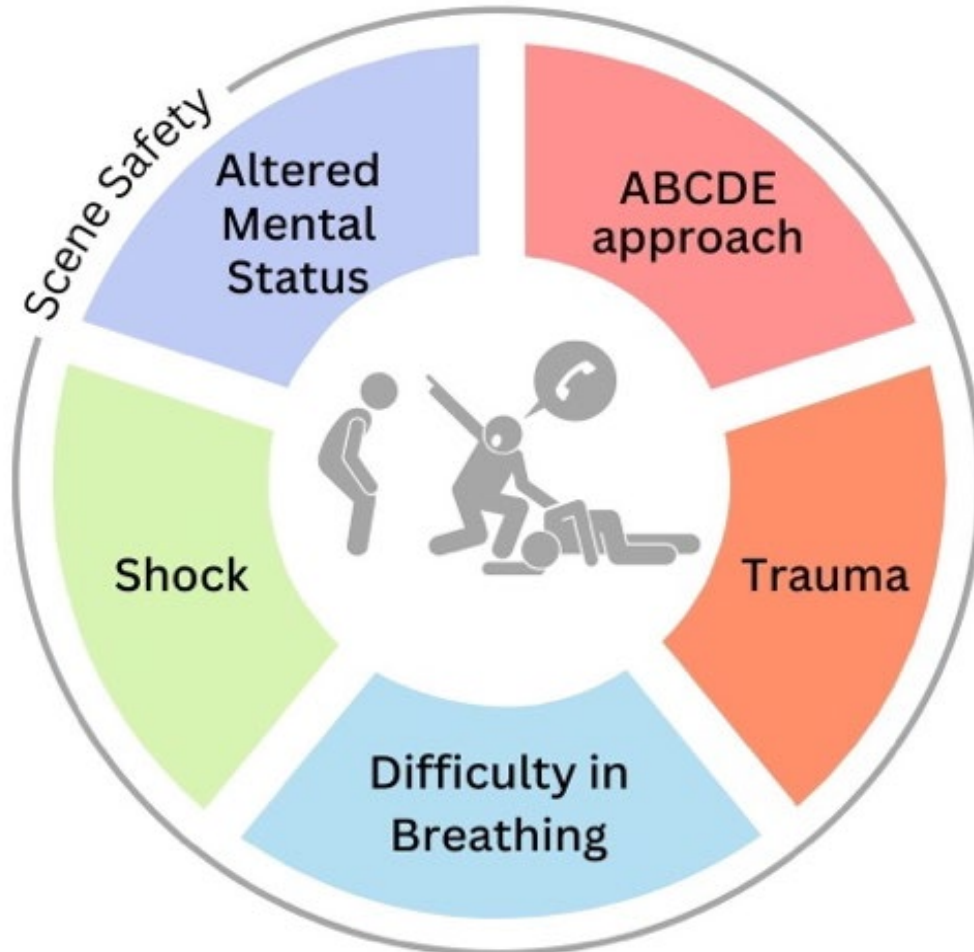
- Lack of equipment for assessment and resuscitation
- Limited pulse oximetry use in EU
- Lack of ability to provide oxygen in the EU

Custom barrier name +



Community First Aid Response

Major bleeding from a wound



SAFETY: STOP. Protect from **HAZARDS**. Get **HELP**.



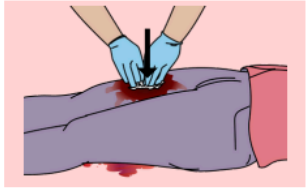
LOOK for **MAJOR BLEEDING** (blood flowing, spraying or pooling). **FIND** the wound. **LIE** patient down.



REMEMBER: If uncontrolled **MAJOR BLEEDING** from a limb with **threat to life** → Apply a **TOURNIQUET** (see Quick Card)



Wear GLOVES.
Use **DIRECT PRESSURE**.
PRESS FIRMLY onto the wound using clean material.
PRESS on the part which is bleeding the most.
Use the patient's hand or your hand to press.
PACK deep, bleeding wounds with clean material.



REMEMBER: DO NOT REMOVE OBJECTS from the wound.
STABILISE and **PRESS** on bleeding **AROUND** the object.



WRAP a bandage around the wound to make a **PRESSURE DRESSING**.
If bleeding comes through the dressing, put more material **OVER** the top and **PRESS**.
ELEVATE any bleeding limbs above chest level.



If bleeding is still uncontrolled and there is a threat to life → Apply a **TOURNIQUET** (see Quick Card).

MOVE the patient quickly to a hospital.
If wound is still bleeding, keep pressing during transport.



If you don't have gloves, cover your hands with plastic bags as a barrier.
Use any clean material for a dressing, such as gauze or clothes.



Lie the patient flat.
Keep the patient warm.
Talk to the patient and keep calm.



Conflict related content



Basic Ambulance Provider Course

- Dispatch of personnel and instructions
- Prehospital assessment & resuscitation
- Communication & destination triage
- Transport patient
- Positioning, Monitoring, Interventions

Module 0



Foundations Course

- Medical Terminology
- Basic Anatomy & Physiology
- Basic Pharmacology

Module 1



Introduction to Prehospital Care

- Introduction to Prehospital Care
- Ambulance Operations
- Provider Basics
- Provider Safety

Module 2



WHO/ICRC Basic Emergency Care Course

- ABCDE Approach and SAMPLE history
- Approach to Trauma
- Approach to Difficulty in Breathing
- Approach to Shock
- Approach to Altered Mental Status

Module 3



Clinical Care: Medical Emergencies

- Clinical Care Protocols
- Medical Emergencies
- Obstetric Emergencies
- Paediatric Emergencies

Module 4



Clinical Care: Trauma and Special Incidents

- Trauma Emergencies
- Mass Casualty Management

























Module 5



Clinical Placements

- Ambulance practicum
- Emergency Unit practicum

Clinical protocols for prehospital care

-  **Ensure scene safety and call for additional resources as needed**
-  **Use Personal Protective Equipment**
-  **Greet the patient**
 - Check responsiveness and determine AVPU
-  **Assess for life-threatening bleeding:**
 - **Control any life-threatening bleeding.** Compress, pack, and apply tourniquet if required
- Immobilize the cervical spine if indicated**
-  **Assess airway:**
 - If signs of airway obstruction:
 - Open airway using jaw thrust
 - Suction
 - Insert OPA or - if no signs of facial trauma - NPA
-  **Assess breathing:**
 - If there is no breathing OR inadequate breathing → Provide bag valve mask ventilations
 - If patient is having difficulty breathing or hypoxia → Administer oxygen, O2 sat (if available)
 - If sucking chest wound → Apply 3-sided dressing
 - If there is a flail chest → control pain and monitor breathing
-  **Assess circulation:**
 - **Reassess and control bleeding.** Compress, pack, and apply tourniquet if required
 - If signs of poor perfusion, refer to **Shock Protocol** after completing this protocol 
-  **If unstable pelvis and concern for pelvic fracture**
 - Perform pelvic binding
-  **Assess pupils:**
 - If unequal → Consider head trauma
-  **Check blood glucose:**
 - If low or unable to check → Administer glucose
-  **Remove all clothing and fully expose for Trauma Secondary Survey**
 - Once done, cover with blanket and keep patient warm
-  **Obtain Vital Signs:** HR, BP, RR, O2 Sat (if available), Temperature, ECG monitor (if available)
- 
 - **Splint any extremity injuries**
 - **Bandage wounds**
-  **If there is an impaled object:**
 - DO NOT remove
 - Stabilize the object in place
-  **For abdominal injuries with visible bowel:**
 - Do not replace it into the body - cover it with sterile moist gauze
-  **For amputations:**
 - Place body part in moist wrap
-  **For snakebites:**
 - Refer to **Poisoning/Overdose protocol** after completing this protocol 
-  **For burns:**
 - Refer to **Burn Protocol** after completing this protocol 
-  **Control pain:**
 - Administer non-opioid analgesic for pain
-  **Transport patient to the closest, most appropriate health facility**
 - If indicated, maintain spinal precautions
 - Always closely monitor the airway in any trauma patient
-  **Reassess frequently, document the patient encounter and hand off to the receiving facility**

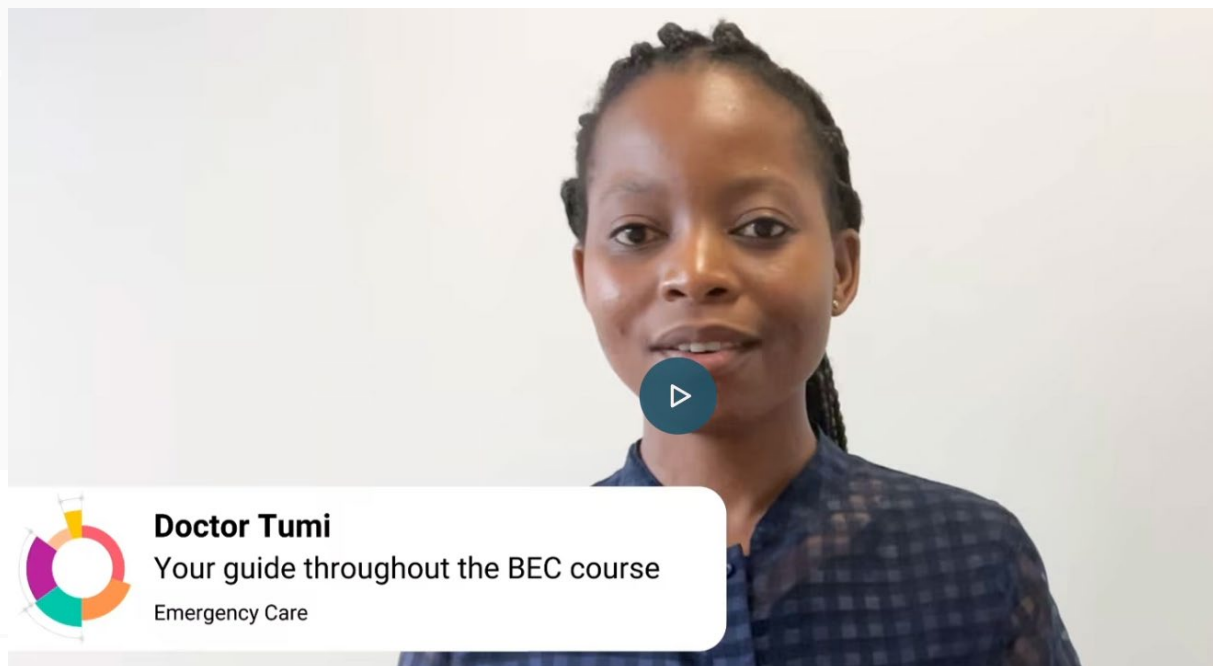
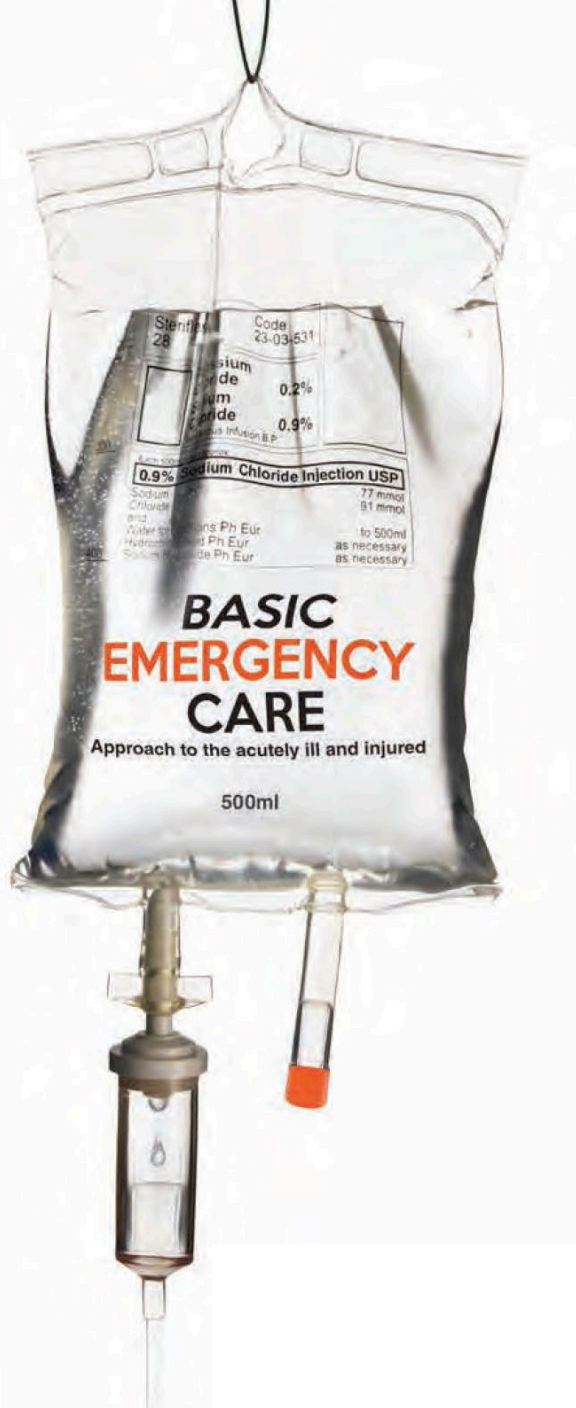
POSSIBLE CAUSES OF SHOCK

POOR PERFUSION DUE TO DILATED BLOOD VESSELS

CONDITION	SIGNS AND SYMPTOMS
Severe infection	<ul style="list-style-type: none">• Fever• Tachycardia• Tachypnoea• May have hypotension• May or may not have obvious infectious source: visible skin infection, cough and crackles in one area of the lungs (often with tachypnoea), burning with urination, urine that is cloudy or foul smelling, or any focal pain in association with fever

DO: MANAGEMENT OF SPECIFIC CONDITIONS

Fever	<ul style="list-style-type: none">• Give fluids and start antibiotics. [See SKILLS] If infectious diarrhoea (like cholera) is suspected, use gloves, aprons and relevant isolation precautions and report it to the local public health agency. If signs of poor perfusion do not improve with fluids, consider rapid handover/transfer.
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Doctor Tumi

Your guide throughout the BEC course

Emergency Care



World Health Organization

WHO/ICRC Basic Emergency Care: Conflict-Related Injuries

OpenWHO

Course is available



Learnings



Discussions



Progress



Certificates



Collab Space



Course Details



Documents



Announcements



Developed by the World Health Organization, International Committee of the Red Cross and the International Federation for Emergency Medicine, the **BEC Extended Modules: Conflict-Related Injuries** support the delivery of quality emergency care for patients with conflict-related trauma, covering penetrating injury, blast injury and burns. These extended modules follow the BEC systematic approach to the initial assessment and management of time-sensitive critical conditions where early intervention saves lives.

Photo credit: WHO



Self-paced



Language: English



Not disease specific

[Enroll me for this course](#)



Advanced Trauma Care Procedures



WHO
Academy

Mass Casualty Management

Learning program

**INTRODUCTION &
MCM PRINCIPLES**



Operative Care at the First Level Hospital

A photograph of surgeons in an operating room. The surgeons are wearing blue scrubs, blue bouffant caps, and white surgical masks. They are focused on a patient who is lying on a table, partially covered with blue drapes. The scene is illuminated by bright surgical lights, creating a clinical and professional atmosphere. The background is dark, emphasizing the surgical team and their work.

1. Organization at first-level hospital
2. Fundamentals of operative care
3. Anaesthesia and post-operative care
- 4. Operative care for injury**
5. Obstetric care
6. General Surgery procedures
7. Surgery in children

Surgical Safety Checklist



World Health Organization
A World Alliance for Safer Health Care



Health Topics ▾

Countries ▾

Newsroom ▾

Em

Home / Emergency health kits / Trauma and Emergency Surgery Kit (TESK) 2019

For 50 patients requiring surgical care in emergency situations assuming 2 operations per patient (100 interventions)

WHO trauma and emergency surgery kit (TESK) aims to provide materials and drugs to meet the needs of 50 patients requiring surgical care in emergency

Intended
part of

Before induction of anaesthesia

Before skin incision

Before patient leaves operating room

(with at least nurse and anaesthetist)

(with nurse, anaesthetist and surgeon)

(with nurse, anaesthetist and surgeon)

Has site

Is the

Is the

Is the

Does

Know

Diff

Risk

This cl



Trauma Care Checklist

Immediately after primary & secondary surveys:

IS FURTHER AIRWAY INTERVENTION NEEDED? May be needed if: • GCS 8 or below • Hypoxaemia or hypercarbia • Face, neck, chest or any severe trauma	<input type="checkbox"/> YES, DONE <input type="checkbox"/> NO
IS THERE A TENSION PNEUMO-HAEMOTHORAX?	<input type="checkbox"/> YES, CHEST DRAIN PLACED <input type="checkbox"/> NO
IS THE PULSE OXIMETER PLACED AND FUNCTIONING?	<input type="checkbox"/> YES <input type="checkbox"/> NOT AVAILABLE
LARGE-BORE IV PLACED AND FLUIDS STARTED?	<input type="checkbox"/> YES <input type="checkbox"/> NOT INDICATED <input type="checkbox"/> NOT AVAILABLE
FULL SURVEY FOR (AND CONTROL OF) EXTERNAL BLEEDING, INCLUDING:	<input type="checkbox"/> SCALP <input type="checkbox"/> PERINEUM <input type="checkbox"/> BACK
ASSESSED FOR PELVIC FRACTURE BY:	<input type="checkbox"/> EXAM <input type="checkbox"/> X-RAY <input type="checkbox"/> CT
ASSESSED FOR INTERNAL BLEEDING BY:	<input type="checkbox"/> EXAM <input type="checkbox"/> ULTRASOUND <input type="checkbox"/> CT <input type="checkbox"/> DIAGNOSTIC PERITONEAL LAVAGE
IS SPINAL IMMOBILIZATION NEEDED?	<input type="checkbox"/> YES, DONE <input type="checkbox"/> NOT INDICATED
NEUROVASCULAR STATUS OF ALL 4 LIMBS CHECKED?	<input type="checkbox"/> YES
IS THE PATIENT HYPOTHERMIC?	<input type="checkbox"/> YES, WARMING <input type="checkbox"/> NO
DOES THE PATIENT NEED (IF NO CONTRAINDICATION):	<input type="checkbox"/> URINARY CATHETER <input type="checkbox"/> NASOGASTRIC TUBE <input type="checkbox"/> CHEST DRAIN <input type="checkbox"/> NONE INDICATED

Before team leaves patient:

HAS THE PATIENT BEEN GIVEN:	<input type="checkbox"/> TETANUS VACCINE <input type="checkbox"/> ANALGESICS <input type="checkbox"/> ANTIBIOTICS <input type="checkbox"/> NONE INDICATED
HAVE ALL TESTS AND IMAGING BEEN REVIEWED?	<input type="checkbox"/> YES <input type="checkbox"/> NO, FOLLOW-UP PLAN IN PLACE
WHICH SERIAL EXAMINATIONS ARE NEEDED?	<input type="checkbox"/> NEUROLOGICAL <input type="checkbox"/> ABDOMINAL <input type="checkbox"/> VASCULAR <input type="checkbox"/> NONE

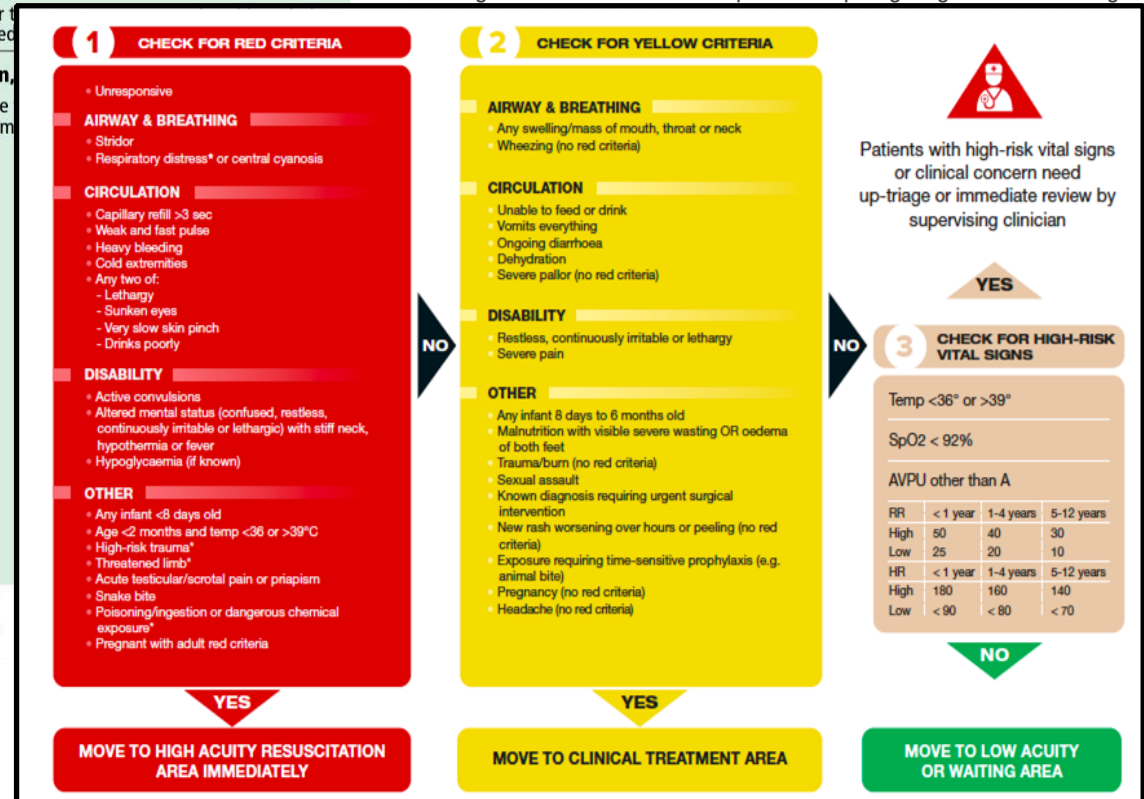
Nurse Verbally Confirms:

- The name of the procedure
- Completion of instrument, sponge and needle counts
- Specimen labelling (read specimen labels aloud, including patient name)
- Whether addressed

To Surgeon,

- What are management

Revised 1 / 2009



Trauma Care Checklist

Adapted for Mass Casualty Incidents

Immediately after primary and secondary surveys:

Full survey for (and control of) external bleeding including:	<input type="checkbox"/> LIMBS <input type="checkbox"/> SCALP	<input type="checkbox"/> PERINEUM <input type="checkbox"/> BACK
Is further airway intervention needed ? May be needed if: • GCS 8 or below • Hypoxaemia or hypercarbia • Face, neck, chest or any severe trauma	<input type="checkbox"/> YES, DONE	<input type="checkbox"/> NO
Is there a penetrating wound to the chest or high risk of tension pneumo-haemothorax ?	<input type="checkbox"/> YES, CHEST DRAIN PLACED	<input type="checkbox"/> NO
Is the pulse oximeter placed and functioning ?	<input type="checkbox"/> YES, DONE	<input type="checkbox"/> NOT AVAILABLE
Large bore IV placed and fluids started ?	<input type="checkbox"/> YES, DONE	<input type="checkbox"/> NOT INDICATED <input type="checkbox"/> NOT AVAILABLE
Clinical evidence of internal bleeding ?	<input type="checkbox"/> YES, RECORDED	<input type="checkbox"/> NO
Is pelvic immobilization needed ?	<input type="checkbox"/> YES, DONE	<input type="checkbox"/> NOT INDICATED
Limb fractures immobilized and neurovascular status of all 4 limbs checked ?	<input type="checkbox"/> YES, DONE	
Is spinal immobilization needed ?	<input type="checkbox"/> YES, DONE	<input type="checkbox"/> NOT INDICATED
Is the patient hypothermic ?	<input type="checkbox"/> YES, WARMING	<input type="checkbox"/> NO
Does the patient need (if no contraindication):	<input type="checkbox"/> URINARY CATHETER <input type="checkbox"/> CHEST DRAIN	<input type="checkbox"/> NG TUBE <input type="checkbox"/> NOT INDICATED

Before team leaves patient:

Does the patient need: (administer now if available or mark as needed on the referral form)	<input type="checkbox"/> TETANUS VACCINE <input type="checkbox"/> ANTIBIOTICS	<input type="checkbox"/> ANALGESICS <input type="checkbox"/> NONE INDICATED
Patient documentation completed ?	<input type="checkbox"/> YES, DONE	
Transfer documentation completed ?	<input type="checkbox"/> YES, DONE	

MASS CASUALTY MANAGEMENT LEARNING PROGRAMME

Guide | MASS CASUALTY PREPAREDNESS AND RESPONSE IN EMERGENCY UNITS

Version 20220501



What is the impact of WHO tools on injury outcomes?

Prospective study at 17 district hospitals: >35,000 patients

Uganda 2 hospitals

Nepal 7 hospitals

Zambia 8 hospitals

- Injury
- Asthma
- Postpartum haemorrhage
- Diarrhoea (<5 years)
- Pneumonia
- DKA

Condition specific mortality reduction

Injury

48.5%



Asthma

47.8%



Pneumonia

44.1%



Diarrhoea

(under 5)

73.8%



CSY key activities & networks

POLICY & PLANNING

- UHC Service Planning Delivery & Implementation Tool
- National Strategic Action Roadmap
- Country sharing of legislation

MODELS OF CARE

- Models of Care Guidance
- Referral/Counter-referral tools

ASSESSMENT

System level

- ECO System Assessment
- Core Clinical Care Readiness Tool
- Prehospital Emergency Assessment Tool

Facility Level

- Hospital Emergency Assessment Tool - ECO Care
- Primary care service assessment

LEARNING PROGRAMMES

Courses

- Integrated Management of Primary and Acute Care Training (IMPACT)
- Community First Aid Response
- Basic Ambulance Provider
- Basic Emergency Care
 - Trauma and Conflict-Related Injury Modules
- Basic Critical Care
- Emergency Unit Management
- Emergency Care Toolkit Implementation
- Mass Casualty Management
- Operative Care at the First Level Hospital
- Trauma Operative Care
- Sepsis Learning Program
- WHO Clinical Registry Training

NETWORKS & ALLIANCES

- Acute Care Action Network
- Palliative Care Working Group
- Global Alliance for Care of the Injured

CLINICAL PROCESSES

Facility Based Care

- Interagency Integrated Triage Tool
- Resuscitation Area Designation
- Emergency Care Checklists
- Critical Care Aide Memoires
- Safe Surgery Checklist
- Primary Care Checklist
- Essential Resources for Emergency and Critical Care

Prehospital

- Standards & protocols
- Clinical protocols
- Essential resources for care
- Reference manual for medical control

QUALITY OF CLINICAL CARE

- Standardized Clinical Forms:
 - Prehospital, emergency and critical care
- WHO Clinical Registry
 - Emergency & operative care, injury
 - Upcoming: Critical care and sepsis
- Trauma Care Quality Improvement Program
- Establishing Quality Improvement Programs
- Hospital Solutions Hub



**World Health
Organization**

**SEVENTY-SIXTH WORLD HEALTH ASSEMBLY
Agenda item 13.1**

**WHA76.2
30 May 2023**

**Integrated emergency, critical and operative care
for universal health coverage and protection
from health emergencies¹**



**World Health
Organization**

**SEVENTY-SEVENTH WORLD HEALTH ASSEMBLY
Agenda item 11.1**

**WHA77(8)
1 June 2024**

**Development of a global strategy
and action plan for integrated emergency,
critical and operative care, 2026–2035**

ECO professional society consultations underway (+/- 20 planned)

Regional consultations to follow

Then MS inputs

Indicators under development

For more information:

Integrated
emergency, critical
and operative care



Emergency care
toolkit



Improving care of
the injured

