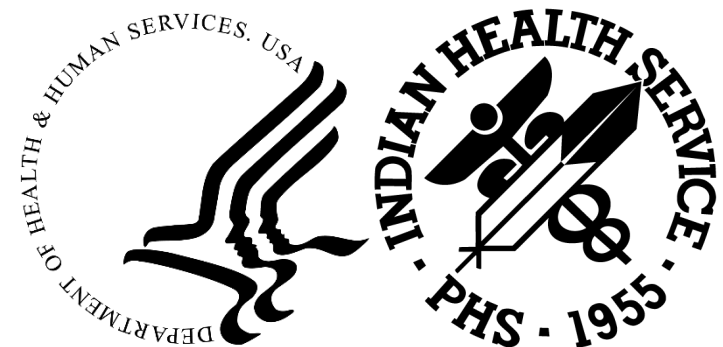


OCPHI Tools and Strategies for Improving Emergency Care

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OFFICE OF CLINICAL PERFORMANCE AND HEALTH IMPACT



Office of Clinical Performance and Health Impact (OCPHI)

- In May 2023 IHS established the Office of Clinical Performance and Health Impact (OCPHI), reporting to the Chief Medical Officer.
- This office brings together the agency's work on monitoring service delivery and health outcomes, with new foci on Primary Health Care (PHC) strengthening and care integration.
- It will be comprised of:
 - Division of Monitoring and Evaluation
 - Division of Academic Affairs
 - Division of Telehealth
 - Division of Credentialing and Privileging.



Data-driven improvements in clinical practice

The AI/AN population has a disproportionately high burden of injury, both in terms of morbidity and mortality. Some example drivers of this outcome:

1. Geographic barriers to accessing care
2. Financial barriers to accessing care
3. Inadequate prevention mechanisms
4. Inappropriate care delivery

To what extent do poor injury outcomes result from this driver?

And how can we improve it?

OCPHI supports Emergency Care development

1. Clinical Monitoring & Evaluation program – emergency care measures
2. Acute Care Registry
3. Austere Environment Emergency Care Assessment Tool
4. Clinical Practice Guidance



Clinical Monitoring & Evaluation Program

Assessing care along *all* lines of service delivery

- The UHC Compendium is a comprehensive list of the essential services required to provide a population with Universal Health Coverage.
- The compendium is organized using a hierarchical taxonomy.
- IHS is adopting this taxonomy to define its lines of service delivery and ensure that no services are omitted from the Clinical M&E program.

The **UHC COMPENDIUM** includes information on a wide range of health services,



including disease prevention, health promotion, treatment for communicable and noncommunicable diseases, palliative care and rehabilitation.



Want to know more?
Access the website here
www.who.int/universal-health-coverage/compendium



UHCC Categories and Subcategories

Foundations of Care

1. Core functions
2. Integrated approach to common presentations

Reproductive and Sexual Health

3. Pregnancy and birth
4. Sexual health and family planning

Growth, development and aging

5. Nutrition, physical activity and sleep
6. Neonatal, infant, child and adolescent growth and development
7. Congenital anomalies
8. Special considerations in older people
9. Special considerations for life limiting illnesses and serious health related suffering

UHCC Categories and Subcategories

Noncommunicable diseases and mental health

10. Blood disorders (excluding cancers)

11. Cancers

12. Cardiovascular diseases

13. Chronic musculoskeletal disorders

14. Chronic respiratory diseases

15. Digestive diseases (see also communicable disease)

16. Endocrine, metabolic, and autoimmune disorders

17. Genitourinary disorders

18. Mental disorders

19. Child and adolescent mental health

20. Substance use disorders

21. Neurologic disorders

22. Sense organ diseases

23. Skin and hair diseases

24. Overweight and obesity

UHCC Categories and Subcategories

- **Violence and injury**

 - 25. Interpersonal violence

 - 26. Injury

- **Communicable disease**

 - 27. Communicable disease prevention

 - 28. Communicable diseases (excluding NTDs)

 - 29. Neglected tropical diseases

“Every system is perfectly designed to get the results that it does.”

– W. EDWARDS DEMING

Clinical Performance Monitoring in Emergency Care

1. Time to CT in acute stroke
2. Time to thrombolytics in acute stroke
3. Time from Last Known Well to transfer in acute stroke
4. Functional status score at 6 months post-stroke
5. Intravenous thrombolytics for STEMI
6. Time from Symptom Onset to transfer in STEMI
7. Administration of aspirin, oral anti-platelet agents, anticoagulants in STEMI
8. Fluid resuscitation for hypotension in injury
9. Intravenous antimicrobials for sepsis
10. Intravenous fluids for sepsis
11. Initiation of vasopressors for sepsis



Acute Care Registry

What are disease registries?

- Disease registries are data repositories with built-in analytic functions that use case-level data to identify “potentially preventable outcomes”
- Care for certain conditions is highly algorithmic, and therefore amenable to such interventions
- Registries have a demonstrable impact:
 - Khon Kaen hospital in Thailand implemented a trauma registry, formed a Trauma Audit Committee, and undertook corrective actions based on registry analytics
 - Trauma mortality decreased by 30%



Why an “acute care” registry?

- Certain emergency care sensitive conditions share similar fundamental approaches to management (e.g. STEMI and stroke)
- Therefore, the analytics on clinical care for each share similar formulae
 - E.g. Time to thrombolytics calculations are nearly identical
- Combining these conditions into one registry is the most efficient means of advancing data-driven improvements in emergency care in low-resource settings



Acute Care Registry Structure

The Acute Care Registry is divided into condition-specific modules. The first 3 modules being developed are Injury, STEMI, and Stroke.

Each module has the same 4 sections:

1. Prehospital & Transport Care
2. Facility Care
3. Health System, Epidemiology, and Prevention
4. Audit Filters



Acute Care Registry Development

Progress to date:

1. Measures developed for Injury, STEMI, and Stroke
2. Metadata defined for each measure and data element
3. Template notes created to collect data points not already in HER
4. Template notes piloted at 2 sites
5. Several measures have been developed with data visualizations

Next steps:

1. Establish data linkages at the Headquarters level
2. Continue to program data extraction and analytic codes
3. Continue to build data visualizations
4. Develop community of practice for end users



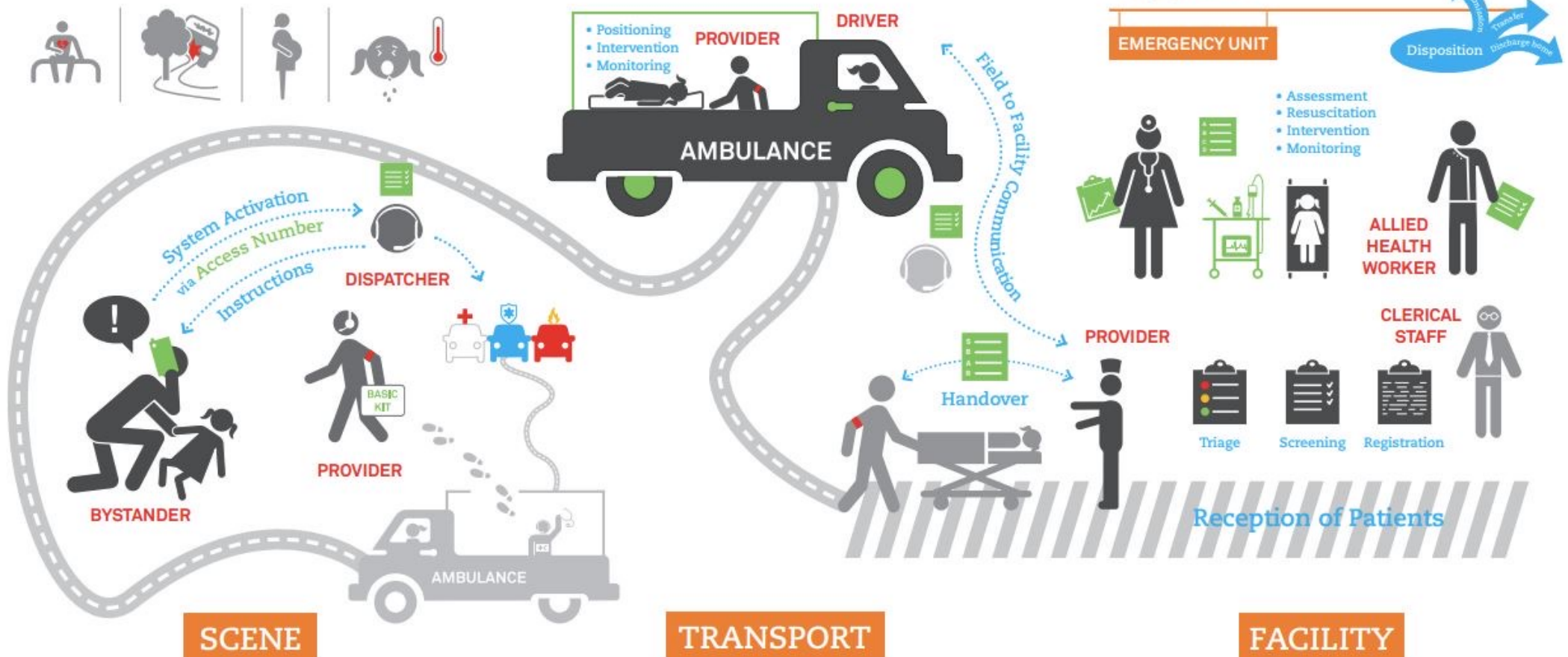
Austere Environment Emergency Care Assessment Tool

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. The reverse side addresses elements of governance and oversight.



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



SCENE

- BYSTANDER RESPONSE
- DISPATCH
- PROVIDER RESPONSE

TRANSPORT

- PATIENT TRANSPORT
- TRANSPORT CARE

FACILITY

- RECEPTION
- EMERGENCY UNIT CARE
- DISPOSITION
- EARLY INPATIENT CARE

What are the key functions a health facility must perform in order to deliver emergency care?

1. Triage
2. Staff Safety, Infection Prevention and Control
3. Primary Survey
 1. Airway
 2. Breathing
 3. Circulation
 4. Disability
 5. Exposure
4. Secondary Survey
5. Referral
6. Ongoing Management (pre-transport)
7. Transport



Sim-based assessment of Facility Functions

Facility Functions		?
Triage		
Staff Safety, Infection Prevention and Control		
Primary Survey	Airway	
	Breathing	
	Circulation	
	Disability	
	Exposure	
Secondary Survey		
Referral protocol		
Ongoing Management (pre-transport)		
Transport		

Undifferentiated Clinical Presentations

1. Injury (BEC, ATLS)
2. Altered Mental Status (BEC)
3. Difficulty in Breathing (BEC)
4. Shock (BEC)
5. Obstetric Emergencies (ALSO)



FACILITY FUNCTIONS		Injury (ATLS, BEC)		
		MASTER	Fall with pelvic and femur fractures with hypovolemic shock	Assault with maxillofacial injury and penetrating chest wound
Primary Survey	Circulation	<ul style="list-style-type: none"> ◆ Procedural: ATLS, TNCC ◆ Human: 1 Physician, 1-2 Nurses ◆ Material (non-pharmacological): Tourniquet, Traction Splint, Pelvic Binder, POCUS (FAST), Pericardiocentesis*, Wound Packing ◆ Material (pharmacological): ACLS medications, TXA, Pressors, IV Fluids, Vitamin K 	<ul style="list-style-type: none"> ◆ Procedural: ATLS, TNCC ◆ Human: 1 Physician, 1-2 Nurses ◆ Material (non-pharmacological): Tourniquet, Traction Splint, Pelvic Binder, POCUS (FAST), Wound Packing ◆ Material (pharmacological): TXA, IV Fluids, Vitamin K 	<ul style="list-style-type: none"> ◆ Procedural: ATLS, TNCC ◆ Human: 1 Physician, 1-2 Nurses ◆ Material (non-pharmacological): POCUS (FAST), Pericardiocentesis ◆ Material (pharmacological): ACLS medications, Pressors, IV Fluids
	Disability	<ul style="list-style-type: none"> ◆ Procedural: ATLS, TNCC ◆ Human: 1 Physician, 2 Nurses (e.g. minimum to roll), 3rd person to roll if c-spine precautions ◆ Material (non-pharmacological): Cervical collar, GCS Reference Card ◆ Material (pharmacological): N/A 	<ul style="list-style-type: none"> ◆ Procedural: ATLS, TNCC ◆ Human: 1 Physician, 2 Nurses (e.g. minimum to roll), 3rd person to roll if c-spine precautions ◆ Material (non-pharmacological): Cervical collar, GCS Reference Card ◆ Material (pharmacological): N/A 	<ul style="list-style-type: none"> ◆ Procedural: ATLS, TNCC ◆ Human: 1 Physician, 2 Nurses (e.g. minimum to roll), 3rd person to roll if c-spine precautions ◆ Material (non-pharmacological): Cervical collar, GCS Reference Card ◆ Material (pharmacological): N/A

FACILITY FUNCTIONS		DEFICIENCIES IDENTIFIED
Triage		Procedural: 3 Human Resource: 0 Material, Non-Pharmacologic: 2 Material, Pharmacologic: 0
Staff Safety, Infection Prevention and Control		Procedural: 2 Human Resource: 0 Material, Non-Pharmacologic: 2 Material, Pharmacologic: 1
Primary Survey	Airway	Procedural: 0 Human Resource: 0 Material, Non-Pharmacologic: 7 Material, Pharmacologic: 0
	Breathing	Procedural: 0 Human Resource: 0 Material, Non-Pharmacologic: 2 Material, Pharmacologic: 1
	Circulation	Procedural: 0 Human Resource: 0 Material, Non-Pharmacologic: 5 Material, Pharmacologic: 0
	Disability	Procedural: 0 Human Resource: 1 Material, Non-Pharmacologic: 0 Material, Pharmacologic: 0
	Exposure	Procedural: 0 Human Resource: 0 Material, Non-Pharmacologic: 2 Material, Pharmacologic: 0

Secondary Survey	Procedural: 1 Human Resource: 0 Material, Non-Pharmacologic: 8 Material, Pharmacologic: 6
Referral protocol	Procedural: 1 Human Resource: 0 Material, Non-Pharmacologic: 0 Material, Pharmacologic: 0
Ongoing Management (pre-transport)	Procedural: 0 Human Resource: 0 Material, Non-Pharmacologic: 3 Material, Pharmacologic: 1
Transport	Procedural: 0 Human Resource: 0 Material, Non-Pharmacologic: 0 Material, Pharmacologic: 0
TOTAL	DEFICIENCIES IDENTIFIED TOTAL : 48 Procedural: 7 Human Resource: 1 Material, Non-Pharmacologic: 31 Material, Pharmacologic: 9

Clinical Practice Guidance

Developing national clinical practice guidance

- OCPHI will coordinate the development of standardized clinical practice guidance.
- This guidance will take the form of policies, pathways, protocols, checklists, and more.
- These products will be housed on the IHS intranet in order to be linked to electronic health record systems.
- OCPHI will engage with the academic community to develop these products



Review of OCPHI Emergency Care Efforts

1. Emergency Care measures in the Clinical Monitoring & Evaluation program
2. Acute Care Registry
3. Austere Environment Emergency Care Assessment Tool
4. Clinical Practice Guidance



Questions/Comments

For offline or follow-up questions

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