



KINGDOM of ESWATINI
Ministry of Health

FIRST RESPONSE TO ROAD CRASHES

The Case of Eswatini

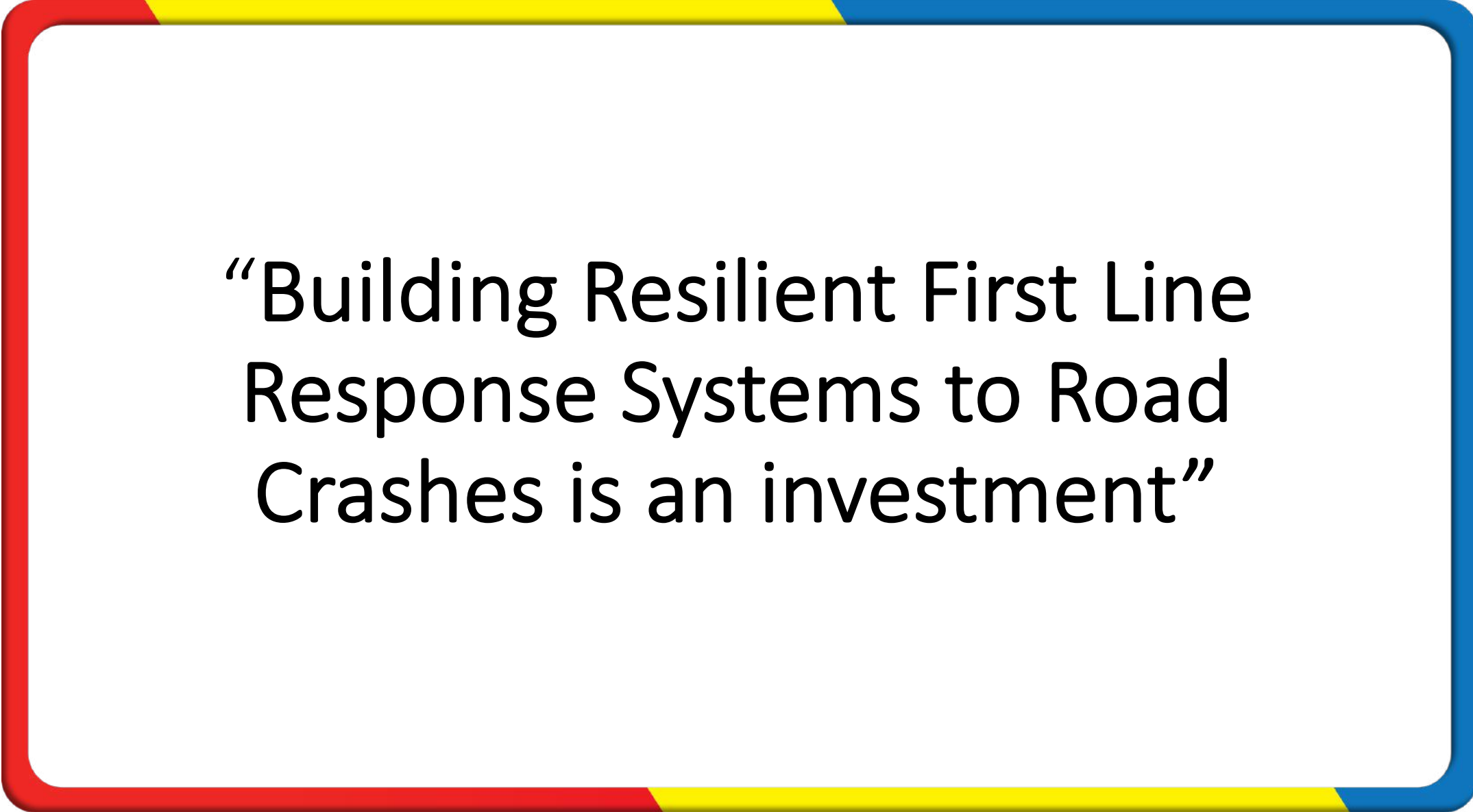
Road Injury Prevention Indaba 2024

Dr. Masitsela Mhlanga



Outline

- Introduction
- Evidence & Early Warning Systems
- Goal
- First Aid & Emergency Response Systems
- What to do?***
- How to do it?***
- Who should do it?***



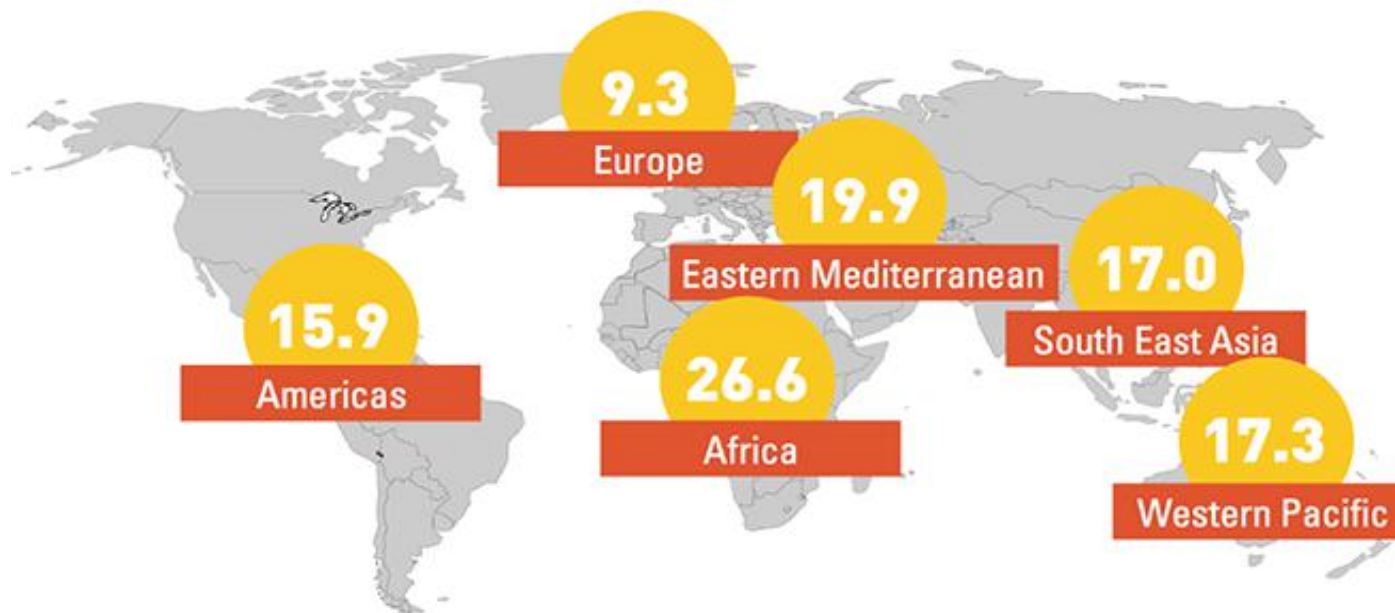
“Building Resilient First Line
Response Systems to Road
Crashes is an investment”

Introduction

- The first **couple of minutes** after a car crash can be critical for determining the long-term outcomes of the victim.
- Knowledge and the confidence** to provide first line/aid response to the victim is crucial

Global Impact of road traffic injuries

The chance of dying in a road traffic crash depends on where you live





All Hazard Risk Summary



KINGDOM of ESWATINI Ministry of Health RISK	RISK LEVEL	Geographical Areas Affected	Estimated Seasonality (Occurrence Next 3 Months)	Estimated Seasonality (Occurrence Next 4-6 Months)	Assessed Likelihood to Occur	Assessed Impact	Coping Capacity Level	Level of Confidence in Data
Storm	Very High	Hhohho, Manzini, Lubombo and Shiselweni	High	Low	Almost Sure	Severe	Partial	Satisfactory
Transportation Accidents	Very High	Hhohho, Manzini, Lubombo and Shiselweni	High	High	Almost Sure	Severe	Partial	Satisfactory
Forest / Wildfire	Very High	Hhohho, Shiselweni	Lowest	Moderate	Almost Sure	Severe	Partial	Satisfactory
Civil Unrest	High	Hhohho, Manzini, Lubombo and Shiselweni	Moderate	High	Probable	Critical	Very Low	Unsatisfactory
Ebola	High	Hhohho, Manzini, Lubombo and Shiselweni	Moderate	Low	Probable	Severe	Very Low	Unsatisfactory
Drought	High	Manzini, Lubombo and Shiselweni	Moderate	Moderate	Very Likely	Severe	Partial	Satisfactory
Chemical spillage	High	Hhohho, Manzini, Lubombo and Shiselweni	Moderate	Moderate	Probable	Severe	Very Low	Unsatisfactory
Gas leak	High	Manzini, Shiselweni	Low	Low	Probable	Severe	Low	Satisfactory
Gastroenteritis / Foodborne diseases	High	Hhohho, Manzini, Lubombo and Shiselweni	Low	Moderate	Probable	Severe	Partial	Good
Heatwave	High	Hhohho, Manzini, Lubombo and Shiselweni	Moderate	Lowest	Probable	Severe	Partial	Unsatisfactory
Poliomelities	High	Hhohho, Manzini, Lubombo and Shiselweni	Low	Low	Probable	Severe	Partial	Good
Cyclone	High	Hhohho, Manzini, Lubombo and Shiselweni	Moderate	Low	Probable	Severe	Partial	Satisfactory

Very Low 0
 Low 0
 Moderate 3
 High 9
 Very High 3

DRM Seasonal Calendar

Specific Hazard	RISK LEVEL	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Storm	Very High	Peak	Peak	High	High	Lowest	Lowest	Lowest	High	High	Peak	Peak	Peak
Transportation Accidents	Very High	Peak	High	High	Peak	High	High	High	High	High	High	High	Peak
Forest / Wildfire	Very High	Lowest	Lowest	High	High	High	Peak	Peak	Peak	Peak	High	Lowest	Lowest
Civil Unrest	High	High	High	High	Peak	Peak	Peak	High	High	High	High	High	High
Ebola	High	High	High	High	High	High	High	High	High	High	High	High	High
Drought	High	High	High	High	High	High	Peak	Peak	Peak	Peak	High	High	High
Chemical spillage	High	High	High	High	High	High	High	High	High	High	High	High	High
Gas leak	High	Lowest	Lowest	High	High	High	High	High	High	High	High	High	Lowest
Gastroenteritis / Foodborne diseases	High	High	High	High	High	High	Peak	Peak	Peak	High	High	High	High
Heatwave	High	High	High	Lowest	Lowest	Lowest	Lowest	Lowest	Lowest	Peak	Peak	High	High
Poliomelities	High	High	High	High	High	High	High	High	High	High	High	High	High
Cyclone	High	Peak	Peak	High	High	Lowest	Lowest	Lowest	High	High	Peak	Peak	Peak
Cholera /Acute Water Diarrhea	Moderate	High	Peak	Peak	Peak	High	High	High	Lowest	Lowest	Lowest	High	High
Covid-19	Moderate	Peak	High	High	High	High	High	High	High	High	High	High	Peak
Measles	Moderate	High	High	High	High	High	Peak	Peak	Peak	High	High	High	High

No Seasonality
Lowest
Moderate
High
Peak

DRM Seasonal Calendar

Specific Hazard	RISK LEVEL	Jan	Feb	Mar
Storm	Very High	Peak	Peak	High
Transportation Accidents	Very High	Peak	High	High
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Cyclone	High	Peak	Peak	High
Cholera /Acute Water Diarrhea	Moderate	High	Peak	Peak
Covid-19	Moderate	Peak	High	High
Measles	Moderate	High	High	High

No Seasonality
Lowest
Moderate
High
Peak

Goal

☐ Reduction by 50% of Road Crash Deaths & serious injuries (2030)

Focus: National Health Security _ No crash should lead to death or serious injury.

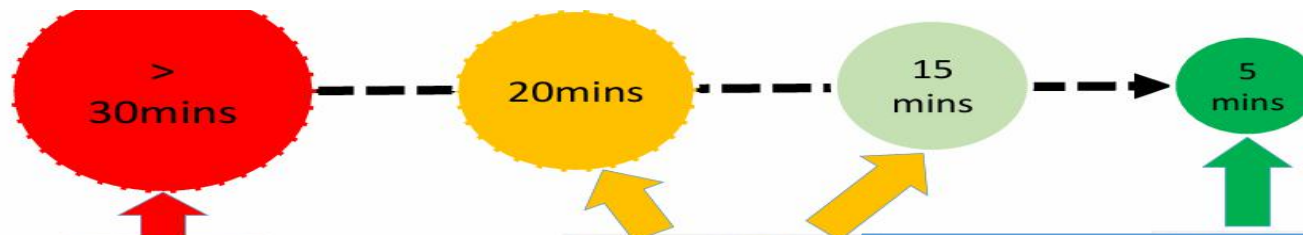
Approach: Safer System Approach

Principle: “Golden hour rule”

Performance Targets

Response Time:

- > 8 Minutes in Urban Settings
- > 14 Minutes in Rural Settings



What to do: areas for action



Multimodal transport & land-use planning



Safe road infrastructure



Safe vehicles



Safe road use



Post-crash response

Post-crash Response



Post-crash response

- **A Well Coordinated, Appropriate and Integrated Pre -Hospital Care Systems - Central & integrated Dispatch**
- **Community First-Responder Training** - greatly expand timely access to simple lifesaving interventions, especially in areas where pre-hospital services are limited and/or **response times are long.**
- **Comprehensive support systems for victims**

How to do it: implementation



Financing



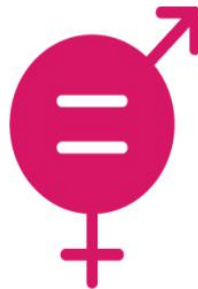
Legal Frameworks



Speed Management



Capacity Development



Gender Perspectives



Technologies



Focus on Low- and Middle-Income Countries

Collision event

Injury care

AT THE SCENE

AT THE TREATMENT FACILITY

FOLLOW-UP

First aid response
 - SCENE SAFETY
 - PRIMARY SUREVY -
GCS

- STOP THE BLEED
 - ROAD CRASH +
BACD - Breathing,
 Airway, Circulation &
 Defibrillation

- TRIAGE
- RESUSCITATION
- MANAGEMENT
- SAFE EVACUATION TECHNIQUES

Transport
 En- route
 to Facility
 Care

In-facility injury care
 - Handover &
 further
 management

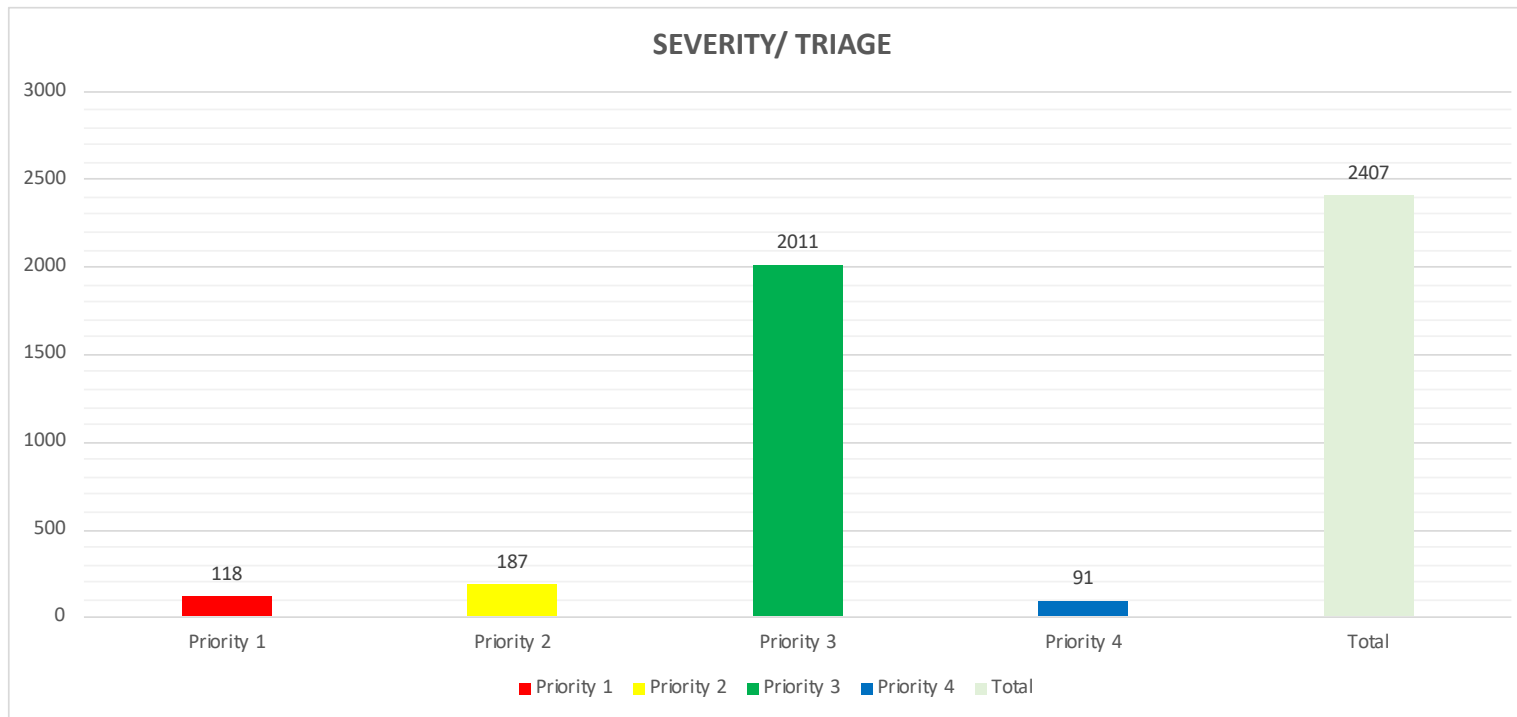
Rehabilitation
 (including OT and PT)

Management of
 disabilities
 Workplace
 reintegration

BEHAVIOR	RESPONSE	SCORE
Eye opening response	Spontaneously	4
	To speech	3
	To pain	2
	No response	1
Best verbal response	Oriented to time, place, and person	5
	Confused	4
	Inappropriate words	3
	Incomprehensible sounds	2
	No response	1
Best motor response	Obeys commands	6
	Moves to localized pain	5
	Flexion withdrawal from pain	4
	Abnormal flexion (decorticate)	3
	Abnormal extension (decerebrate)	2
	No response	1

OT = Occupational Therapy, PT = Physiotherapy

Triage (2023)



Components of the Post Crash Care Response

Research
and
Information

Crash data

**Pre-hospital
care
documentation**

**Trauma registry
and QI**

Care documentation,
QI, surveillance

Fatal injury
surveillance - **Road
Crash Death Audits**

QI = Quality Improvement

Legal support and legislation

Collision investigation

Duty to Assist and Good Samaritan Laws

Police evidence reports

Emergency care access legislation

Health Act (2023)

- Access
- Responder
- Ambulance

- DNR
- Declaration of death at scene

Facility designation, standards and regulations

Legal support for affected

Legal process (inquest, criminal charges, prosecution, etc)

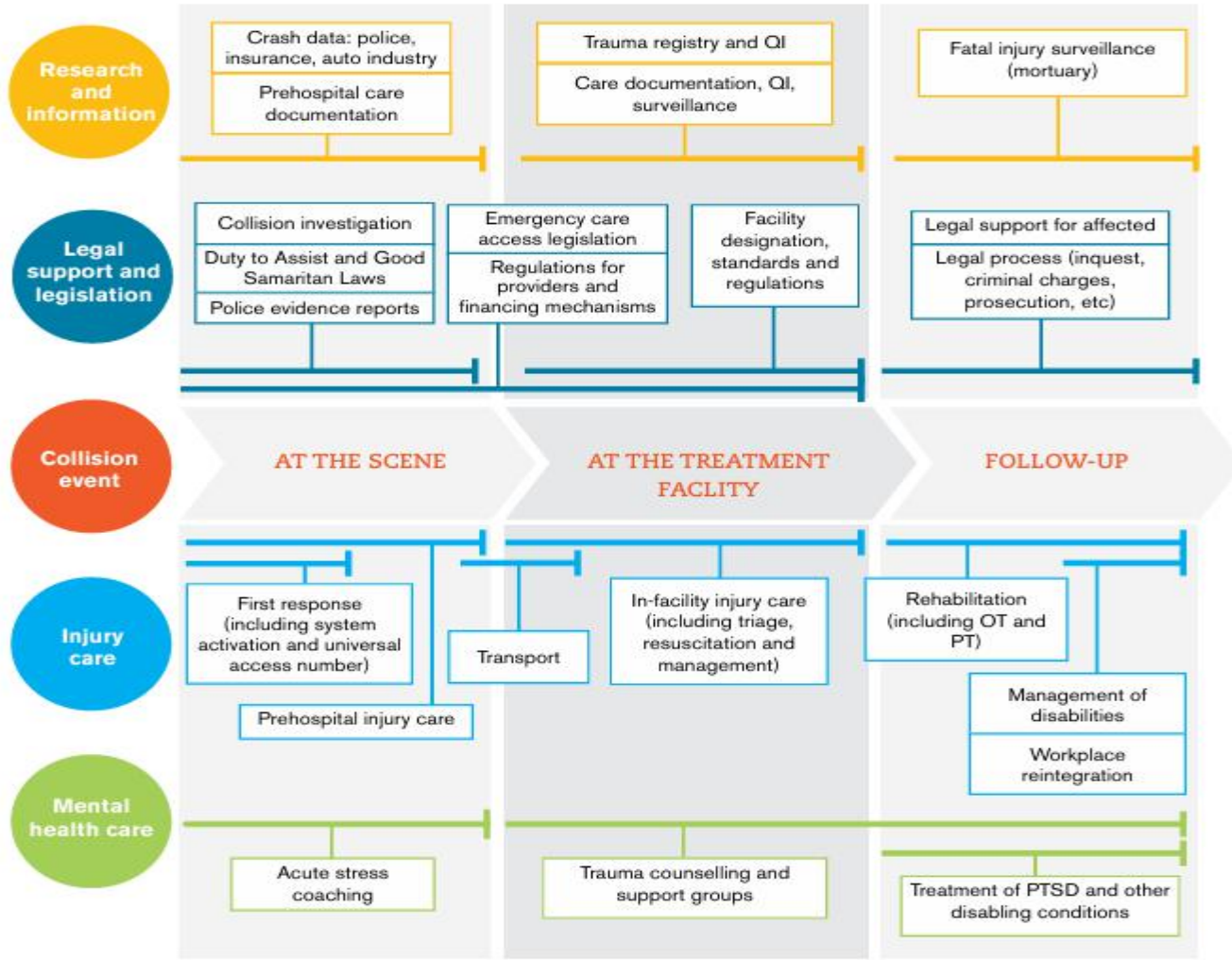
Mental health care

Acute stress coaching

Trauma counselling and support groups

Treatment of PTSD and other disabling conditions

Conceptual Framework - Post-Crash Response



QI = Quality Improvement; PT = Physiotherapy; OT = Occupational Therapy

Who should do it: Shared Responsibility



Government



Civil Society



Private Sector



Funders



UN Agencies

Who should do it?

Road Crash is an immediate notifiable condition

DIAL 977

JOINT ROAD CRASH DESK (SMVA & EPR)



Who should do it? Best Practices



- **Joint SMVA/MOH Partnership- Stabilization Centres/Off -Road Side clinics (MR1 Road)**
- **Joint SMVA/MOH Ambulances & Strategic Zoning**
 - I. Ngwenya - Mbabane
 - II. Mbabane -Malagwane - Manzini
 - III. Motshane - Nkhaba- Piggs Peak -Matsamo
 - IV. Manzini - Hlatikhulu -Nhlangano
 - V. Manzini - Mpaka -Siteki -Lomahasha
 - VI. Manzini -Siphofaneni -Matata -Lavumisa

Process -National Ambulance Service

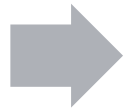
Phased approach

Stage 1

Establishment of the toll free line 977

& Legislative Frameworks

Year 1 and 2

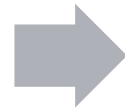


Stage 2

Joint Road Crash Desk

Integrated Road Crash Deaths Audits (RCDA)

Year 3



Stage 3

National Ambulance Central Dispatch Cent.

Road Crash Academy

Year 4



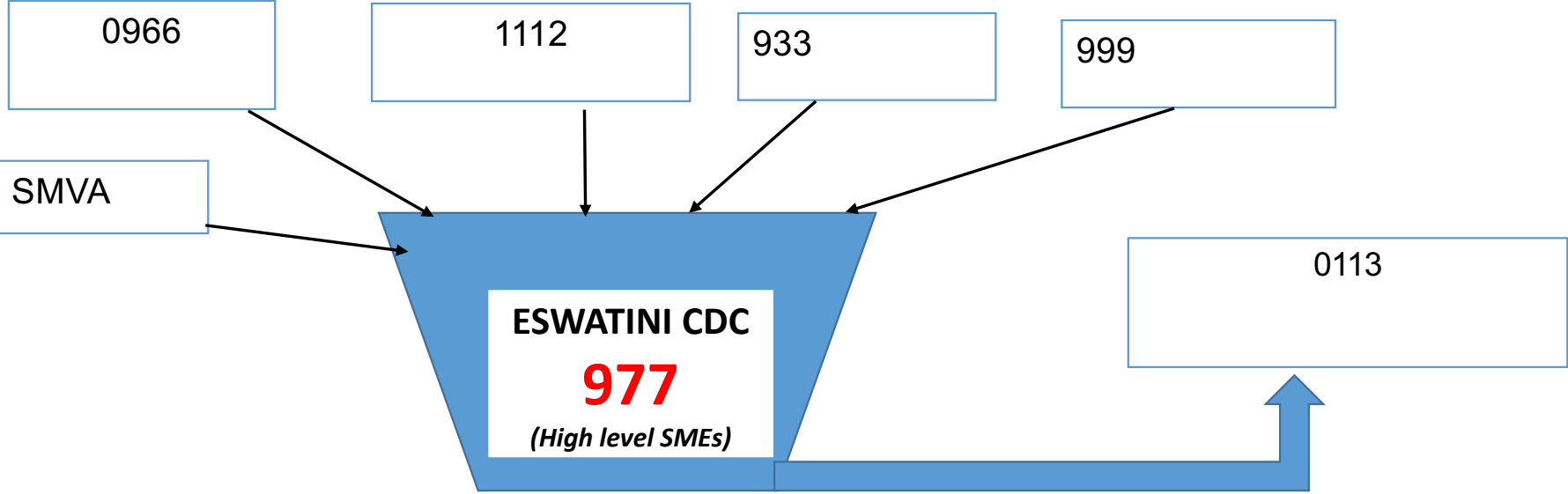
Stage 4

Airlifting Facilities

Trauma Centres

Year 5 and 6

Example: Central Dispatch Centre



EMERGENCY MEDICAL RESPONSE



EMERGCARE - 0966



AFRICARE - 1112



MED ASSIST - 0113



EMS -977

Government



Government

- Provide a legislative framework for roll players and legal mandate for the work of different agencies within and outside government.
- Develop a plan of action with targets and monitoring
- Encourage compliance with standards
- Ensure overall coordination for these activities.

ESWATINI

PHONE



Call Centre Toll Free: 977



SMS NOTIFICATION



www.eswatinipheoc.org

Everybody's road safety



Sources

- Sun JH, Wallis LA. The emergency first aid responder system model: using community members to assist life-threatening emergencies in violent, developing areas of need. *Emergency Medicine Journal*, 2012, 29(8):673–678.
- World Health Organization Country Office presentation _Decade of Action
- MOH -EPR Strategy 2023
- Health Act, 2023

Thank you, Siyabonga

