

REVIVE

IMPROVING POST-COLLISION
RESPONSE AND EMERGENCY
CARE IN EUROPE

MALTA
ROAD
SAFETY
COUNCIL

ETSC
European Transport Safety Council
25 YEARS 1993-2018

Dr. Jonathan Joslin
Consultant Emergency Physician
Emergency Department Mater Dei Hospital
Malta

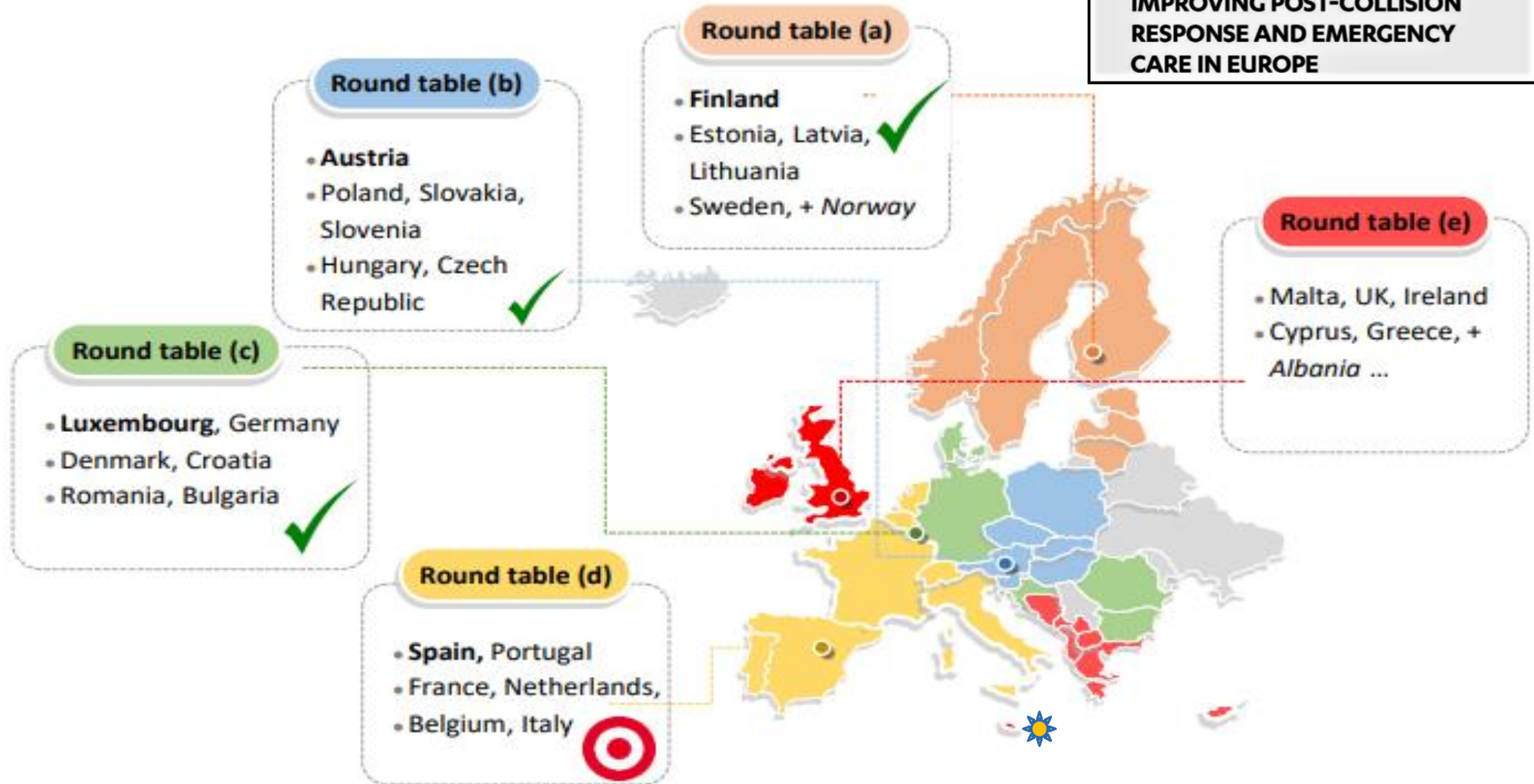
From Impact to the Resus Room

EMS Response: An Emergency Physician's
Perspective

Round table discussions

REVIVE

IMPROVING POST-COLLISION
RESPONSE AND EMERGENCY
CARE IN EUROPE





Valletta Declaration on Road Safety

29 March 2017
Valletta

- The work on improving road safety should not be measured only by counting road deaths.
- continue developing measures to ensure post-collision care, early rehabilitation and social reintegration of road traffic accident victims....
- Road Safety is a shared responsibility...

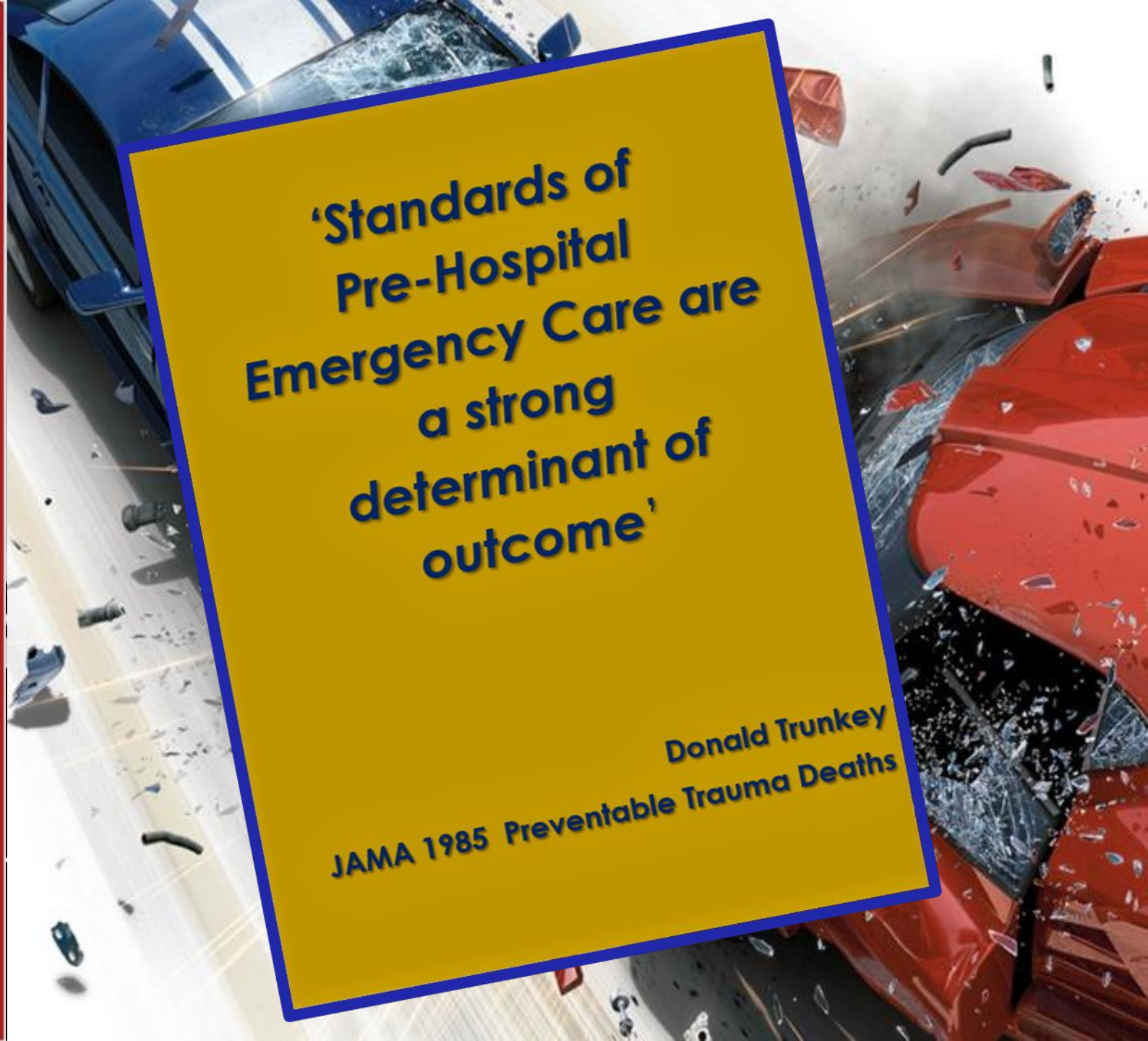
**The Road to
Recovery
begins at
Impact !**



The Road to Recovery begins at Impact !

**'Standards of
Pre-Hospital
Emergency Care are
a strong
determinant of
outcome'**

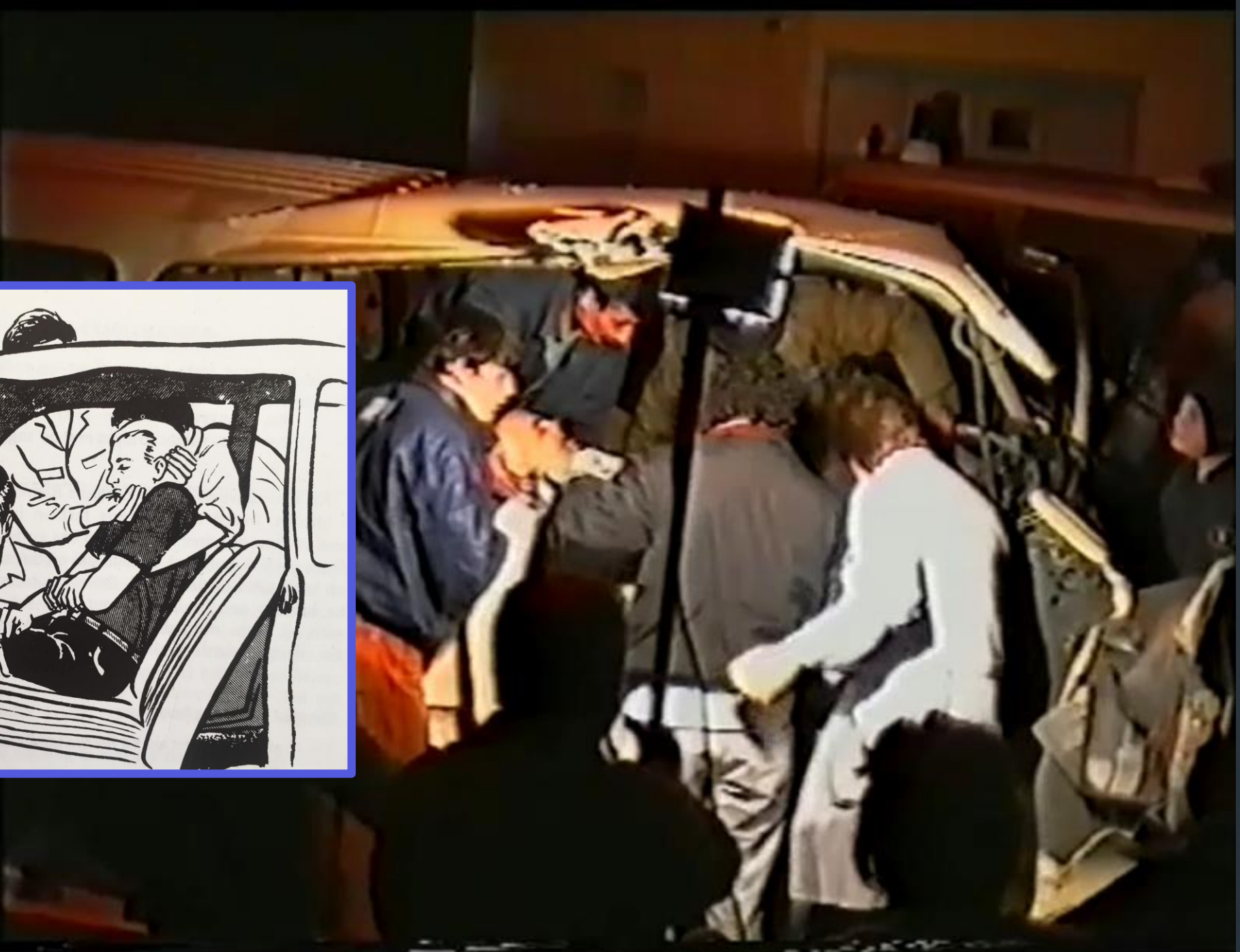
**Donald Trunkey
JAMA 1985 Preventable Trauma Deaths**

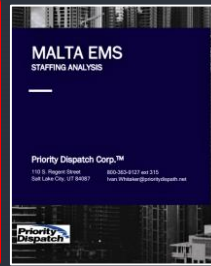




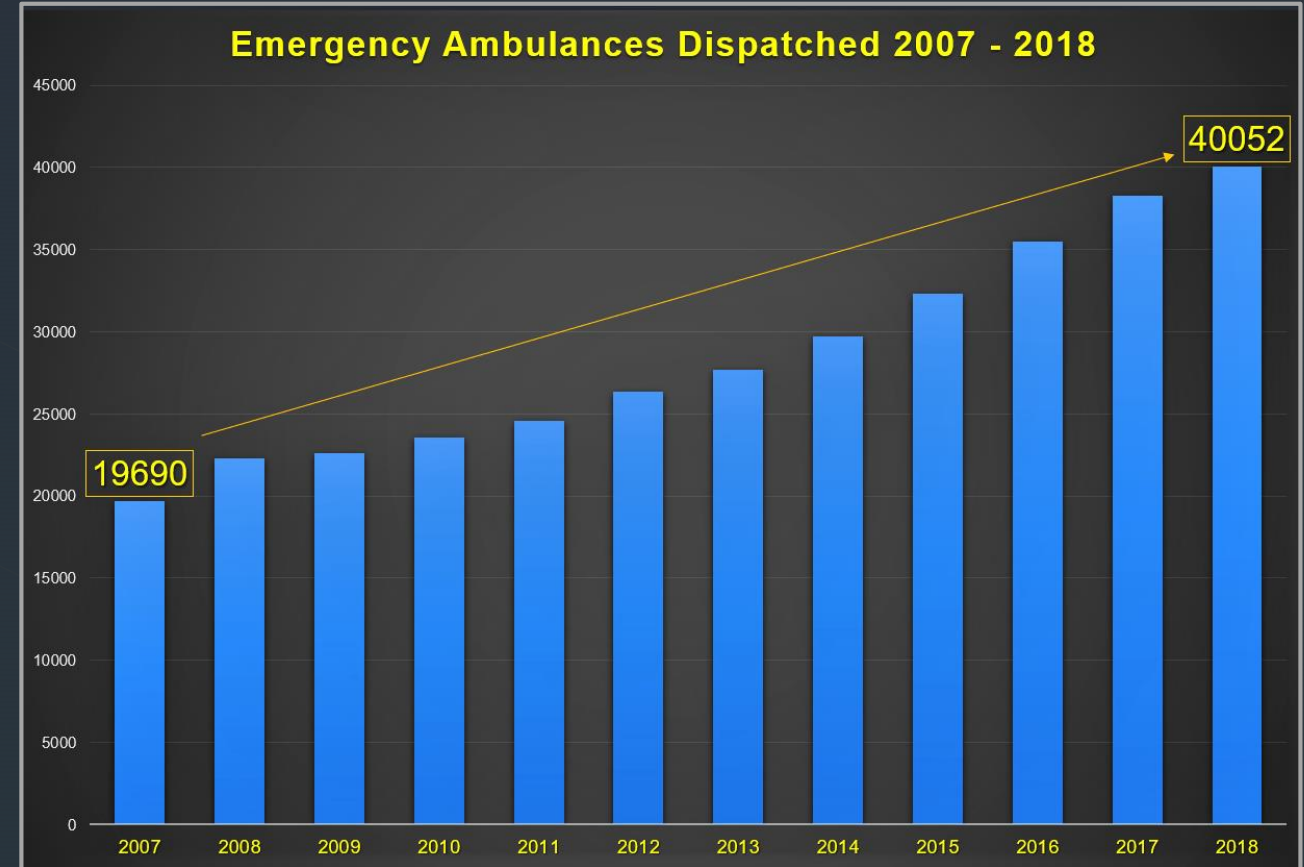
Extrication 1989

FROM IMPACT TO THE RESUS ROOM





Emergency Dispatch



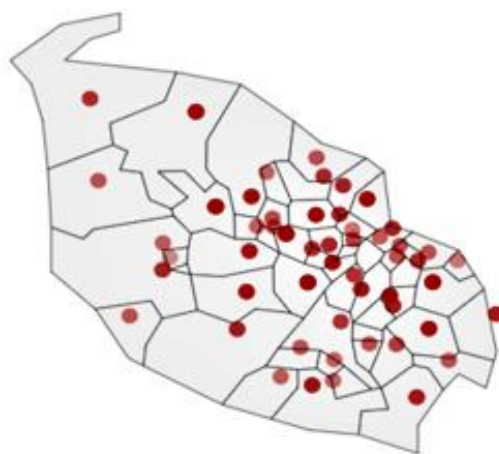
Estimated population is 433,245
Population density of 1,562 people per square km



EMS Dispatch
Centres



10 Minutes
Response Time





Emergency Ambulance Service Emergency Department



FROM IMPACT TO THE RESUS ROOM



Emergency Ambulance Dispatch Top 10 Complaints

1	Respiratory Complaints	3951
2	Abdominal Complaints	3540
3	Chest Pain / Cardiac Complaints	3175
4	Unconscious / Unresponsive / Syncope	3123
5	Generally unwell / Vague Complaints	3008
6	Trauma (Assault / Fractures / Lacerated Wounds)	2924
7	Falls / Painful conditions	2070
8	Gastroenteritis / Nausea / Vomiting	1145
9	Road Traffic Collisions	1022
10	Head Injuries	895

Road Traffic Collisions 2017

14,940

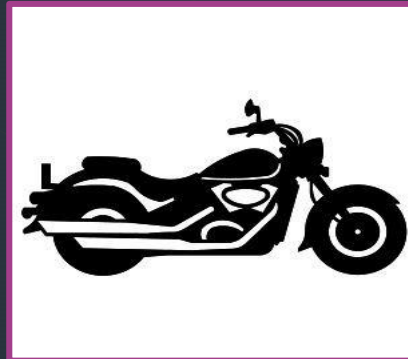
RTC Victims

1862



1107 Victims (59.5%)

14 fatalities



436 Victims (23.4%)

4 fatalities



269 Victims (14.4%)

1 fatality



50 Victims (2.7%)

0 fatalities

19 Fatalities

Road Traffic Collisions 2018

14,378

RTC Victims

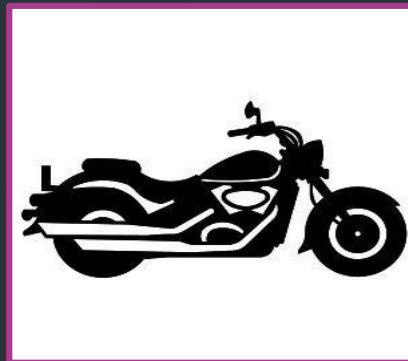
1675



984 Victims (58.7%)

127 grievous injuries

7 fatalities



461 Victims (36.2%)

108 grievous injuries

8 fatalities



200 Victims (15.7%)

77 grievous injuries

2 fatalities



30 Victims (2.4%)

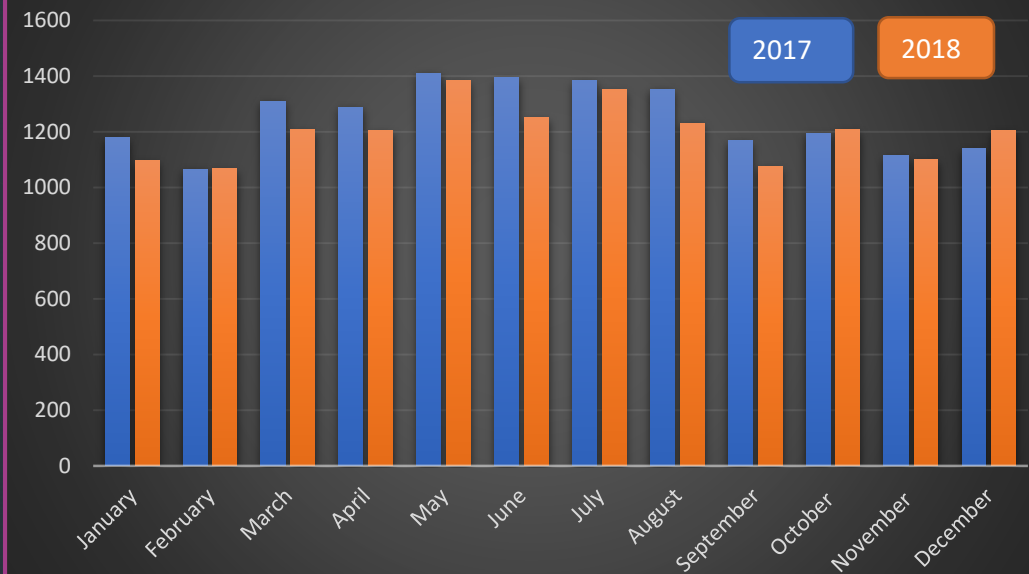
5 grievous injuries

1 fatality

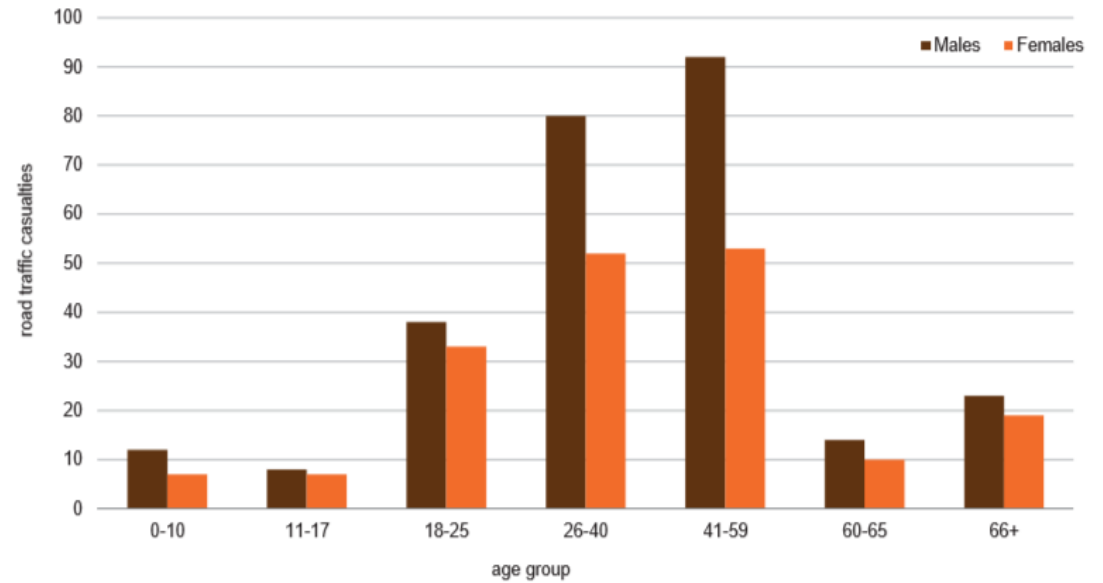
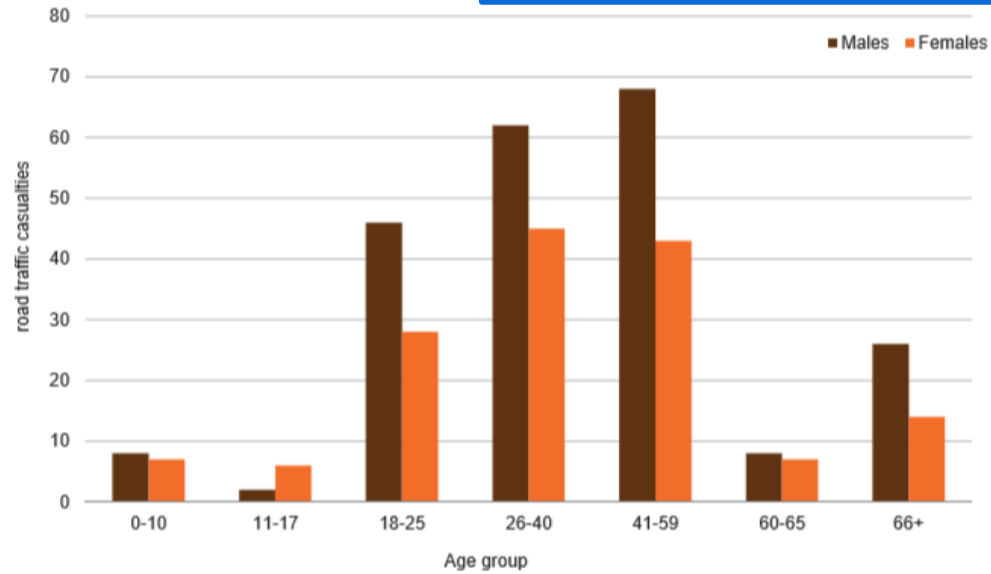
RTCs according to day of the week



RTC according to month of the year

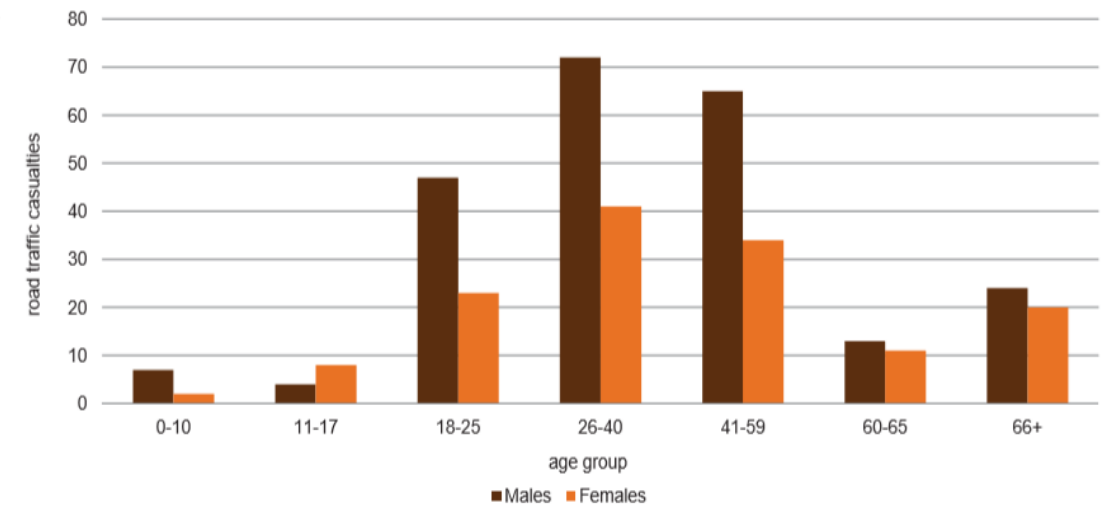
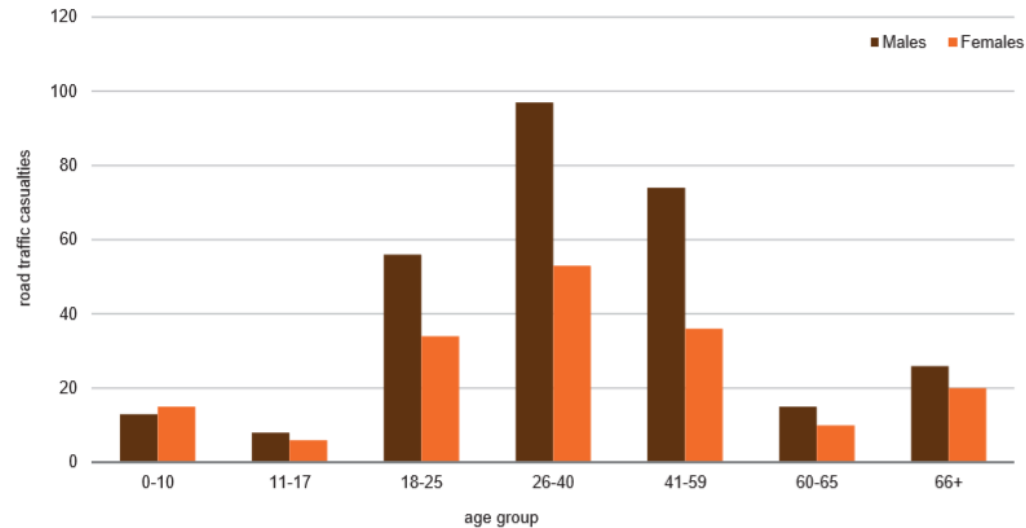


Road Traffic Casualties by Gender and Age 2018



January - March 2018

April - June 2018

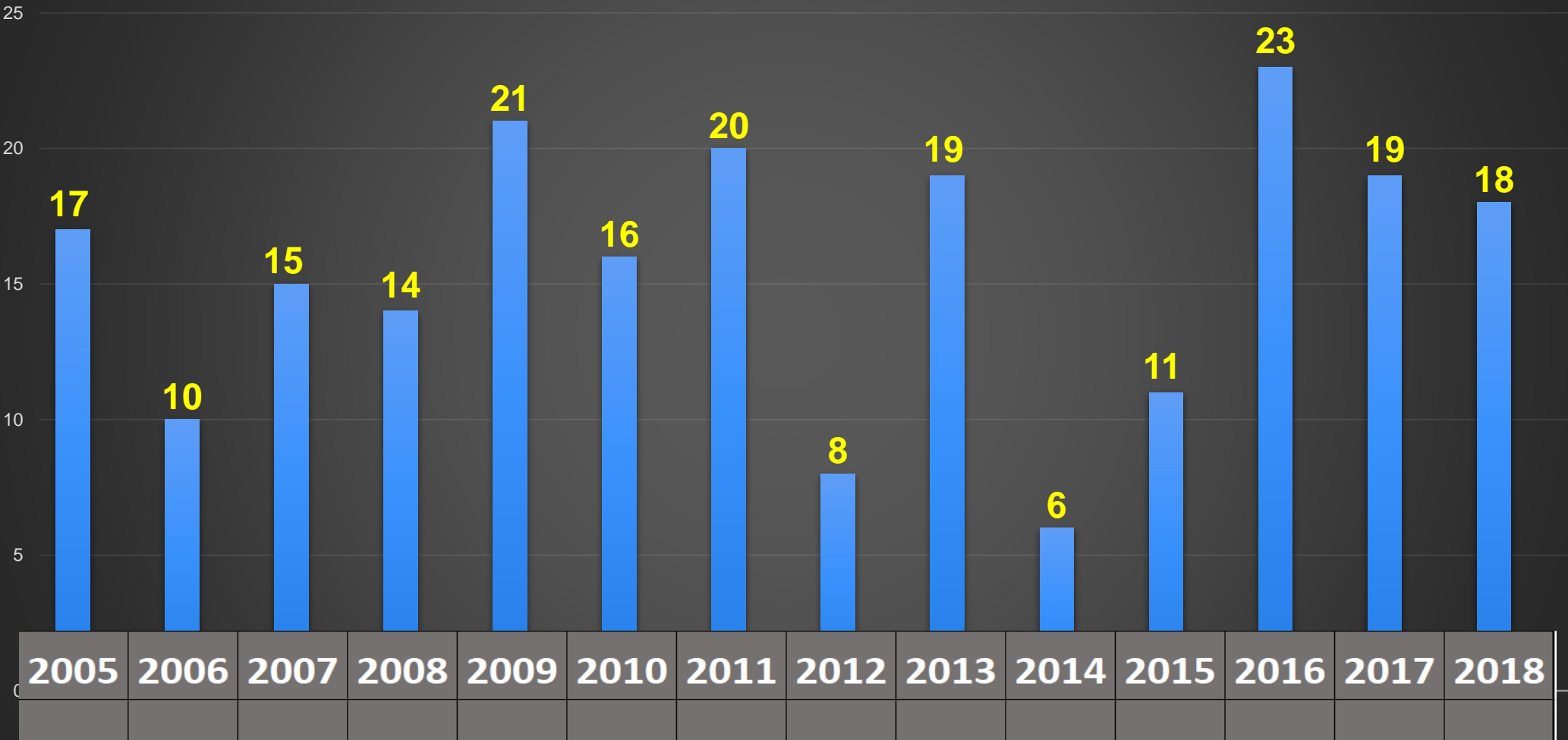


July - September 2018

October - December 2018

Injury	Fatalities	Grievous	Slight	Total
2017	19	303	1447	1873
2018	18	317	1273	1675

Road traffic fatalities 2005 - 2018 Malta





The Emergency Ambulance Team

- **Emergency Nurse** led response supported by two Ambulance Responders
- **Emergency Physician** Supported critical responses





Pre-Hospital Emergency Nurse Responder

- Pre Hospital Emergency response
Ambulance training minimum 1 year
- Training Portfolio
- Skills training
- Basic Life Support
- Intermediate Life Support
- Advanced Life Support
- Pre Hospital Emergency Care
- Simulation Training



Roads are a
high risk
environment!

Emergency Ambulance Service Emergency Department

Emergency Physician
Rapid Response Units



The complimentary role of the Specialist Physician on scene

The critically injured crash victim will have specialist medical care management within 10 - 15 minutes of crash

- ▶ On scene **lead management** role
- ▶ **Decision taking** in front line triage in multiple casualties
- ▶ **Airway management** and ventilatory support
- ▶ **Hemorrhage control** and circulatory support
- ▶ **Pain relief** management



Emergency Medicine Training

Progression of Training in EM

BST 1 (1 year + FRCER Primary)

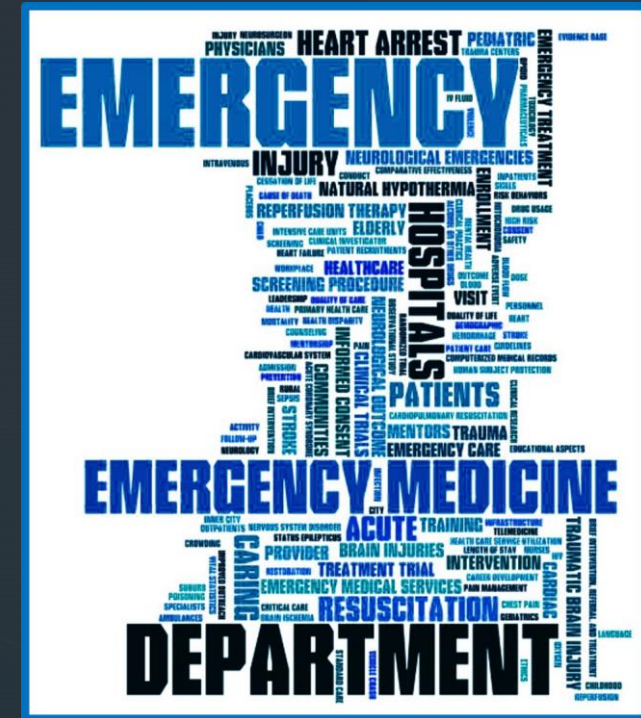
BST 2 (1 year + FRCER Intermediate + MRCEM OSCE)

CCBEMT

HST 1-4 (4 years + EBEEM + final appraisal)

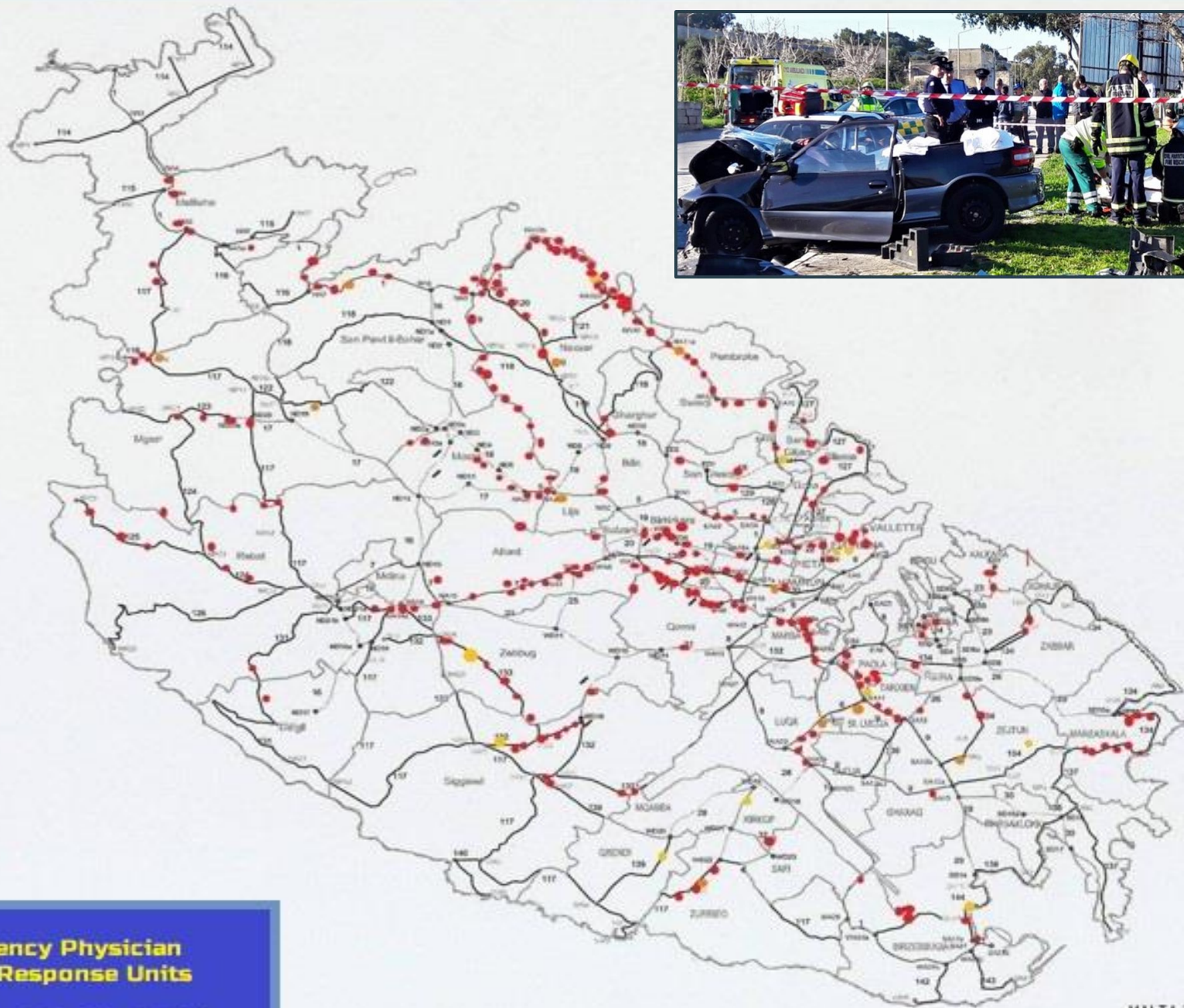
CCST - SPECIALIST REGISTER

- ✓ Shop floor teaching
- ✓ Small-group tutorials
- ✓ Simulation sessions
- ✓ Clinical skills boot camp
- ✓ CME (sponsored) events
- ✓ Audits
- ✓ Life support courses
- ✓ Ultrasound courses
- ✓ Pre Hospital and Major Incident simulations
- ✓ Placements outside ED
- ✓ Journal Clubs
- ✓ E-portfolio





Emergency Physician Rapid Response	2004 - 2018
Number of Victims	2319
Category Type Dispatch	
Road Traffic Accidents	553
Fall from Height	170
Building / structural collapse	36
Fires	72
Water Related	40
Occupational	50
Fireworks Factories Blasts	17
Explosions	24
Airport / plane related	10
Firearms / shooting incidents	18
Medical Responses / cardiac arrests	55
Assault / Riots	30
Hazmat Incidents	3
Total Number of Emergency Responses	1085



**Emergency Physician
Rapid Response Units**

**568 Road Traffic Collisions
2004 - 2019**



MALTA TRANSPORT AUTHORITY
LT.S.D. SAN MAISON FLORIANA
MAP OF MALTA



Civil
Protection
Department

Inter-Agency Coordinated Team Work







Trauma Registry

Trauma Teams

112 Call with TRAUMA/?EPRU

By-stander information includes any of the following?

- | | |
|--|--|
| Amputation (proximal) | Riot |
| CBRNE | RTA with entrapment |
| Cliff rescue | RTA with serious injuries |
| Construction collapse | Suicide (imminent) |
| Crush injury | Transportation sea/air |
| Explosion (or threat) | Suspected terrorism |
| Fall from height with difficult access | Fire : commercial, leading to evacuation, residential or Major |

• Summon EPRU

- Lead EP and nurse will be automatically summoned
- Trauma team will be automatically put on stand-by when selecting the events in **BOLD**

By-stander information includes any of the following?

- History of penetrating injury to head, chest or abdomen
- High velocity RTA and EPRU have not been summoned
- Trauma with an unresponsive patient
- Trauma with extensive bleeding on site

Dispatch ambulance & await ATMIST

- Does ATMIST information include any of:
- Signs of ABC compromise
 - Aggressive/confused/P or c on AVPU?

Register and triage on arrival

Inform Lead EP & Lead Nurse

Algorithm for LEAD EP in trauma patients

Is the situation any of the following:

- | | |
|-----------------------|---------------------------|
| Amputation (proximal) | Explosion |
| Cliff rescue | FFH with difficult access |
| Construction collapse | RTA with entrapment |
| Crush | |

Confirm that EPRU been summoned through Everbridge!

Trauma team has been put on **STAND-BY**.

If Trauma team has been put on stand by remember to do a **STAND-DOWN**

Wait for ATMIST. Does the ATMIST include ANY of the following?:

- FFH ≥ 2 storeys
- Explosion
- Extensive burns
- Penetrating injury to any body cavity
- High velocity MVA
- Amputation proximal to wrists/ankles
- Clinical picture with ABC instability
- Trauma with confused, aggressive or AVPU ≤ P
- Any other information to suggest that patient will require trauma team input.

Send Trauma Team Call out through EVERBRIDGE
If Everbridge not available use PAGER 356 0014.

Stand-by TT	Numbers	Sending message with Everbridge
Ortho Surgeon	79056957	1. Log in
General Surgeon	79056940	2. Click of "LAUNCH INCIDENT"
CPR Anaesthesia	79080869	3. Select "TRAUMA TEAM DIRECT"
Lead EP	79057064	4. Input required data
Theatre nurse	79847538	5. Press "NEXT" then press "SEND"
		6. Follow response by clicking on the episode
		7. Contact the relevant non-responders

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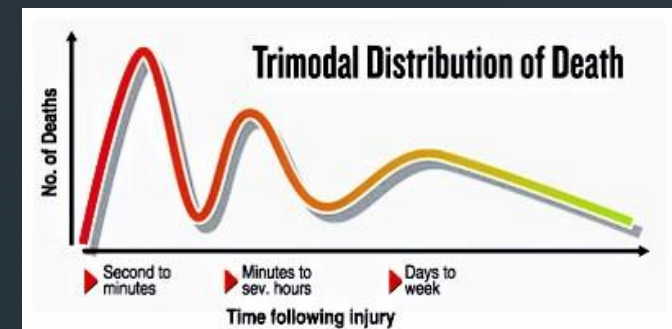
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General Surgeon	79056940	
CPR Anaesthesia	79080869	
Lead EP	79057064	
Theatre nurse	79847538	

Aim to deal with priorities on scene

**TREAT FIRST
WHAT KILLS FIRST**



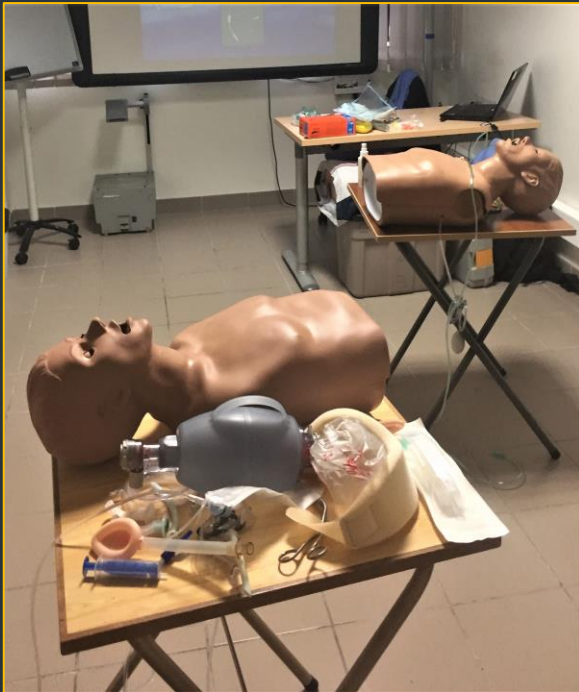
OPEN AIRWAY



First Responder Training



Patient management **within the first 10 minutes** may be crucial in a seriously ill or injured victim in the period awaiting emergency responder arrival.



FROM IMPACT TO THE RESUS ROOM

Doctors for Road Safety

AEPM
ASSOCIATION OF EMERGENCY PHYSICIANS OF MALTA

What Should You Do? Come find out

First Responder Doctors Training
3rd November, 2018
Medical School

SPTAR MATER DEI **MAPFRE MIDDLESEA**

Open to all medical doctors
Places limited



FROM IMPACT TO THE RESUS ROOM



National Strategic Response to Road Traffic Incident Management



Developing **recommended practices for responder safety** at incident scenes.

All emergency responding agencies **receive joint interagency multidisciplinary** RTC Management Training

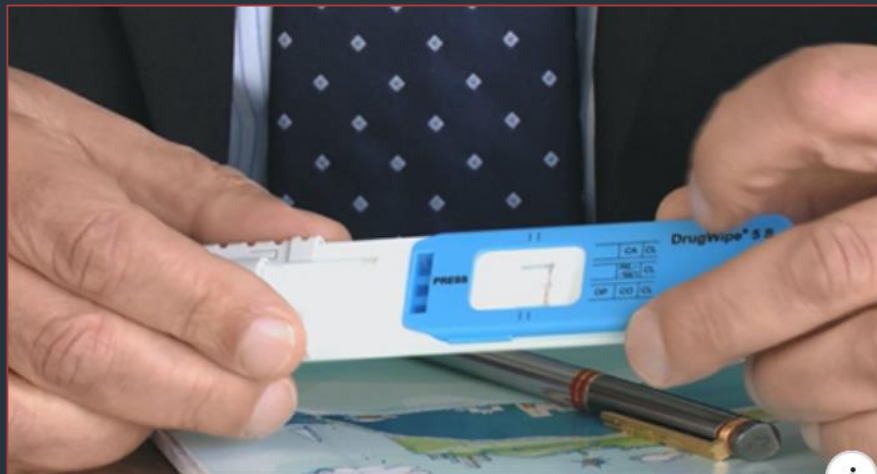
Coordinated effort in **implementing new technologies** that will improve the rapidity and safety of the emergency response to RTC Management



All responding agencies hold regular **post critical debriefing sessions** after all critical or difficult road traffic incidents especially those involving critically injured or fatal casualties.

Raising awareness regarding the need of effective policies and **interagency Standard Operating Procedures** directed at improving the National Emergency response to RTCs

Promoting Public Education and Awareness programmes directed at Injury prevention and Safer Driving campaigns.



TVM.COM.MT

New test for drug use while driving, similar to breathalyser, being proposed - TVM News

- ✓ Drugs testing kits
- ✓ Personal Breathalysers
- ✓ School Education
- ✓ TV education slots
- ✓ 112 interagency day

