

Human Factors Affecting Paediatric Prehospital Care During Mass Casualty Incidents Across Western Europe: A Narrative Review

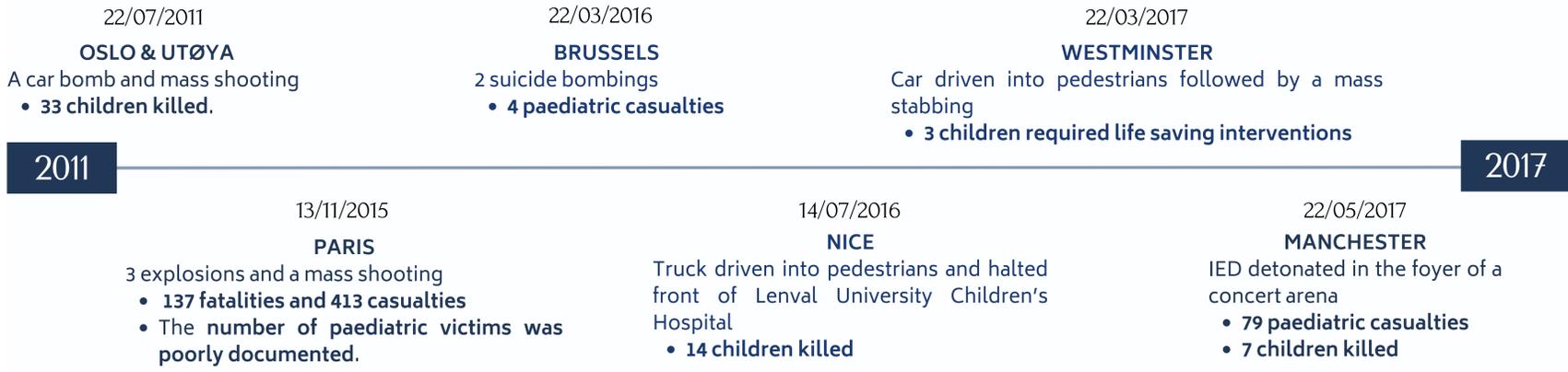
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HUMAN FACTORS ENCOMPASSES...

Communication, teamwork & leadership, situational awareness, cognitive bandwidth and so much more.

We cannot moulage every possible mass casualty scenario but we can optimise non-technical skills thus improving the emergency response.



AIMS

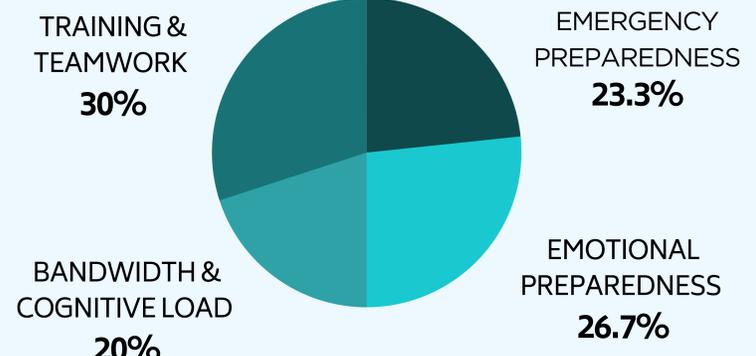
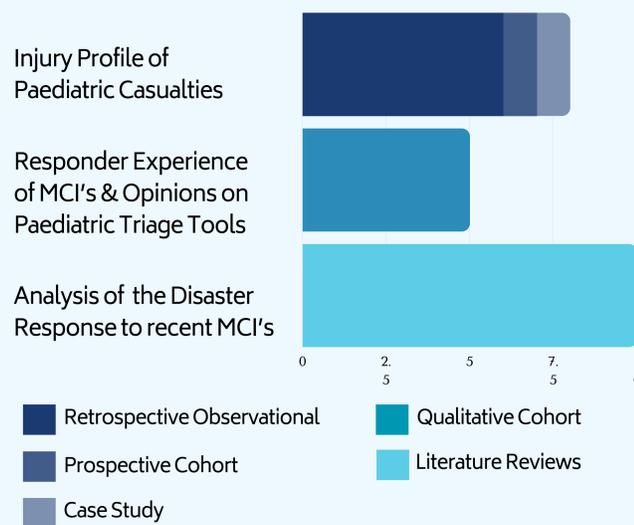
- Establish the human factors present during disaster responses and understand how these factors impact the delivery of paediatric prehospital care.
- Analyse clinician's attitudes to MCIs and paediatric emergencies and evaluate current training protocols to find areas for improvement.

METHODS

A literature search of four databases was conducted; 23 papers were deemed to contain relevant information. Studies published prior to 2005 were excluded due to changes in both national and international emergency responses to MCIs following 7/7.

RESULTS

STUDIES WERE SUMMARISED...



...AND KEY THEMES WERE IDENTIFIED

KEY FINDINGS

DAILY PAEDIATRIC DISASTER TRIAGE PRACTICE?

Children may evoke a greater emotional response from clinicians, reducing their ability to accurately assess a paediatric patient's clinical state.

Cognitive load of responders is further exaggerated in those with limited paediatric experience.

- Frequent Simulation Training
- Intuitive Application of Triage Tools
- Confidently Recognising 'Big Sick'

A 15-year-old who suffered a penetrating brain injury during the Manchester Arena Attack was identified by matching a parent's description of their child to photographs taken in A&E.

SWIFT REUNIFICATION DECREASES THE RISK OF PTSD

CAN WE DO IT EARLIER?



VS

COGNITIVE BANDWIDTH & RESOURCES

This has been widely researched in the US due to a high prevalence of school shootings, further research is required from European responders.

EMOTIONAL TOLL ON RESPONDERS

When asked about managing paediatric emergencies and potential MIs, participants on LAA's PHCC said...

"People have 2 responses: don't worry til your there OR do as much prep as possible to free up your bandwidth on scene, I am the second one"

"Some of us will have kids the same age"

"Immediate awareness of what you don't know"

"Big Sick?... Comfort in doing drug calculations, wetflag etc"

PHYSIOLOGICAL AND ANATOMICAL DIFFERENCES IN CHILDREN



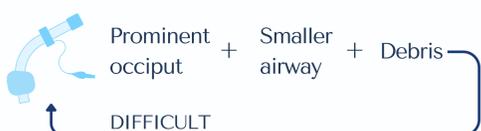
Large head + Weak neck muscles = Brain and c-spine injury following mechanical trauma.



Increased minute ventilation → Increased inhaled dose of an agent



Elastic ribs will compress and dissipate kinetic energy causing contusions



Compensatory mechanisms VS Small blood volume
Minimal blood loss may result in a large % (volume lost)



Short stature

Exposure to ground based IED's and denser chemical agents