CRMI
Clinical Response to Major Incidents

NHS England

Revising the UK Major Incident Triage Tools

The How & Why

Disaster & Emergency Management

Coventry University 2025

Phil Cowburn

Complexity of Major Incidents

Risk is Defined

Why Triage?

Find the critically inured and rapidly transport to correct hospital

What Do You Fear?

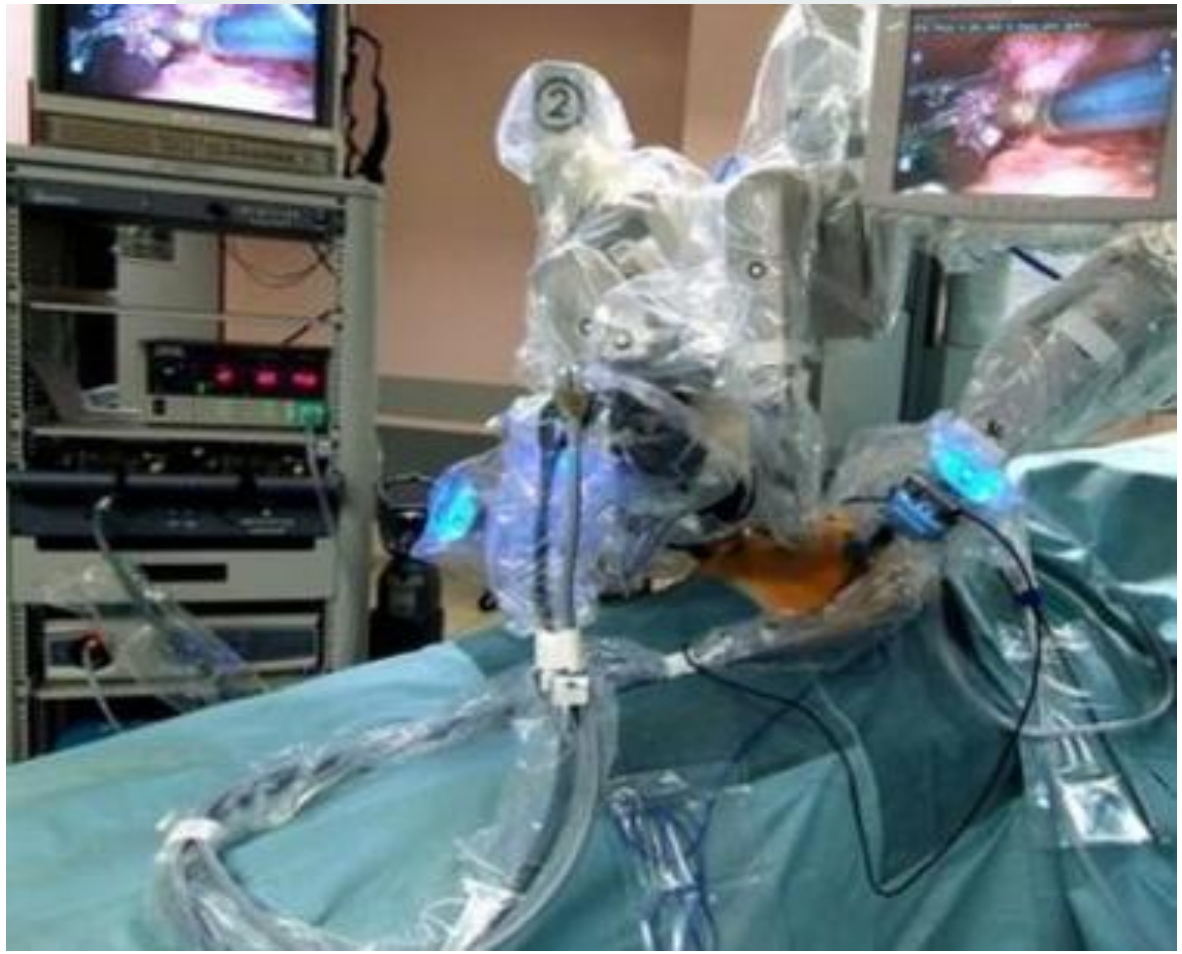
Under-triage?

Over-triage?

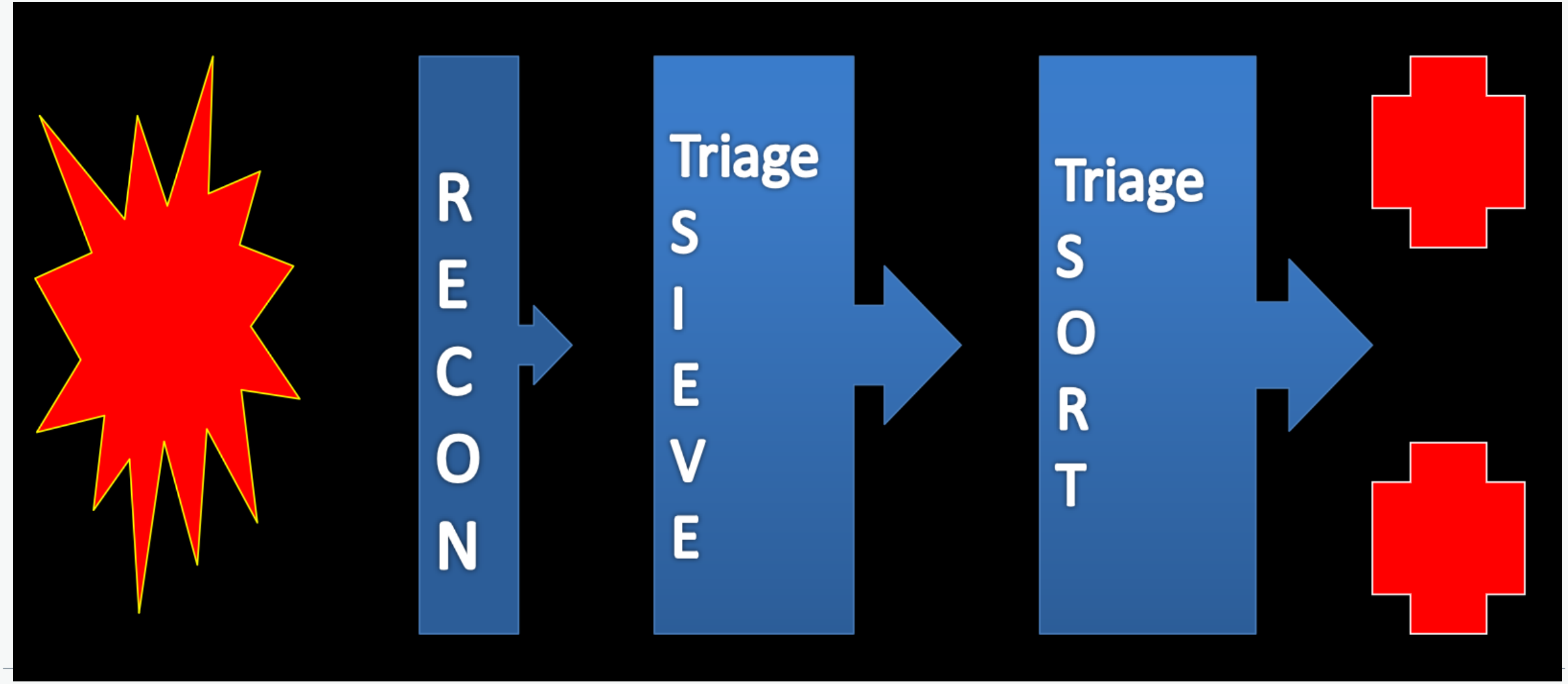
How to Triage?

- Clinical gestalt?
- Triage Tool?

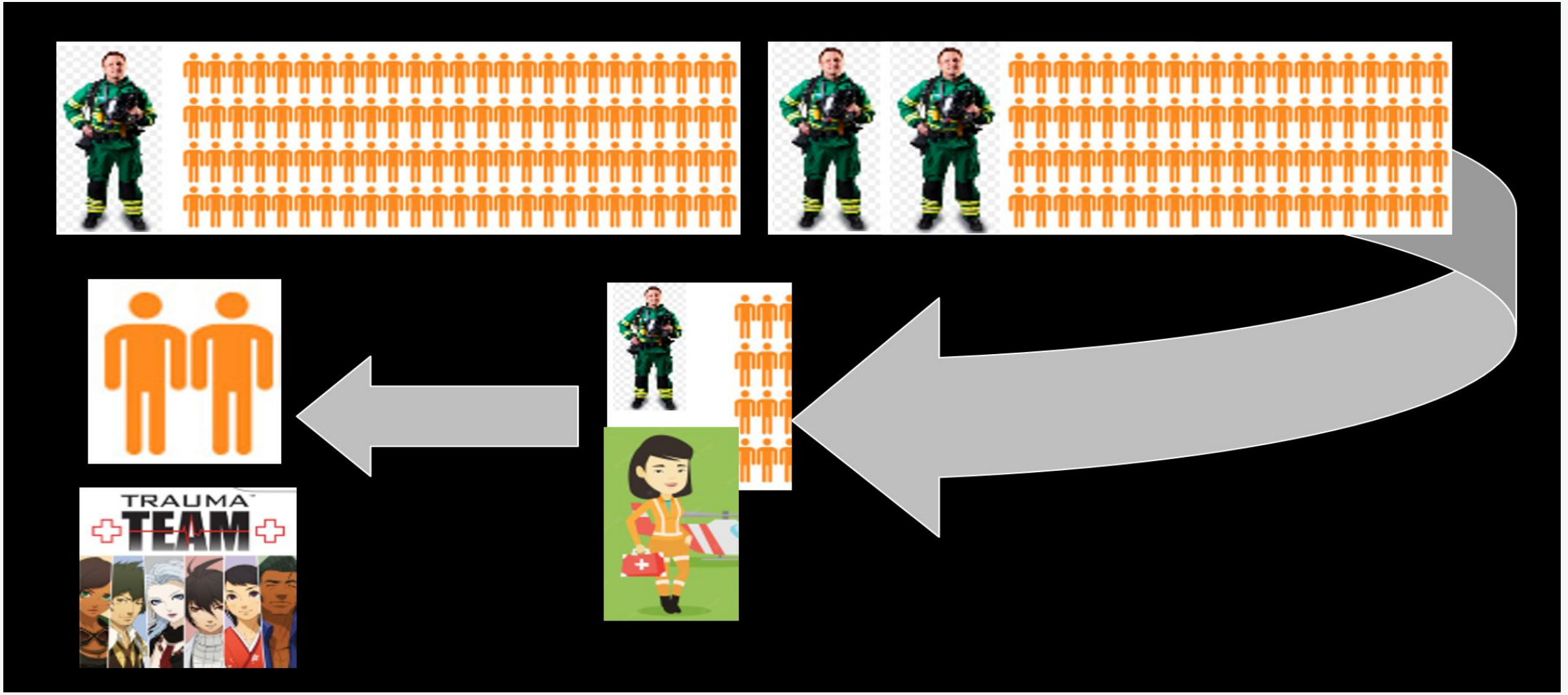
What kind of Tool?



Major Incident Phases



‘Numbers Game’



Bandwidth

Cognitive Load

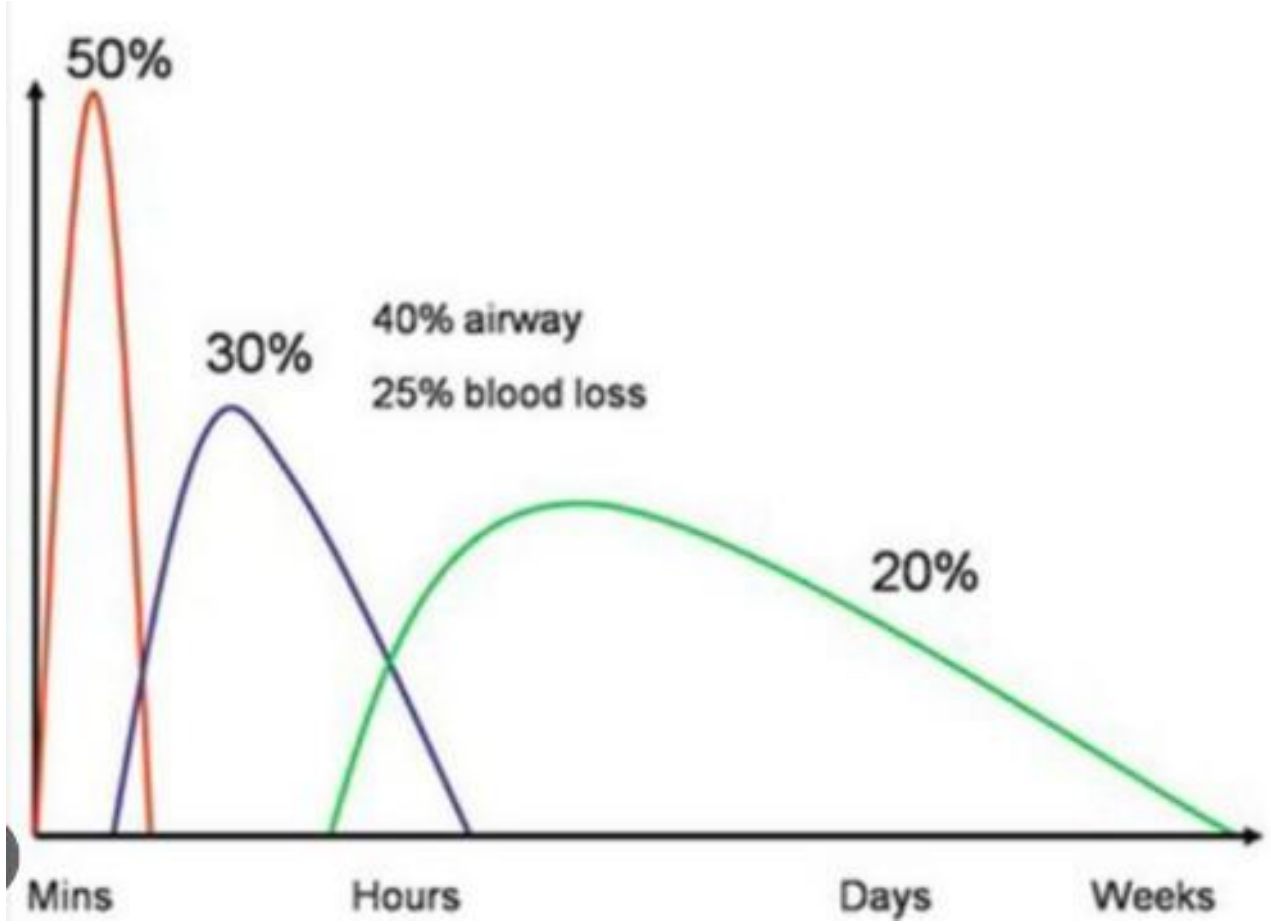
Why do Trauma Patients Die?

Trimodal Distribution of Death.

Or

Consistent Curve of Death.

- Some death inevitable
- Others preventable



What Are Life-Saving Interventions?

Airway

Bleeding

Traige Priority & Identification

P1	Time Critical
P2	Severe/Urgent
P3	Delayed/Non-Urgent
Dead	Deceased

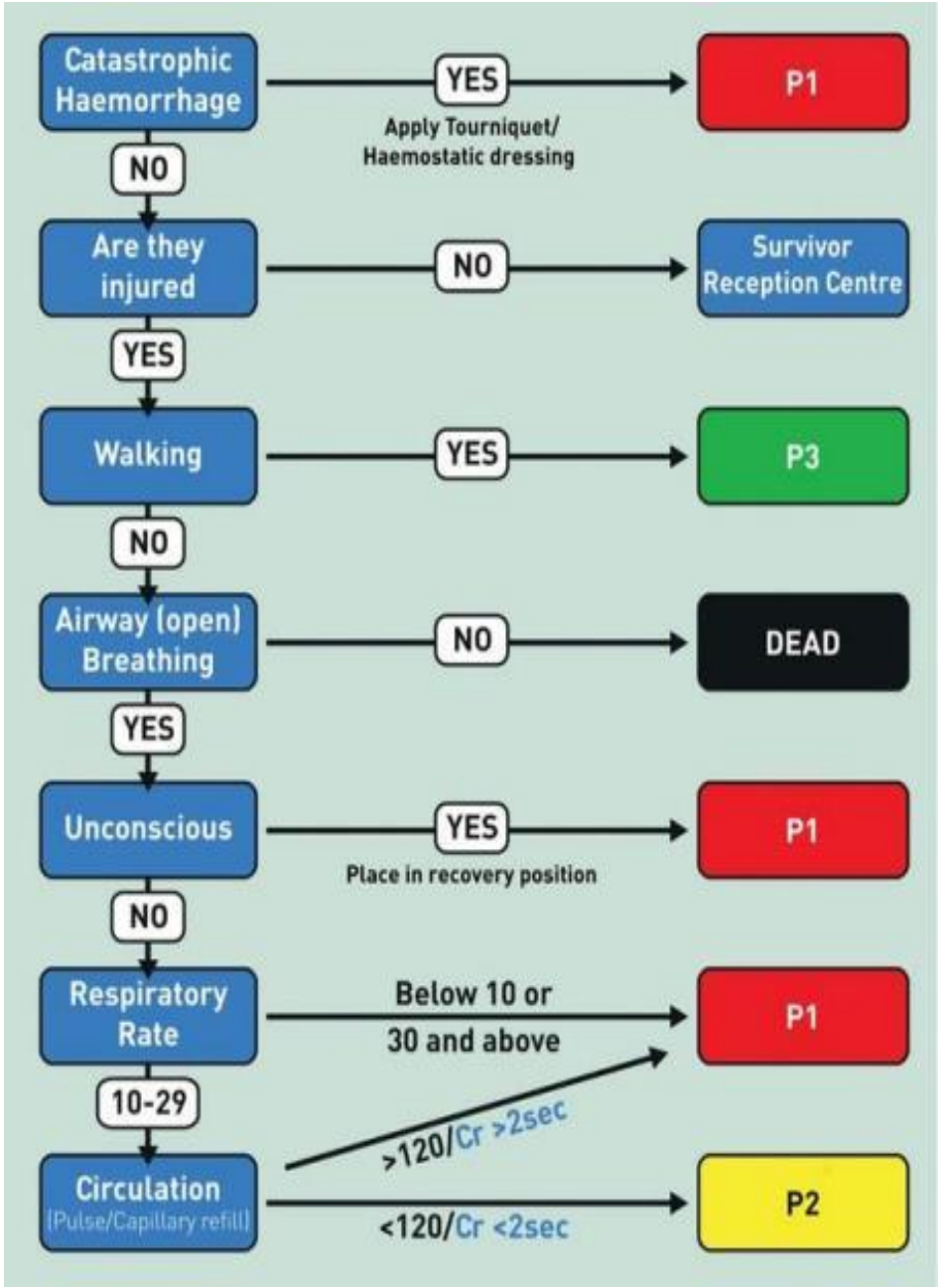
NASMeD Sieve

NHSE Triage Task & Finish Group

- Set up to revise Sieve
- Evidence Based

Consider complexities

Paediatrics



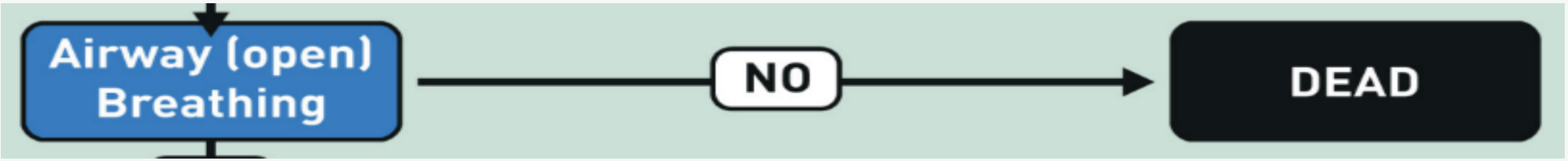
Paediatric Physiology

Peri-arrest baby

- Respiratory Rate = 12
- Pulse Rate = 60

P2 ?

Triage Dead versus Deceased



Breathing?

- How long do you check for?
- Bandwidth
- Outcomes in Traumatic Cardiac Arrest
- Coronial Inquest
- Responder welfare

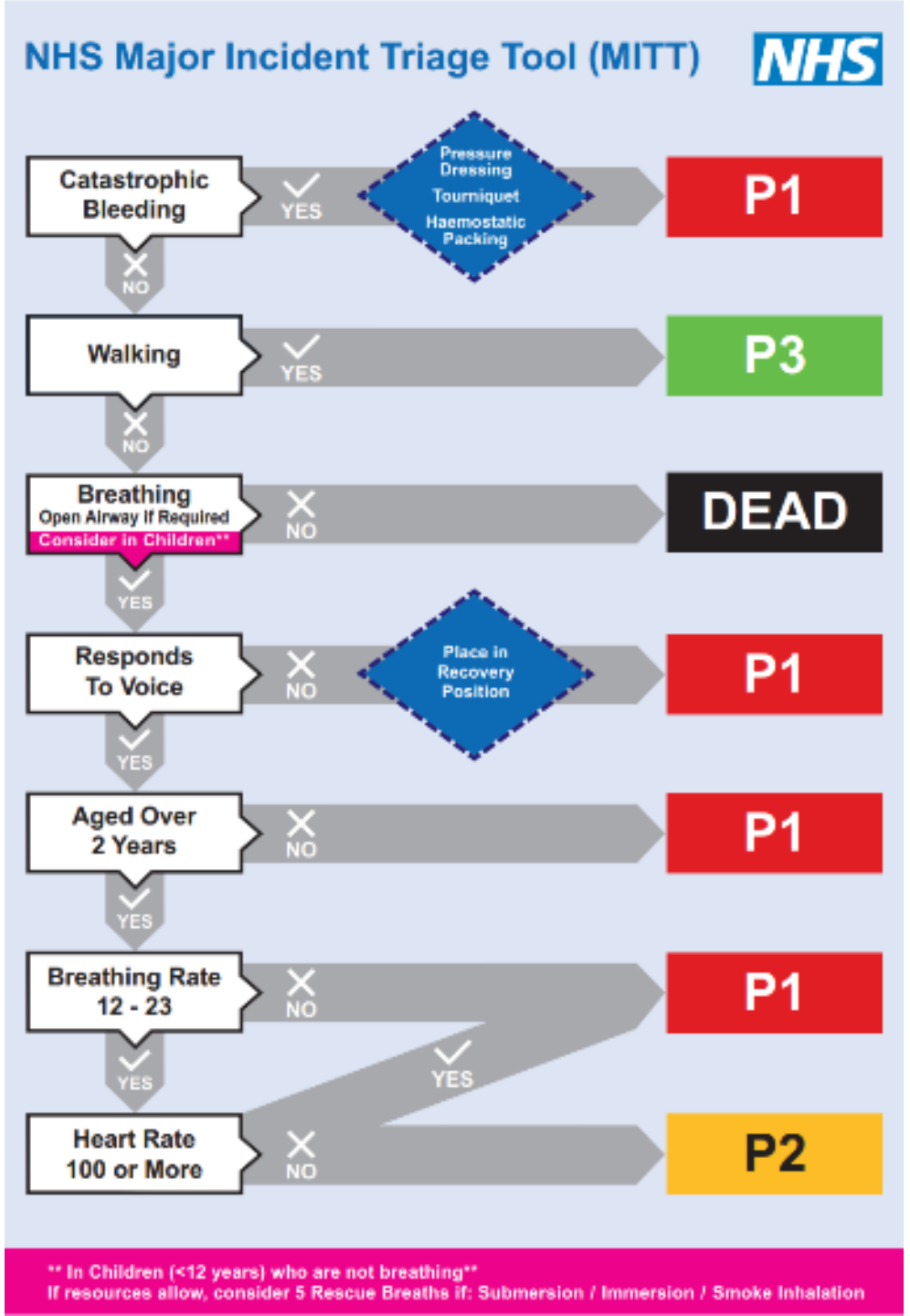
Major Incident Triage Tool (MITT)

No Uninjured Survivor

Option for rescue breaths

- Paediatric + hypoxia

Clearer assessment responsiveness (AVPU)

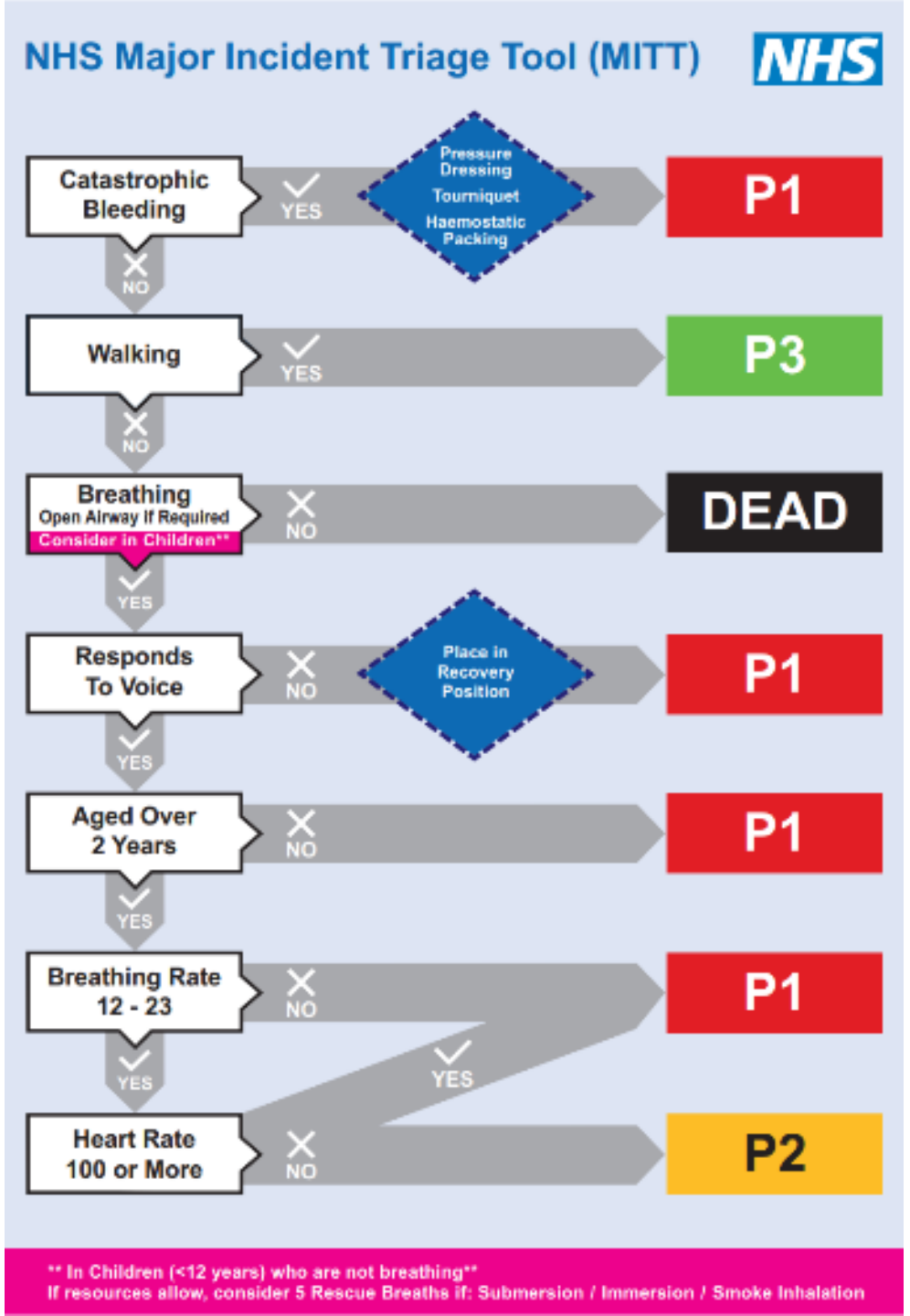


Major Incident Triage Tool (MITT)

Automatic P1 for Infants

- Difficult to assess
- Decompensate
- Emotive

Physiology scientifically based (MPTT-24)



Field Test MITT

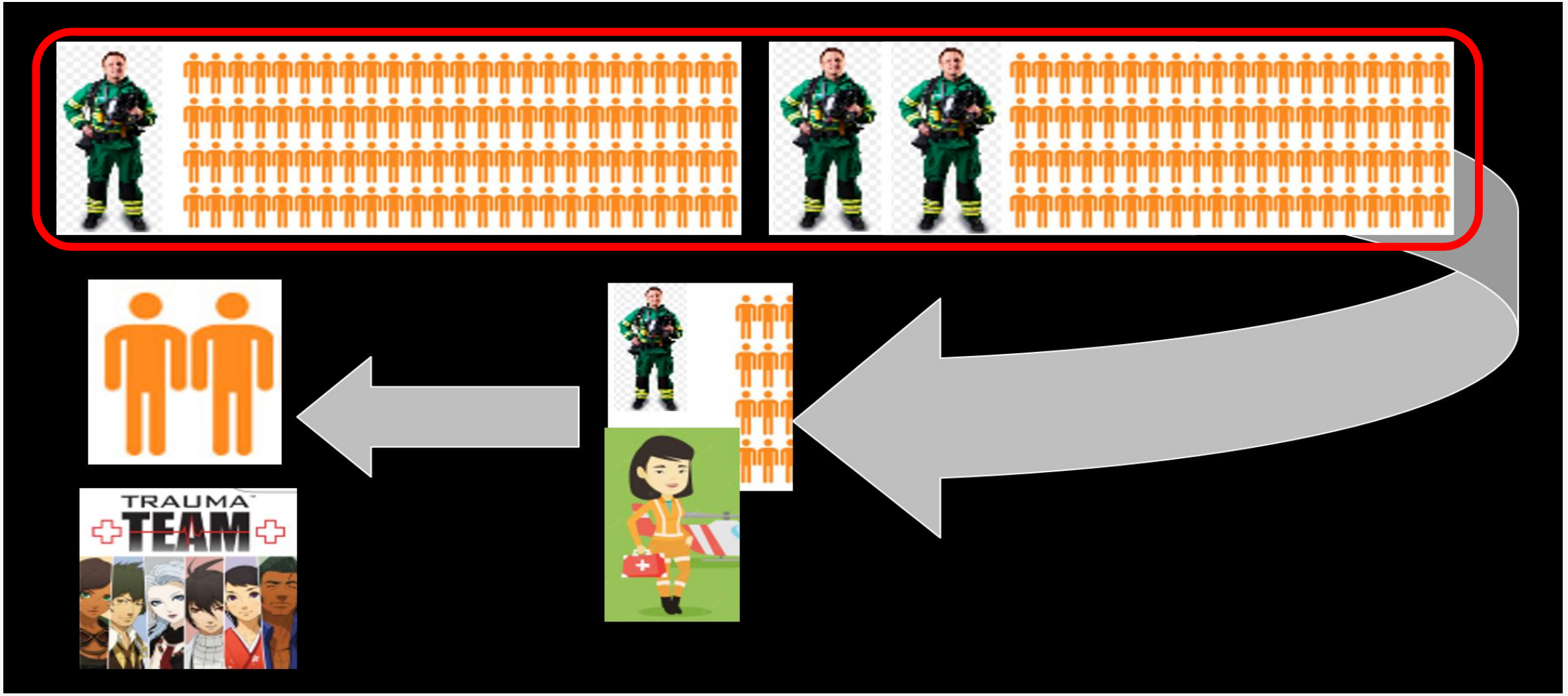
Physiological values

- Can't "*count and do*"
- No watch
- Using & losing mobile phones

Arithmetic is **VERY** poor

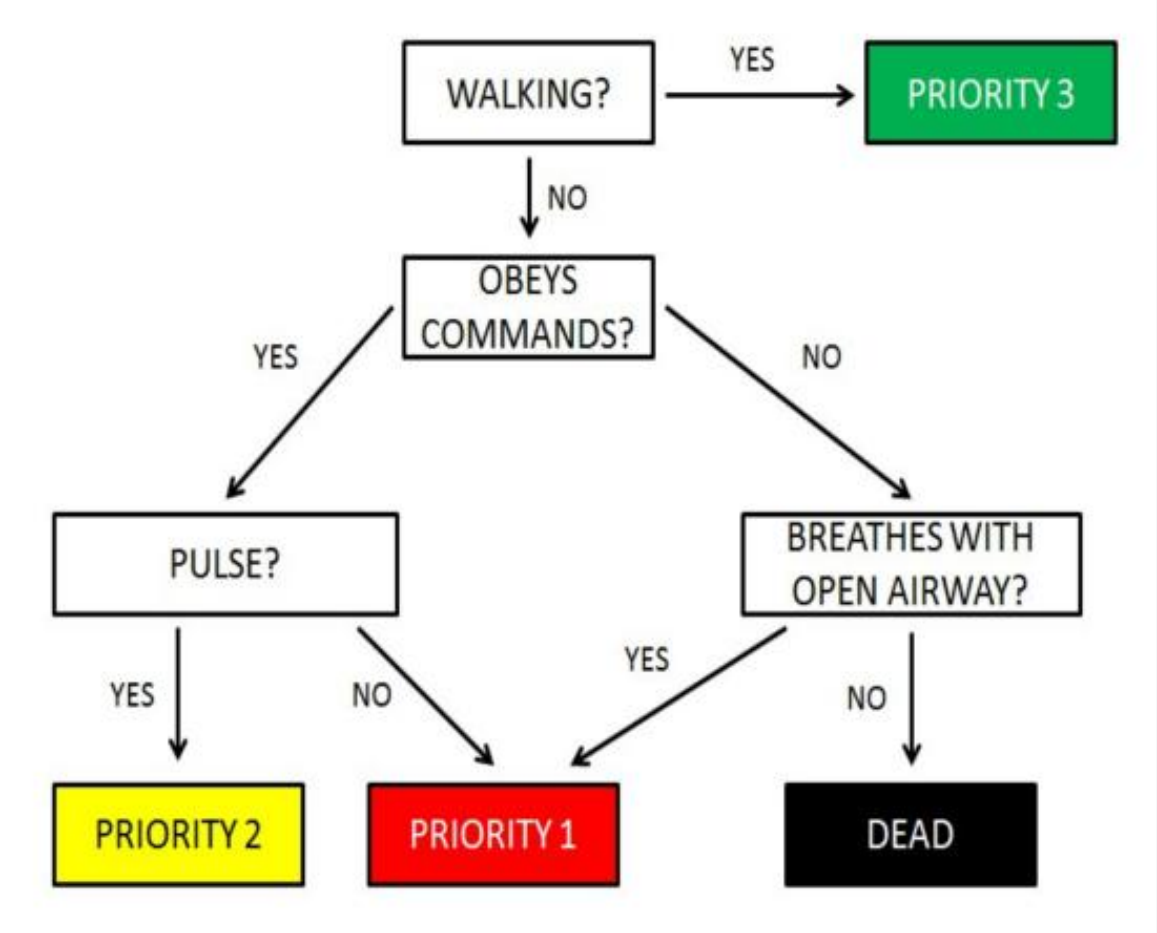
Bandwidth

‘Numbers Game’

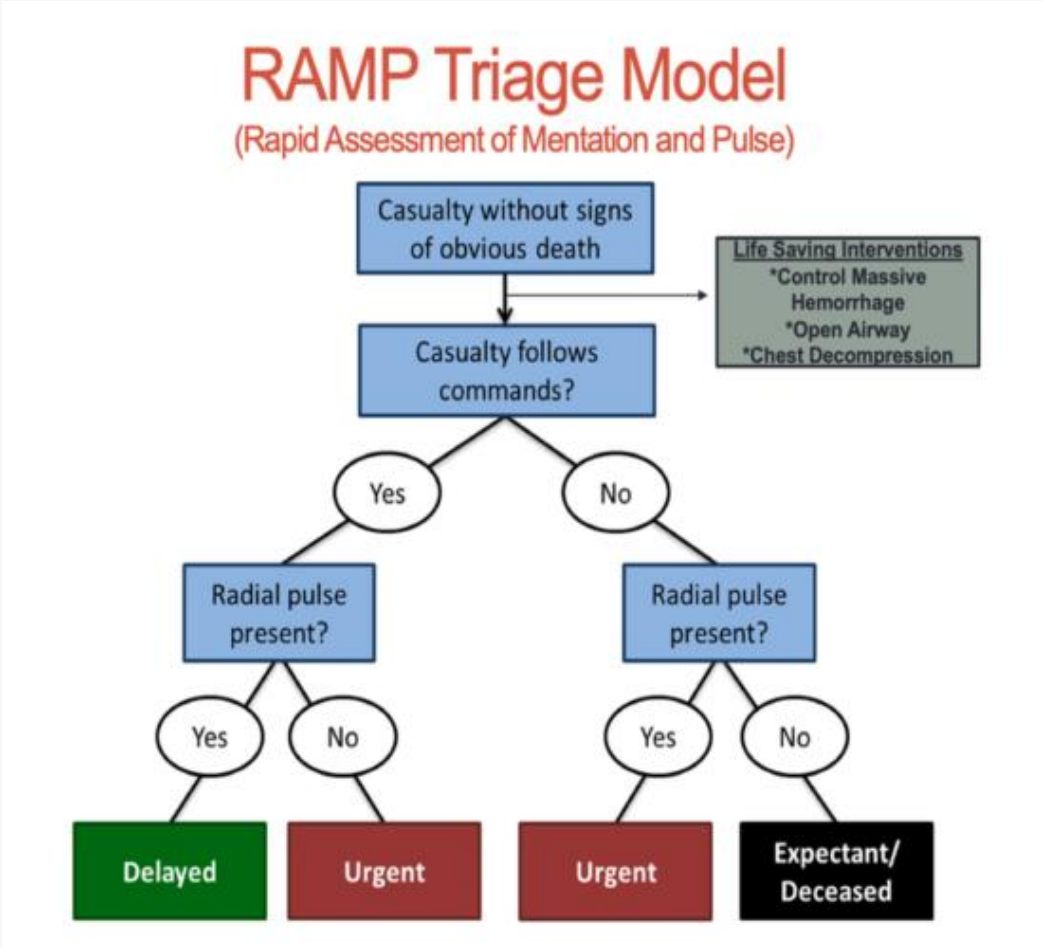


Rapid Triage Tools

Careflight



RAMP



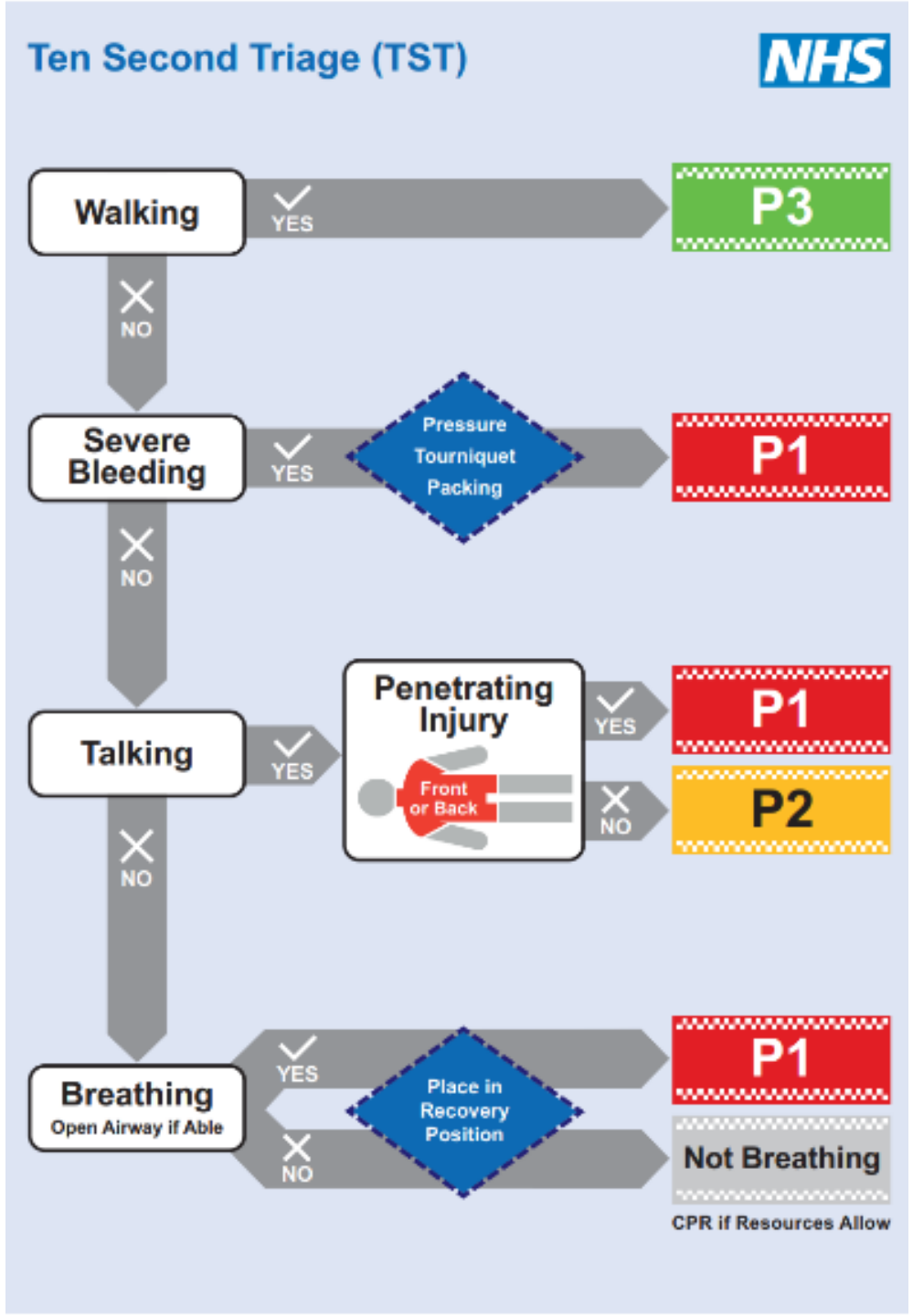
TST

(Ten Second Triage)

Walking first

‘Severe Bleeding’

Simple assessment of response
If ‘Talking’
Penetrating torso injury check



TST

(Ten Second Triage)

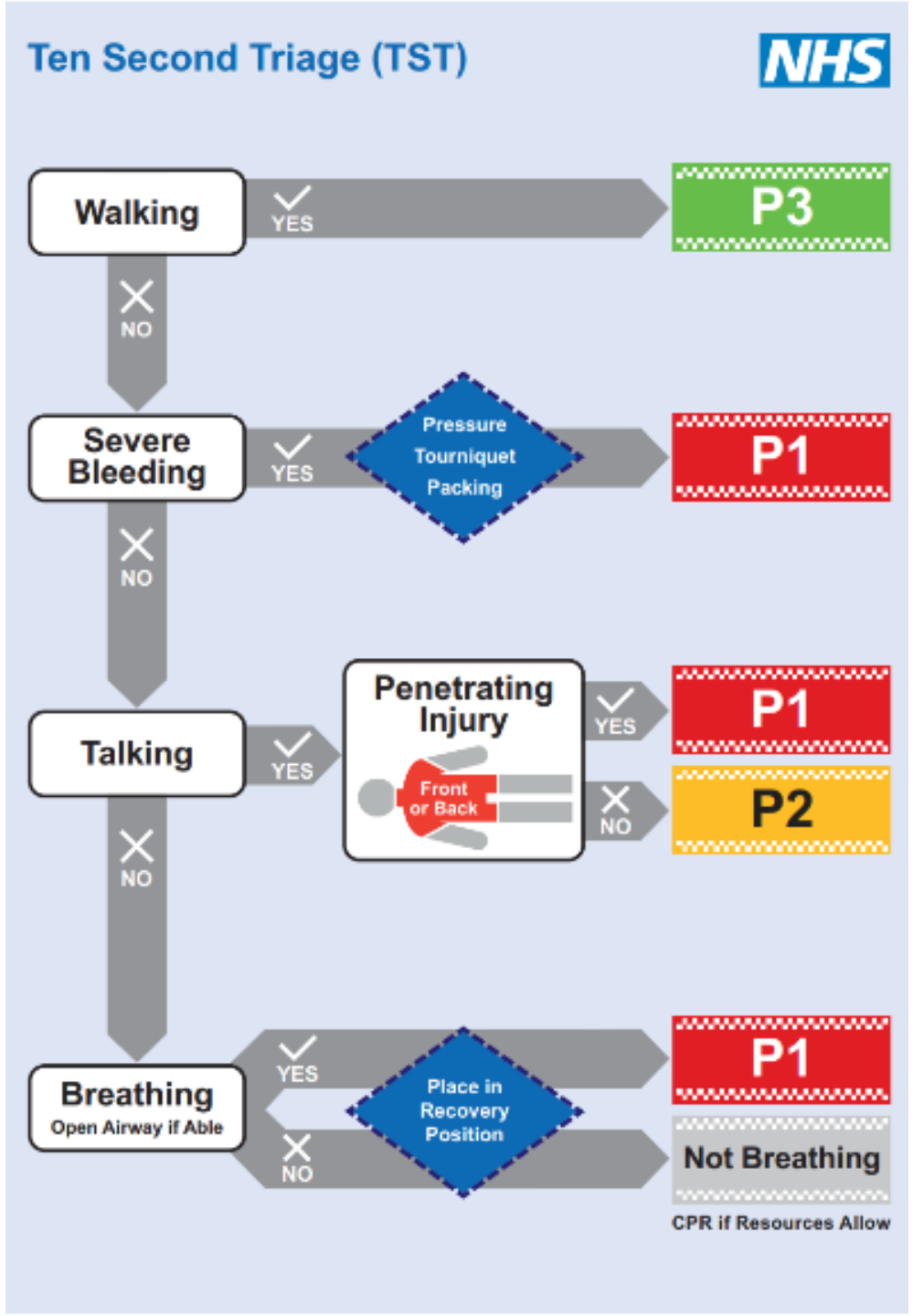
If not ‘Talking’

Check for ‘Breathing’

No one is Dead

- Breathing or Not Breathing same care

Incorporates LSI



Field Test TST

Major Incident

- 37 casualties
- 11 Index patients

Mixed trauma

- Blunt & penetrating
- Blast, ballistic & burns

Mixed Emergency Services

- Ambulance
- Police
- Fire Rescue

Field Test TST

Qualitative

- **Simple**
- **Effective**
- **Gave confidence**
    - **Do LSI and move on**
- **Shared Model**
- **Common Language**

Field Test TST

Quantitative

Very quick to LSI

- **TST 6 minutes**

Mean Time to Triage/Patient

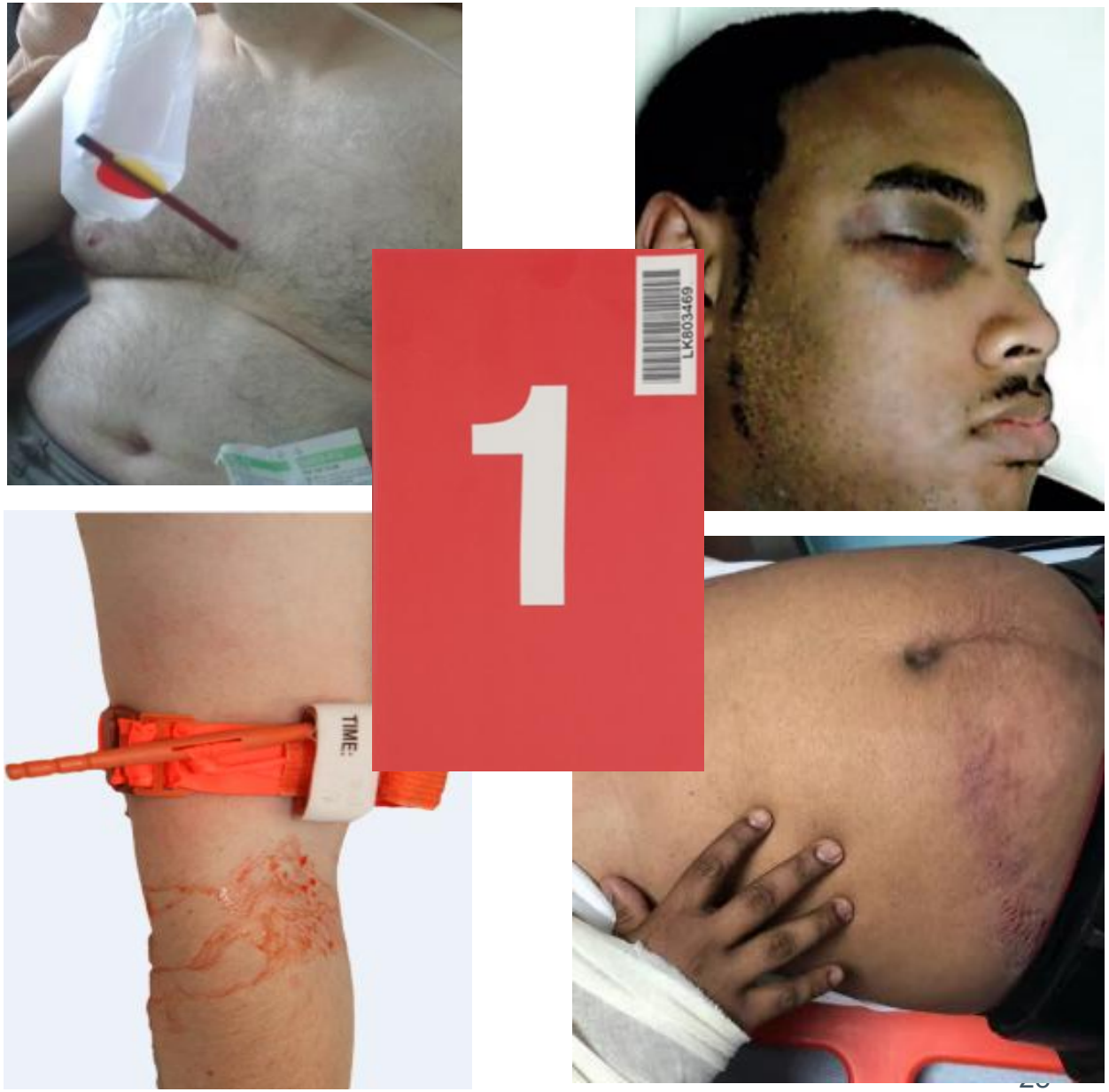
- **TST 10. seconds**

Advanced Clinicians

Key Triage Roles.

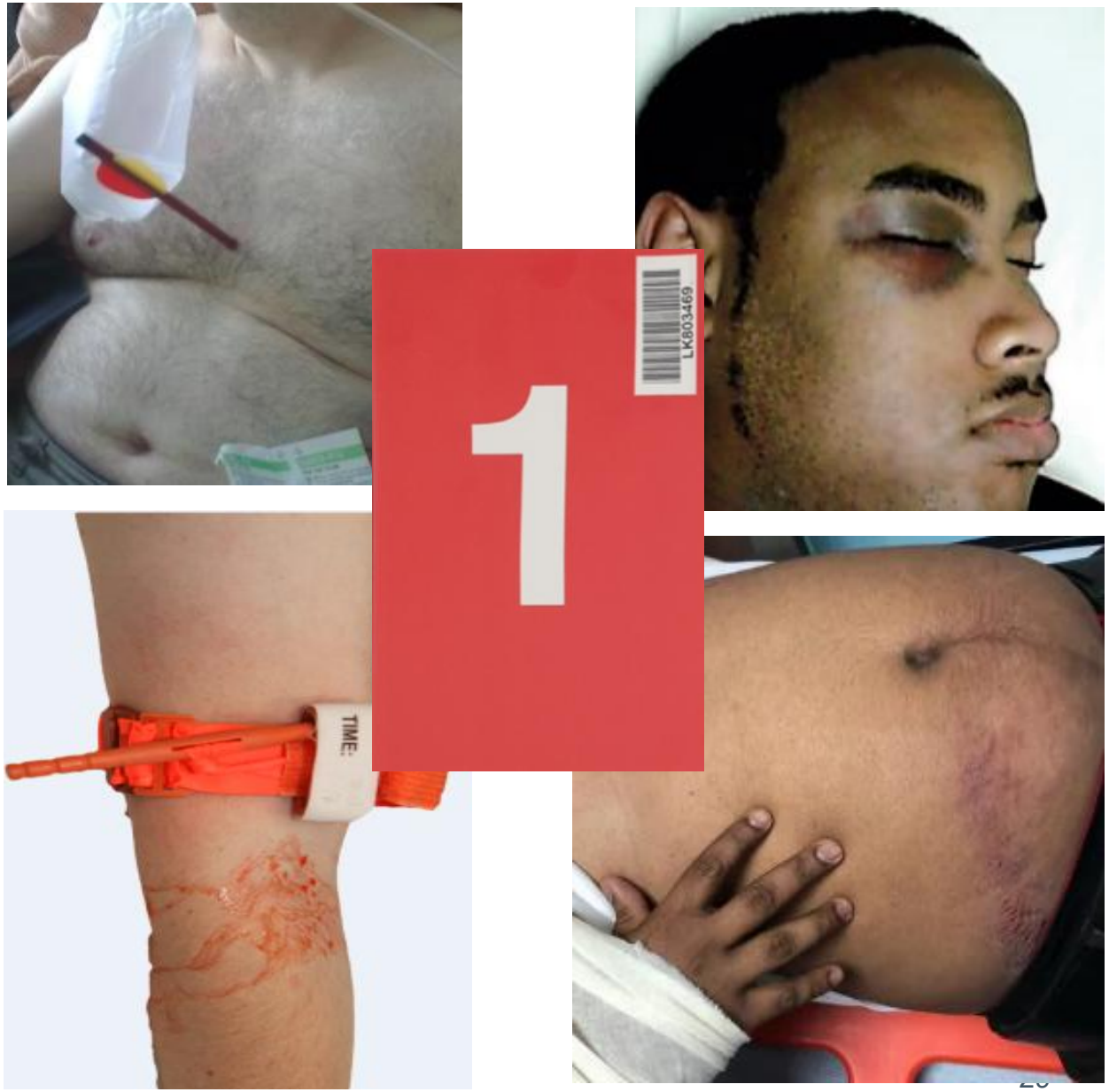
- Support decision if MITT required after TST.
- Reprioritise P1
- Review Silver ‘Not Breathing’

All P1 Are Not the Same!



All P1 Are Not the Same!

Who's the *PeeWunniest* of P1's?



Expectant P4 v P1 Hold

P1

But unlikely to survive as overwhelmed.

Controversial

Consider futility?

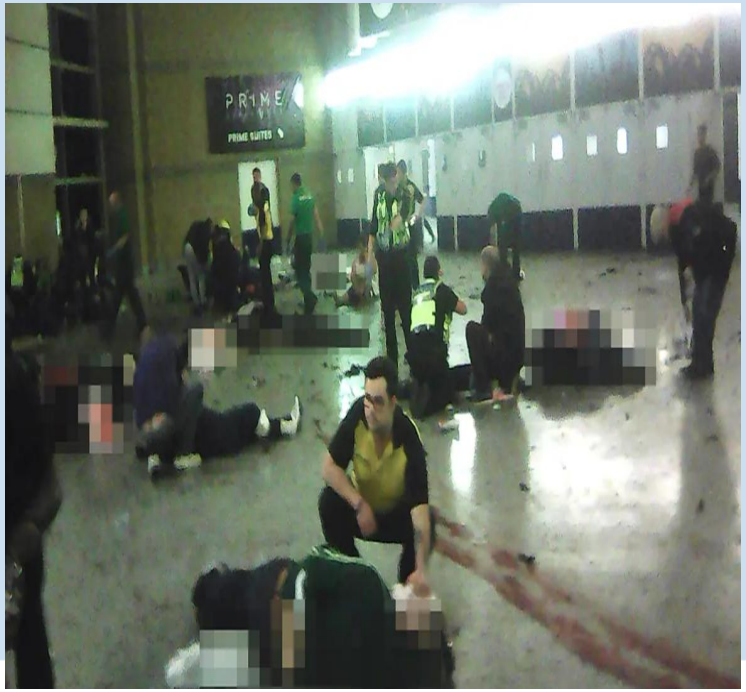
P1 (Hold)

- Senior clinician decision

The Context

Manchester Arena

22nd May 2017



Manchester Arena

Looking at all aspects:

- Response
- Preparation
- Each victim.

Lessons identified to improve response.

Hard hitting

Wide ranging

manchester arena inquiry

Manchester Arena Inquiry
Volume 2: Emergency Response

Volume 2-II

Report of the Public Inquiry into the Attack on Manchester Arena on 22nd May 2017

Chairman: The Hon Sir John Saunders

Thousands of hours of evidence.

- Written
- Oral
- Video
- Multiple expert reports
- Witness testimony

Recommendations

Total: 149

manchester arena inquiry

Manchester Arena Inquiry
Volume 2: Emergency Response

Volume 2-II

Report of the Public Inquiry into the Attack on Manchester Arena on 22nd May 2017

Chairman: The Hon Sir John Saunders

Recommendations

- Many across Emergency Services

12 (76) Monitored Recommendations

manchester arena inquiry

Manchester Arena Inquiry
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Timeline of Response

- 1 minute police in City Room
- 11 minutes 1st paramedic at scene
- 22 minutes 1st paramedic in City Room
- 28 minutes 1st ambulance at scene
- 44 minutes HART paramedics in City Room
- 1 hour 8 minutes last living casualty from City Room
- > 4 hours last casualty from CCS

manchester arena inquiry

Manchester Arena Inquiry Volume 2: Emergency Response

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Remember

22 lives lost

The hundreds injured

- Physically
- Psychologically

Their families, friends

All those affected

The twenty-two who died

Alison Howe

Angelika Klis Marcin Klis

Chloe Rutherford Liam Curry

Courtney Boyle

Eilidh MacLeod

Elaine McIver

Georgina Bethany Callander

Jane Tweddle

John Atkinson

Kelly Brewster

Lisa Lees

Martyn Hakan Hett

Megan Joanne Hurley

Michelle Kiss

Nell Jones

Olivia Paige Campbell-Hardy

Philip Tron

Saffie-Rose Roussos

Sorrell Leczkowski

Wendy Fawell

The Victims

- **22 deceased**
- **20 Unsurvivable**

Majority 2-6m

- Others 9, 14 & 20m

2 cases survivability was debated

‘The Care Gap’

Narrowing the Gap

- Get sufficient resources
- Get resources in quickly

Filling the Gap

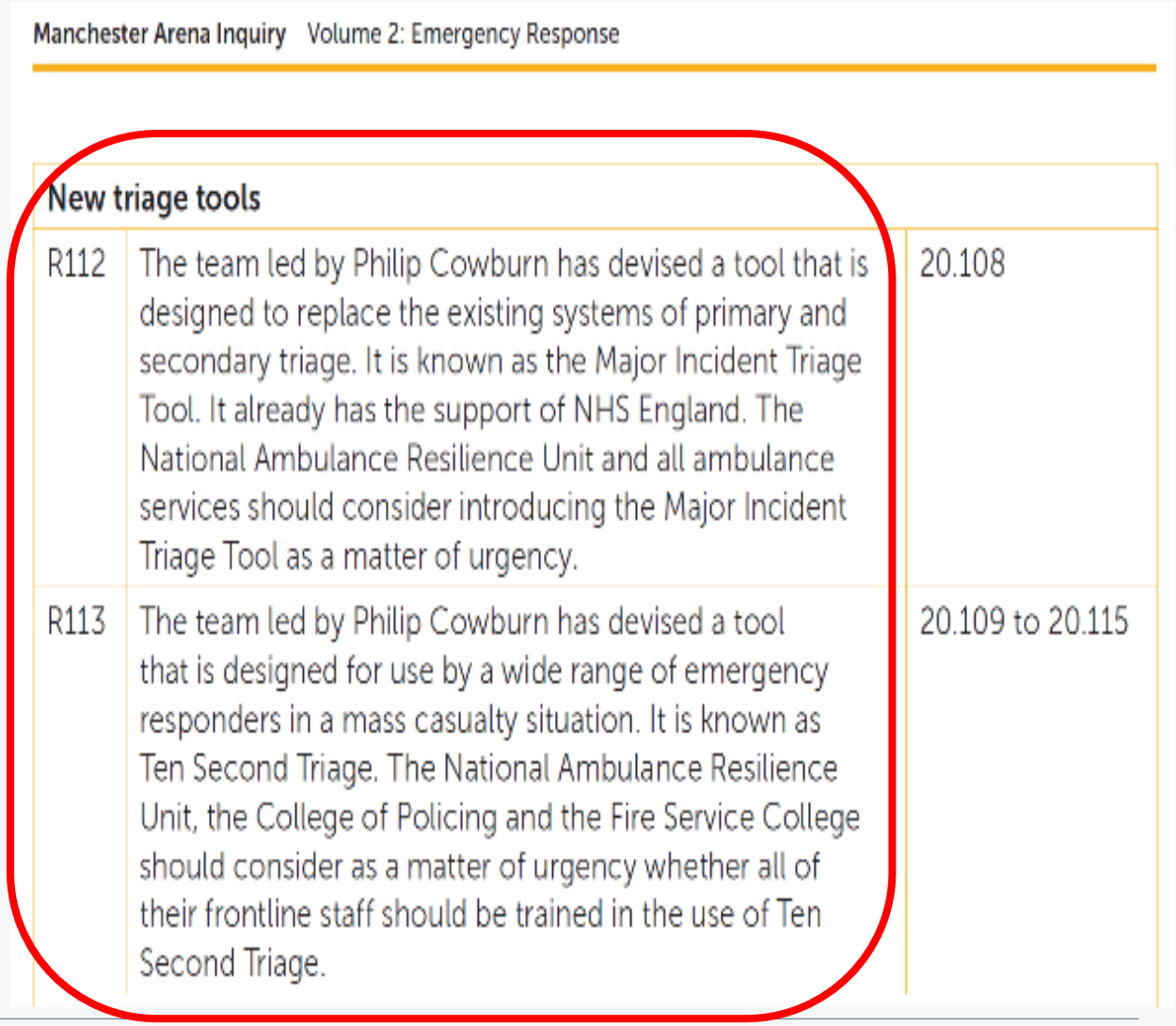
- Any resources present deliver basic care

NHSE Task & Finish Group Output

Two New Prehospital Tools

1. **Major Incident Triage Tool (MITT)**
   - Replacement of NASMeD Sieve for healthcare

2. **Ten Second Triage (TST)**
   - For **all** responders



Manchester Arena Inquiry Volume 2: Emergency Response

New triage tools		
R112	The team led by Philip Cowburn has devised a tool that is designed to replace the existing systems of primary and secondary triage. It is known as the Major Incident Triage Tool. It already has the support of NHS England. The National Ambulance Resilience Unit and all ambulance services should consider introducing the Major Incident Triage Tool as a matter of urgency.	20.108
R113	The team led by Philip Cowburn has devised a tool that is designed for use by a wide range of emergency responders in a mass casualty situation. It is known as Ten Second Triage. The National Ambulance Resilience Unit, the College of Policing and the Fire Service College should consider as a matter of urgency whether all of their frontline staff should be trained in the use of Ten Second Triage.	20.109 to 20.115

Organisational Buy In

Launched April 2023

Educational packages
Open Access

Roll out in July 2024

Trauma
OnlineFirst, March 6, 2023

https://doi.org/10.1177/14604086231156219

Editorial

Ten second triage: A novel and pragmatic approach to major incident triage

J. Vassallo [1,2], P. Cowburn [3,4,5], C. Park [6,7], D. Bull [5], S. Harris [8], C.G. Moran [9,10], and J.E. Smith [2,11]


HART

Acknowledgements

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National Ambulance Resilience Unit
NARU

CRMI
Clinical Response to Major Incidents

NHS England

Thank You

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