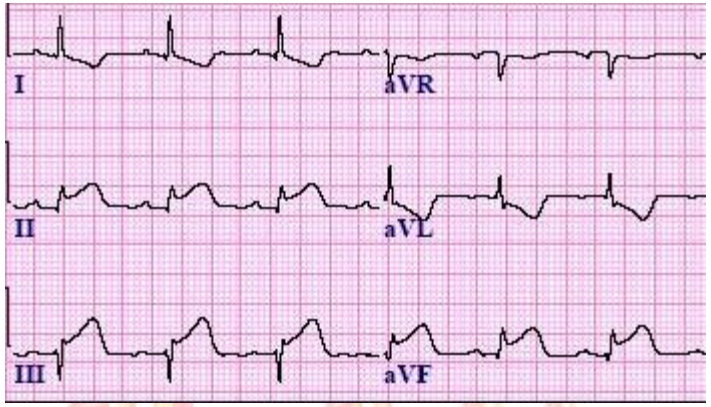
The Silver Safety Net

Dr David Raven
ED Consultant

Ready for something really controversial?

Emergency Departments Have Big Queues


I
aVR
II
aVL
III
aVF

Room for One More?

Older Major Trauma has a similar injury severity and distribution of injury to younger people, however :

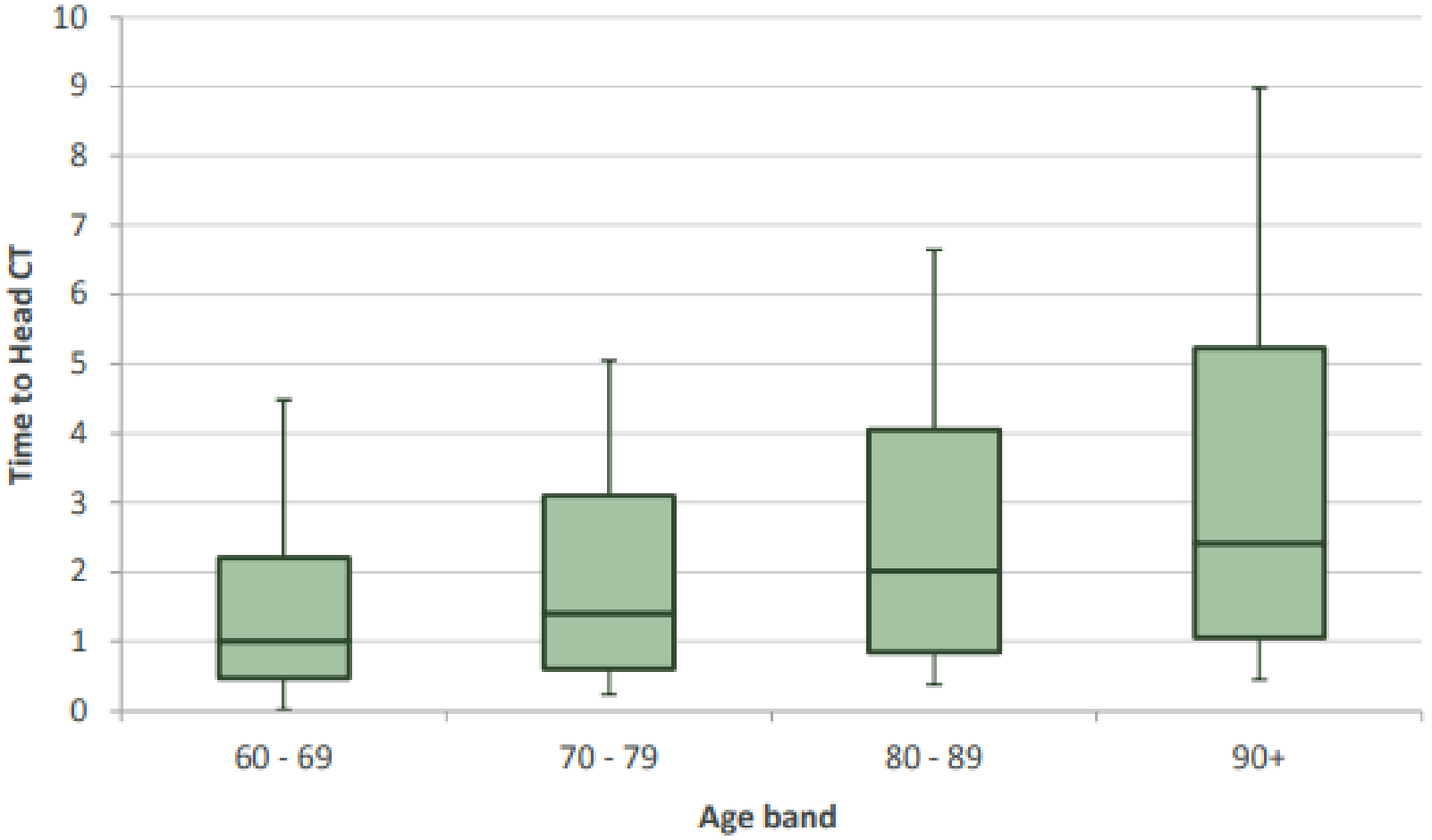
1.People are less likely to be transferred to specialist care

2.They have longer times to intervention and investigation

3.They will have less involvement of senior medical staff

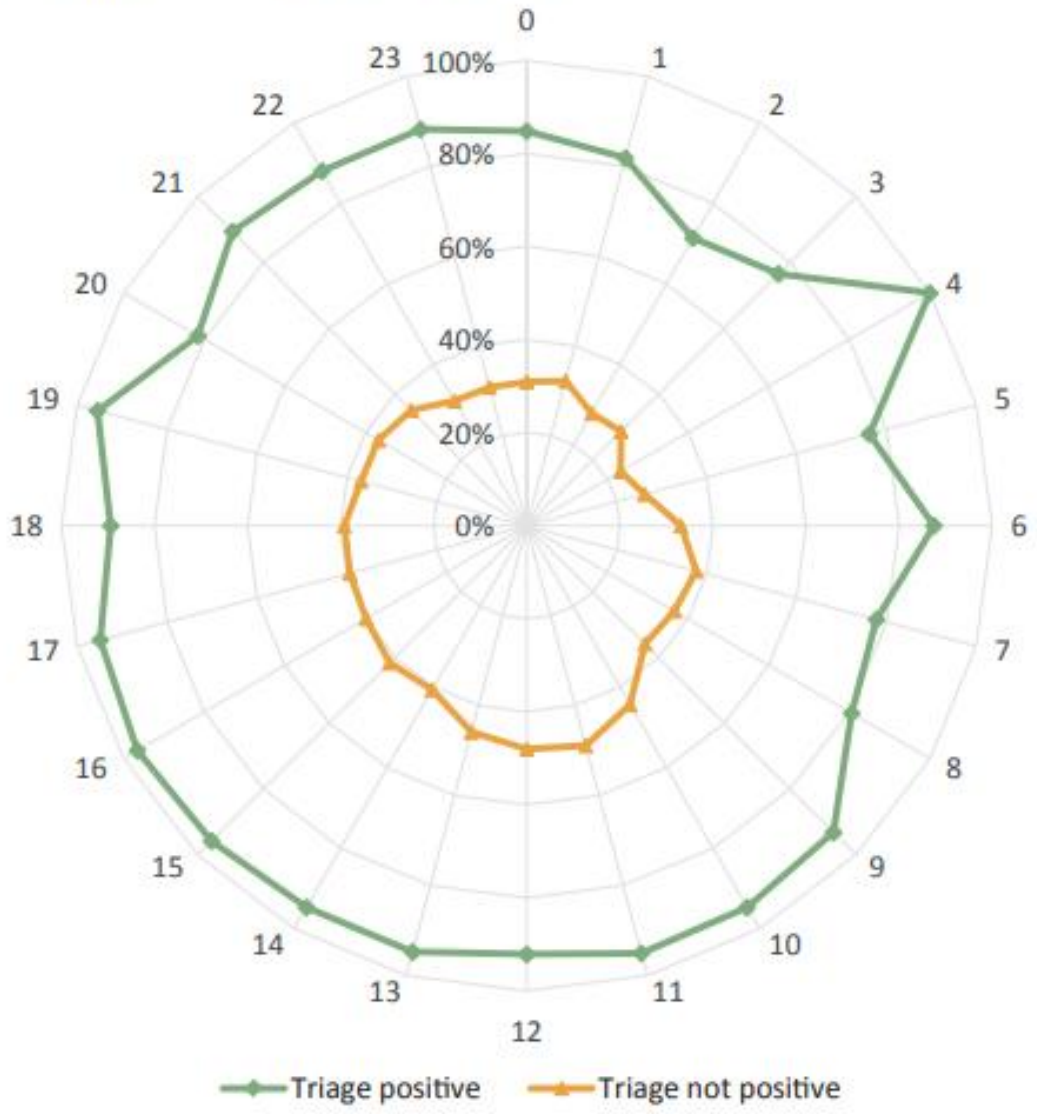
TARN England & Wales – Major Trauma in Older People (2017)

Time to Head CT for patients with Traumatic Brain Injury (TBI)



TARN England & Wales – Major Trauma in Older People (2017)

Consultant led initial care by hour of the day



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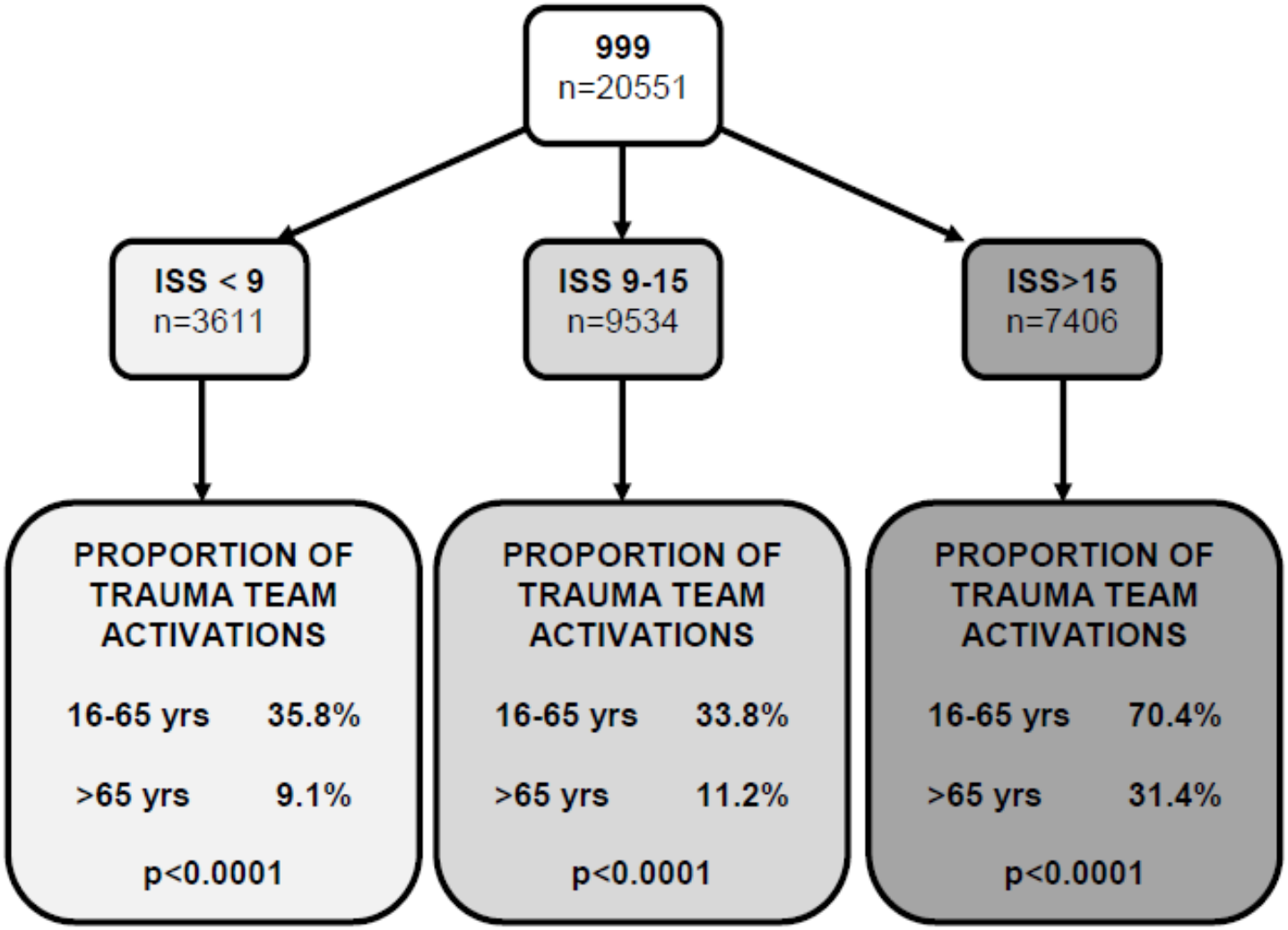
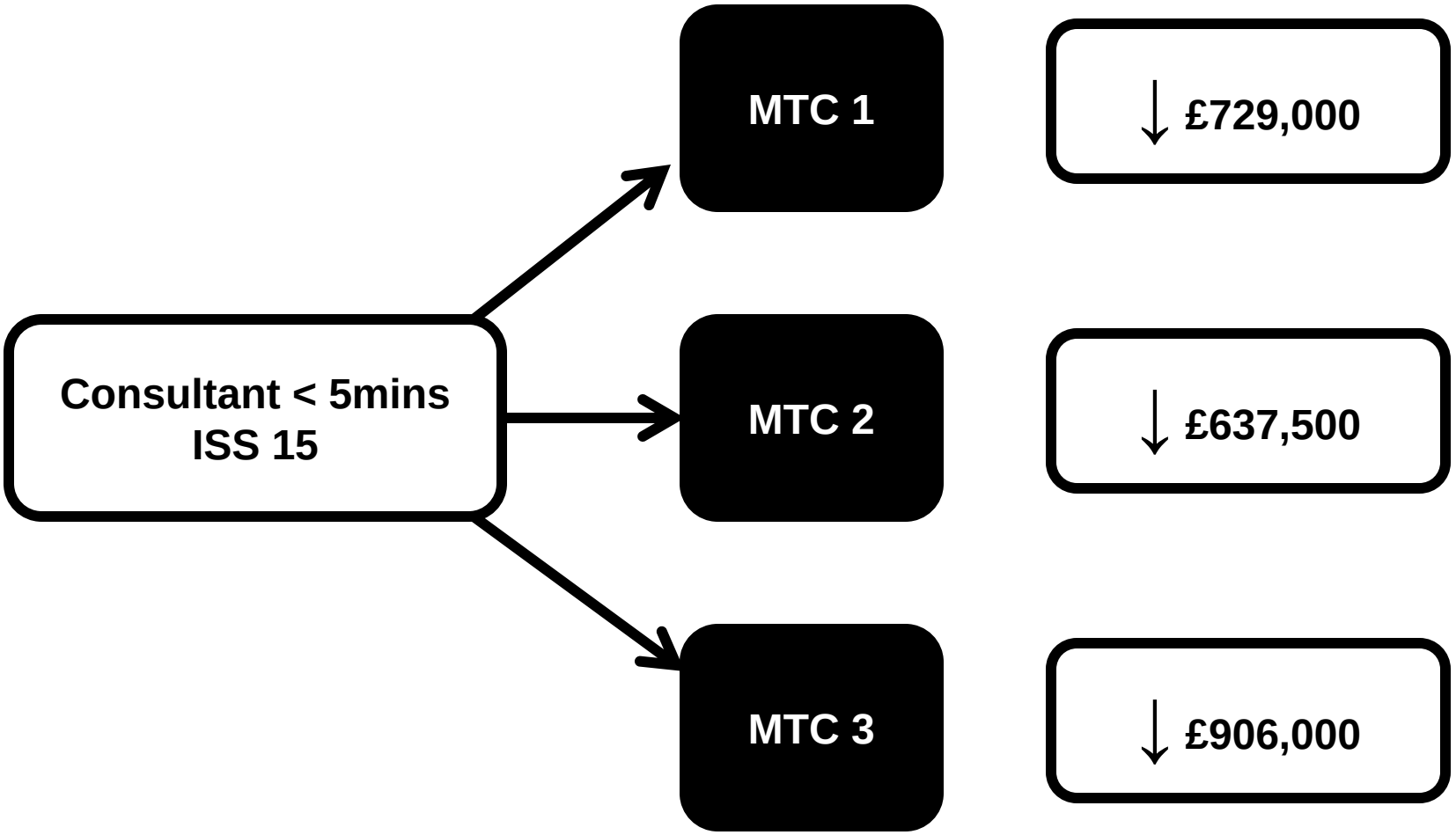


Midlands Silver Trauma Group 2017– Trauma Team Activations For Age and ISS Distribution

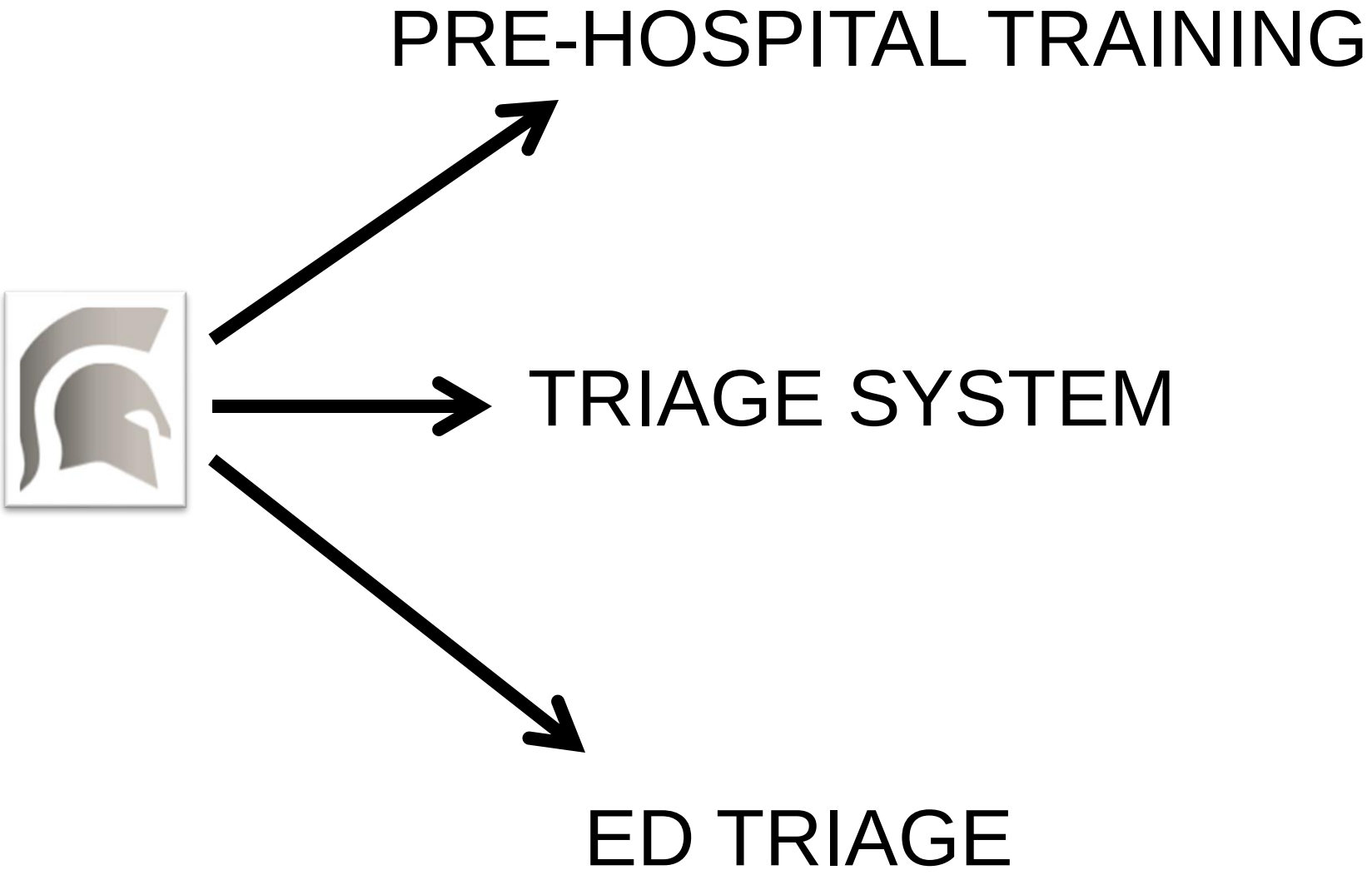
Implications?



Data from Steve Littleson, Midlands' Tri-Networks Data Analyst

Solution?

All Older People with Falls and Injury go to an MTC?


PRE-HOSPITAL TRAINING
TRIAGE SYSTEM
ED TRIAGE

Major Trauma Triage Tool

Entry criteria for this triage is a judgement that the patient may have suffered significant trauma

West Midlands Ambulance Service NHS

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1. Measure vital signs

- Glasgow Coma Scale ≤13
- Systolic Blood pressure (mmHg) <90 mmHg
- Respiratory Rate <10 or > 29 breaths per minute (<20 in infant aged <1 year), or need for ventilatory support

NO

2. Assess anatomy of injury

- All penetrating injuries to head, neck, torso and extremities proximal to elbow or knee
- Chest wall instability or deformity (e.g., flail chest)
- Two or more proximal long-bone fractures
- Crushed/ de-gloved/ mangled or pulseless extremity
- Amputation proximal to wrist or ankle
- Pelvic fractures
- Open or depressed skull fracture
- Paralysis

NO

3. Assess mechanism of injury

- **Falls**
  - Adults: >20 feet (one storey is equal to 10 feet)
  - Children: > 10 feet or two or three times the height of the child
- **High-risk motor vehicle collision**
  - Intrusion including roof: > 12 inches occupant site
  - Ejection (partial or complete) from automobile
  - Death in same passenger compartment
  - Vehicle telemetry data consistent with a high risk of injury
- Motor vehicle vs pedestrian/ bicyclist thrown, run over, or with significant (> 20 mph) impact
- Motorcycle crash > 20 mph

NO

4. Special conditions

- **Older adults**
  - Risk of injury/death increases after age 55 years
  - SBP <110 might represent shock after age 65 years
  - Low impact mechanisms (e.g. ground level falls) might result in severe injury
- **Children**
  - Should be triaged preferentially to paediatric capable trauma centres
- **Anticoagulants and bleeding disorders**
  - Patients with head injury are at high risk for rapid deterioration
- **Burns**
  - Without other trauma mechanism: consider triage to regional burn centre
  - With trauma mechanism: triage to major trauma centre
- Pregnancy > 20 weeks
- Clinician judgement in liaison with RTD

Yes to any one

If any of the factors are present:-

- Activate a Major Trauma Alert with the EOC Regional Trauma Desk
- Transport to Major Trauma Centre

If all factors are absent, proceed to stage 3.

Yes to any one

If **any of the factors** are present contact:

EOC Regional Trauma Desk for advice

If all factors are absent, proceed to stage 4.

Yes to any one

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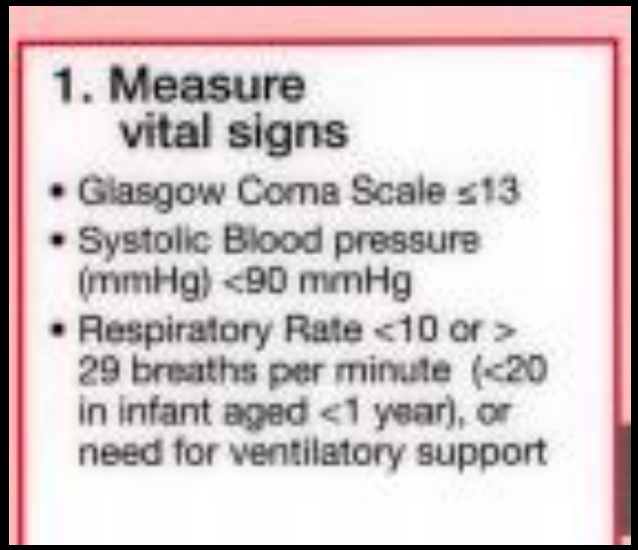
Transport to nearest Trauma Unit or Local Emergency Hospital

ARP Talkgroup 282

01384 215695 - RTD Emergency Contact | 01384 215696 - RTD General Enquiries | 01384 215697 - RTD Hospital Line



GCS

Emerg Med J 2016; 33(6): 381-5

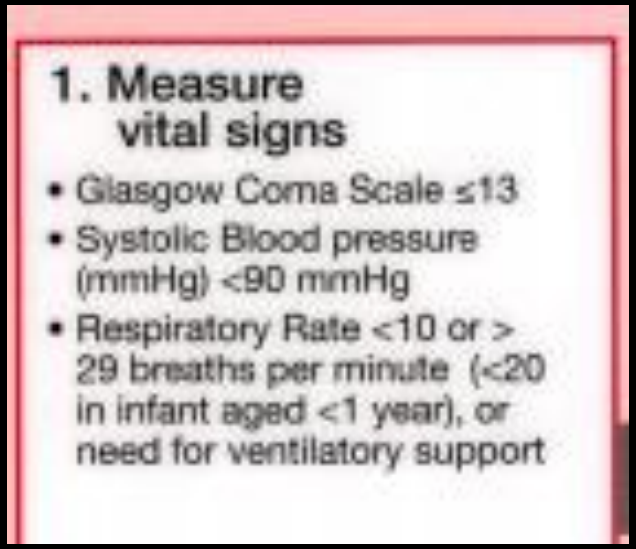
Older Patients with traumatic brain injury present with a higher GCS score than younger patients for a given severity of injury

Kehoe A, Smith JE, Boumara O et al

J Trauma 2010; 69(4): 813-20

Normal presenting vital signs are unreliable in geriatric blunt trauma victims

Heffernan DS, Thakkar RK, Monaghan SF



BP

Scand J Trauma Resus Emerg Med 2013; 21: 7

A retrospective analysis of geriatric trauma patients: venous lactate is a better predictor of mortality than traditional vital signs

Salottolo KM, Mains CW, Offner PJ

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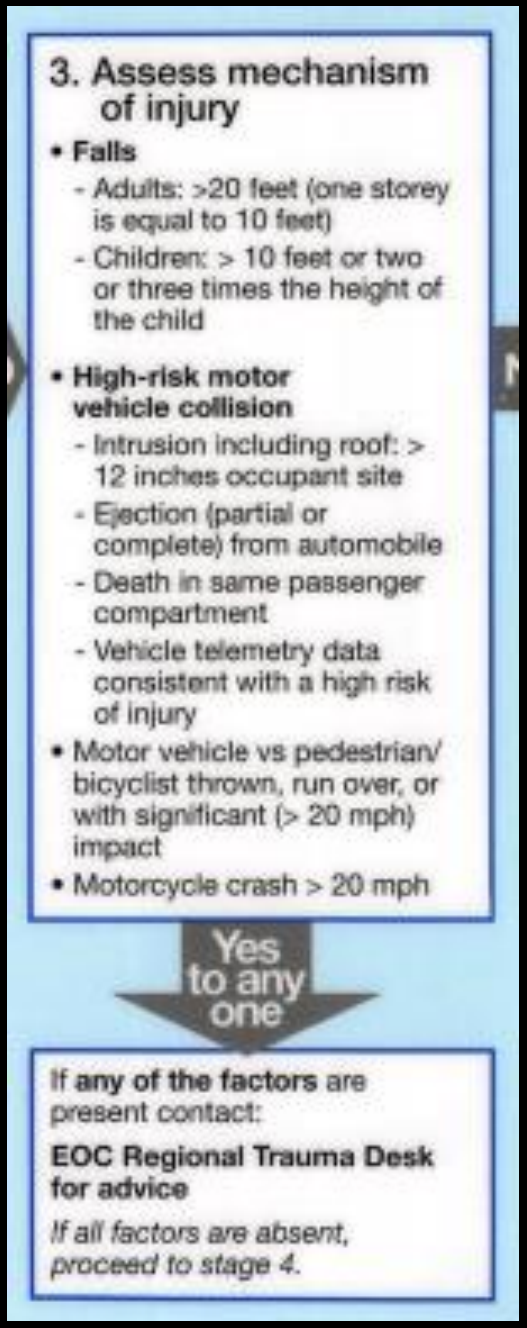
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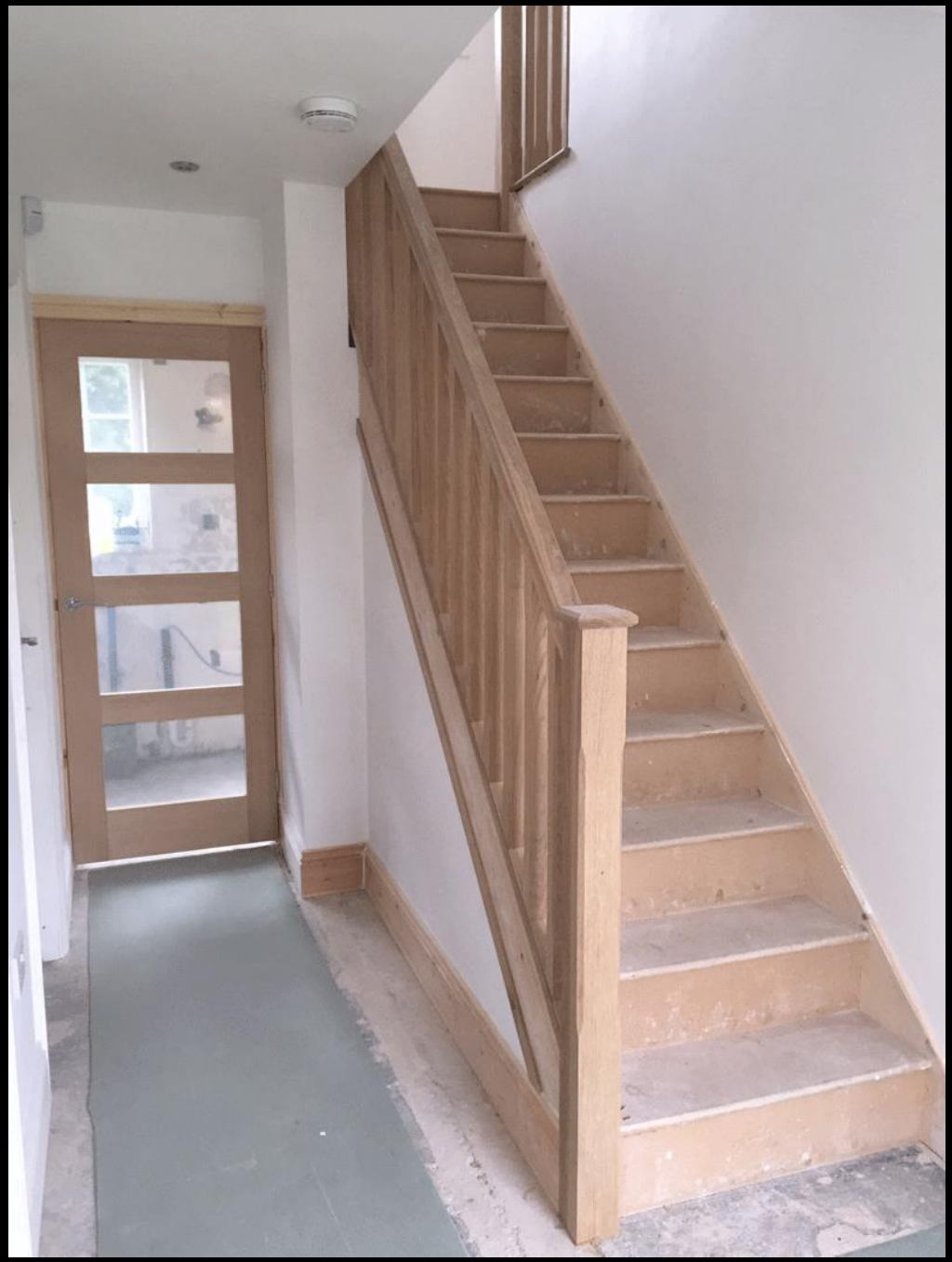

Aged 65 years and over?

Silver Trauma Safety Net

Issue Silver Trauma Pre-Alert With Any of the Following:

PHYSIOLOGY

SBP <110mmHg in the presence of significant injury*

**excludes minor abrasions, lacerations, haematoma, or fractures distal to wrist / ankles*

ANATOMY

Injury to 2 or more Body Regions (excluding injuries distal to wrist/ankle joints)

Suspected shaft of femur fracture

Open fracture proximal to wrist / ankles

MECHANISM

Fall downstairs

Road Traffic Collision* (entrapment > 30mins; ejection; death in same incident; telemetry suggests high-energy)

Pedestrian or Pedal-cyclist vs Car*

** Direct MTC Conveyance*

Lower threshold for MTC conveyance if a patient is on anticoagulation medication with any of the listed mechanisms of injury

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*excludes minor abrasions, lacerations, haematoma, or fractures distal to wrist / ankles		*Direct MTC Conveyance

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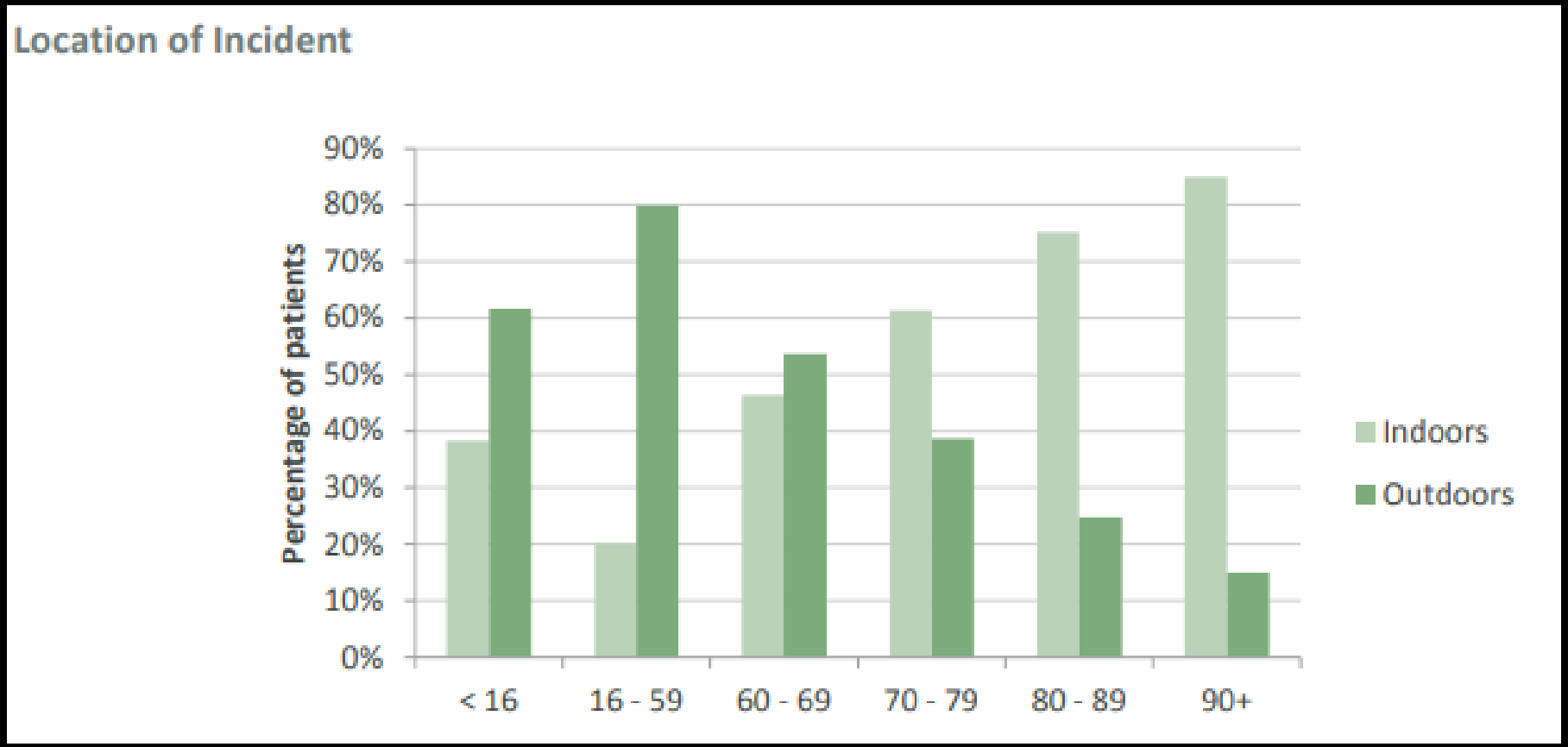
MTC

Limitations

- Reliant on pre-hospital teams calling the trauma desk and not just applying the existing tool
- Initial recognition of trauma in older people – injury vs. illness
- Acceptance of alerts by overcrowded EDs



"Pre-hospital triage status is not recorded in many older patients, possibly because pre-hospital providers do not always consider major trauma as a potential diagnosis"

TARN, Major Trauma in Older People 2017

Next Steps.....

- Review impact
- Training.....

Contributors:

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