



Imperial College
Healthcare
NHS Trust



Major Trauma Services for Frail Patients

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Imperial College London



Imperial College
London

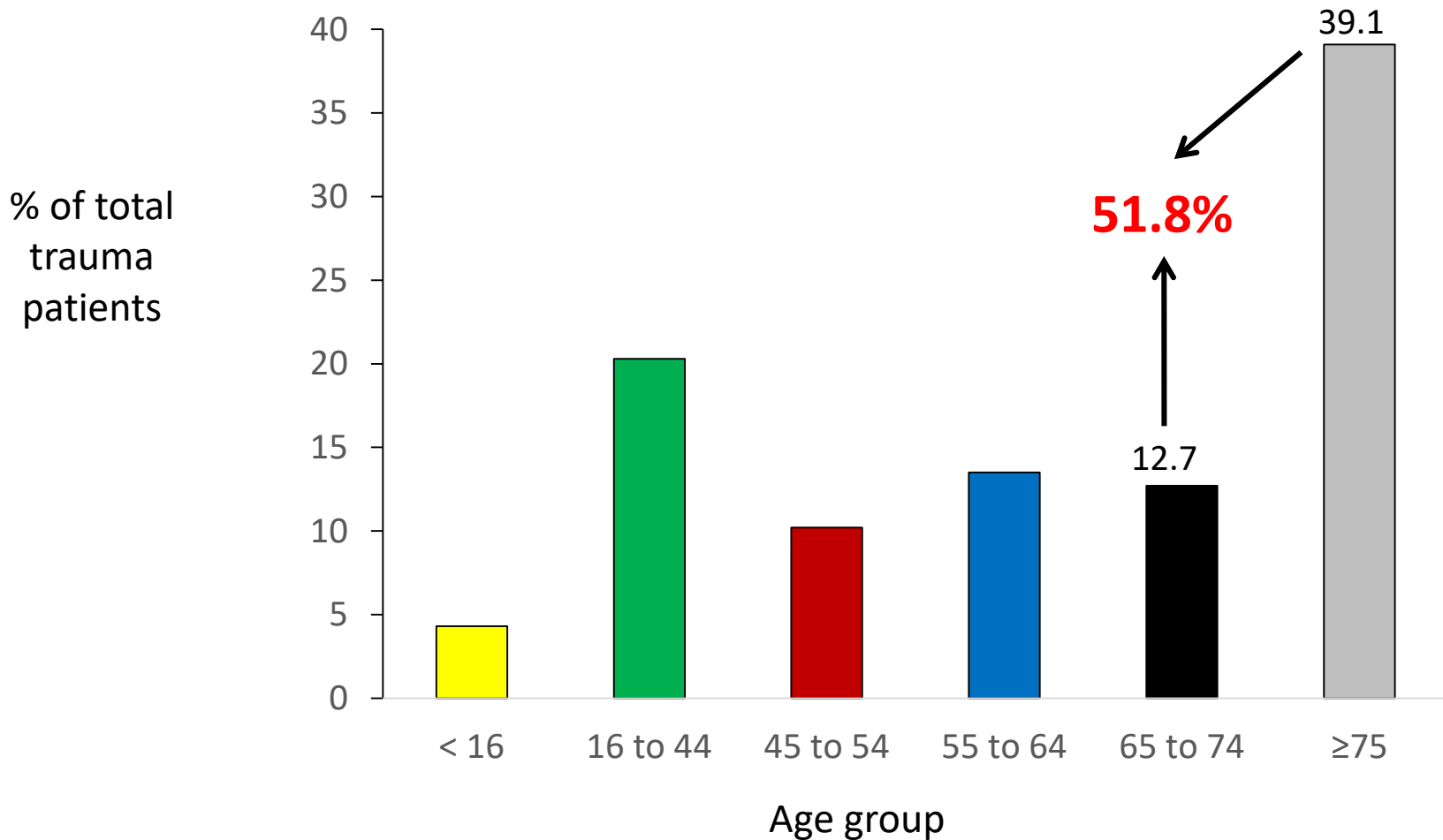






2017 – England, Wales, Northern Ireland

Total number of trauma patients = 64,374



Are the frail destined to fail?

- Post-op outcomes for all types of surgery
 - Systematic review ~8000 patients
- Frail patients:
 - Stay in hospital longer (≥ 1 day)
 - 3x more likely to die in hospital
 - 2x more likely to die within 1 year
 - 6x more likely to need more prolonged rehabilitation or a step-down facility

Are the frail destined to fail?

- 368 trauma patients >65yrs
- Trauma specific frailty index
 - Frail patients are x3 more likely to die from a complication
 - Less likely to go home
 - More likely to need rehab

Joseph B et al. The impact of frailty on failure-to-rescue in geriatric trauma patients: A prospective study Trauma Acute Care Surg. 2016 Dec;81(6):1150-1155.

National Major Trauma Geriatrics

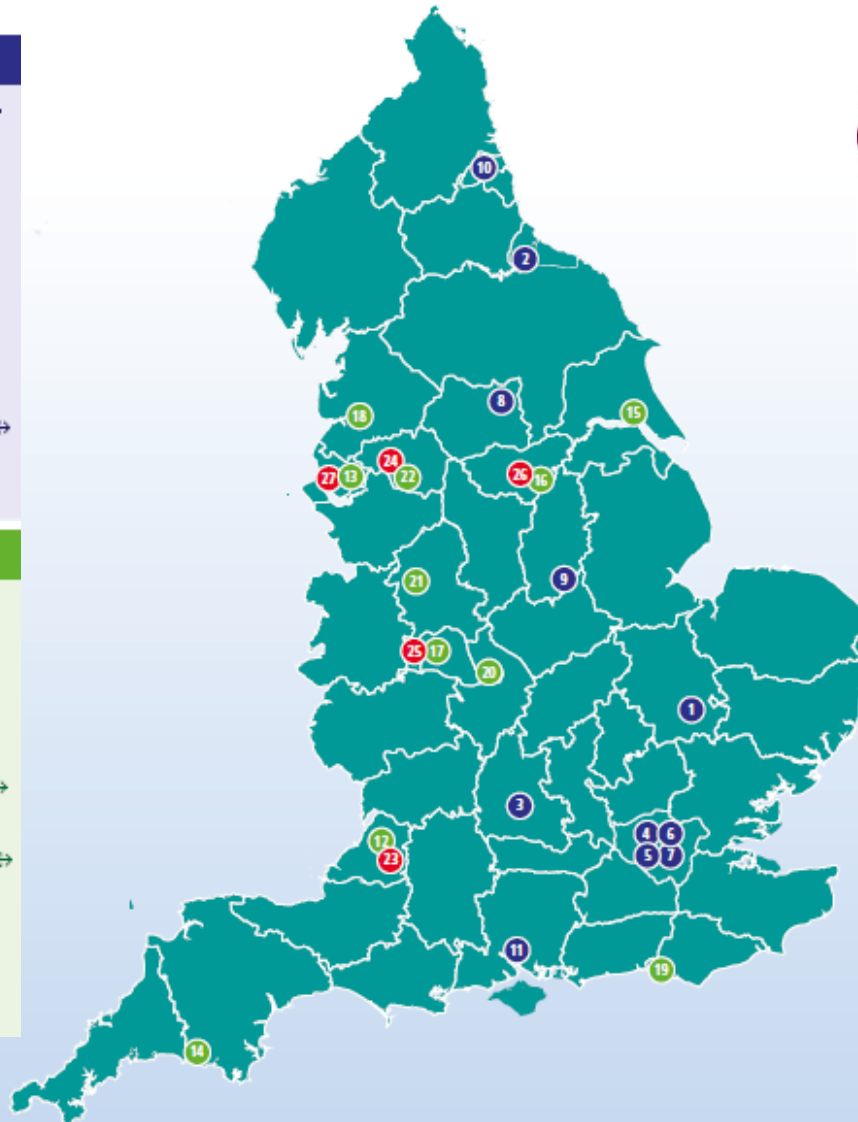
Meeting 14th November 2018

Adult & Children's MTCs

- 1: Addenbrooke's Hospital Cambridge ⇄
- 2: James Cook University Hospital Middlesborough ⇄
- 3: John Radcliffe Hospital Oxford ⇄
- 4: St Mary's Hospital London ⇄
- 5: St George's Hospital London ⇄
- 6: Royal London Hospital ⇄
- 7: King's College Hospital London ⇄
- 8: Leeds General Infirmary ⇄
- 9: Queen's Medical Centre Nottingham ⇄
- 10: Royal Victoria Infirmary Newcastle ⇄
- 11: Southampton General Hospital ⇄

Adult MTCs

- 12: Southmead Hospital Bristol ⇄
- 13: Aintree University Hospital Liverpool ⇄
- 14: Derriford Hospital Plymouth ⇄
- 15: Hull Royal Infirmary ⇄
- 16: Northern General Hospital Sheffield ⇄
- 17: Queen Elizabeth Hospital Birmingham ⇄
- 18: Royal Preston Hospital Lancashire ⇄
- 19: Royal Sussex County Hospital Brighton ⇄
- 20: University Hospital Coventry ⇄
- 21: University Hospital of North Staffordshire Stoke on Trent ⇄
- 22: Salford Royal Hospital and Manchester Royal Infirmary (Collaborative) ⇄



The ROYAL
SOCIETY of
MEDICINE



London Major Trauma
System

MTC
MAJOR TRAUMA CENTRE
ST MARY'S LONDON



Imperial College Healthcare
NHS Trust

Major Trauma Centres in England

Queens Medical Centre, Nottingham

- **Opinder Sahota**

Salford Royal, Manchester

- **Emily Feilding**

University Hospital North
Staffordshire, Stoke

- **Tejaswini Chavan**

Queen Elizabeth,
Birmingham

- **Helen Chamberlain**
- **Htet Win**

University Hospital Coventry

- **Katie Thin**

Southmead, North Bristol

- **Karen Harding**
- **Katherine Walsh**
- **David Shipway**

Derriford, Plymouth

- **Jo Davies**

Royal Victoria Infirmary,
Newcastle

- **Ahmed Jaafar**

Hull Royal Infirmary

- **Ricky Saharia**

Northern General,
Sheffield

- **Suvira Madan**

John Radcliffe, Oxford

- **Ku Shah**
- **Shvaita Ralhan**
- **Claire Pulford**

St Mary's, London

- **George Peck**
- **Michael Fertleman**

The Royal London

- **Dhanu Sivapathasuntharam**

St George's, London

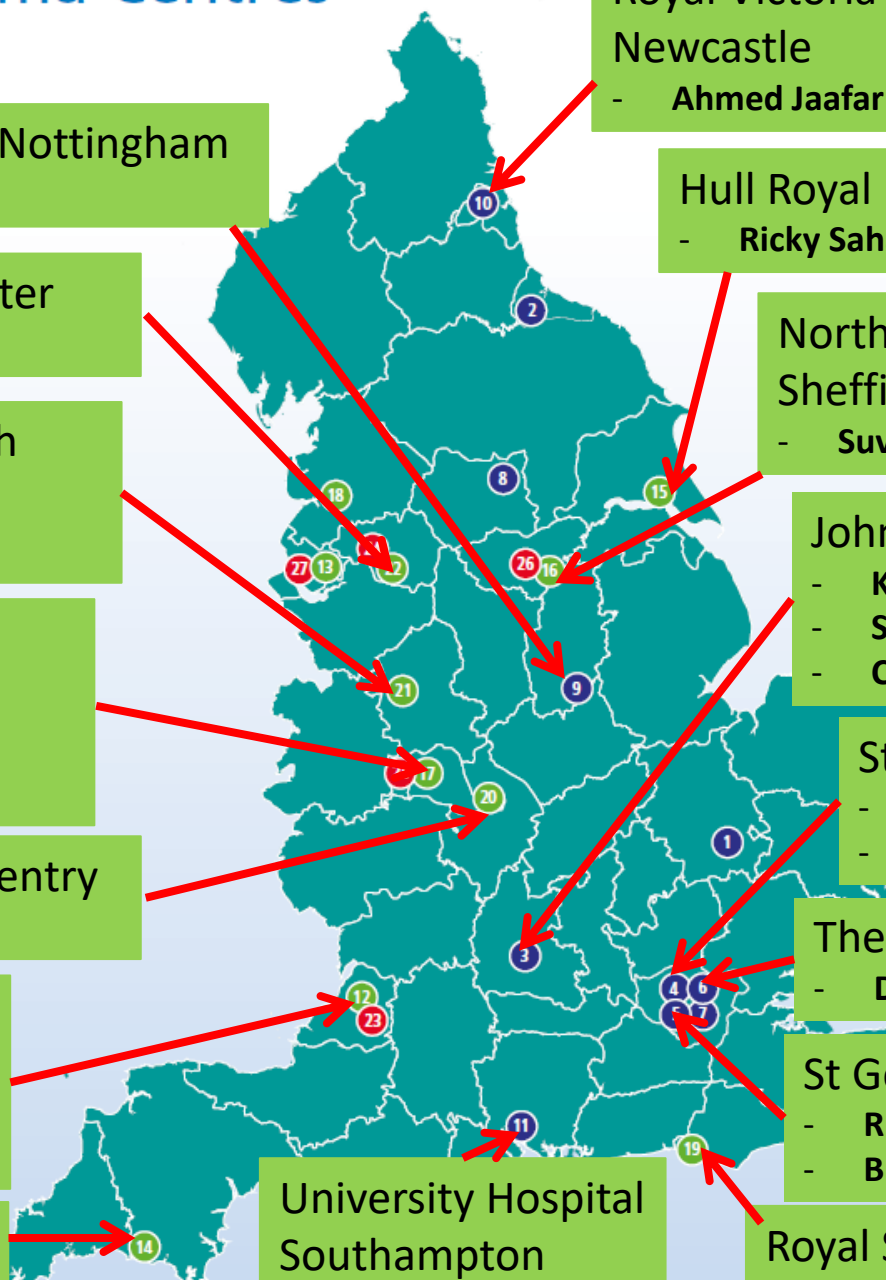
- **Rhonda Sturley**
- **Bryony Elliott**

Royal Sussex, Brighton

- **Henry Alexander**

University Hospital
Southampton

- **Mark Baxter**



Proposed Tariff 2019 – Level 2

£s = PAs

£2,947

All patients 65 years or older have a Clinical Frailty Scale completed within 72 hours of admission by a geriatrician (defined as consultant, non-consultant career grade or specialist trainee ST3 or above)

150 patients/year = £442,050

Topics of debate

- $ISS \geq 16$
 - What about those with $ISS \geq 8$?
 - Is a geriatrician reviewing intubated/level 3 patients worthwhile?
 - Should we have exclusion criteria?
- Clinical Frailty Scale within 72 hrs

IDENTIFY THE VULNERABLE

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graph TD; A[IDENTIFY THE VULNERABLE] --> B[Divert resources to the most vulnerable]; A --> C[Prevent Under-triage]; A --> D[Improve outcome prediction];
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Divert resources to the most vulnerable

- Physio (#PJPARALYSIS)
- Geriatrician
- Dietician
- Pharmacist
- Occupational therapy

Prevent Under-triage

- Increase trauma team activation
- Earlier identification of injuries
- Prompt analgesia
- Admission to appropriate ward
- Delirium screening
- Falls risk assessment

Improve outcome prediction

- Better informed treatment decisions (operate vs not)
- Timely decisions regarding ceilings of care
- Earlier focus on palliation
- Appropriate use of resource (ICU)

FR~~Δ~~IL-T

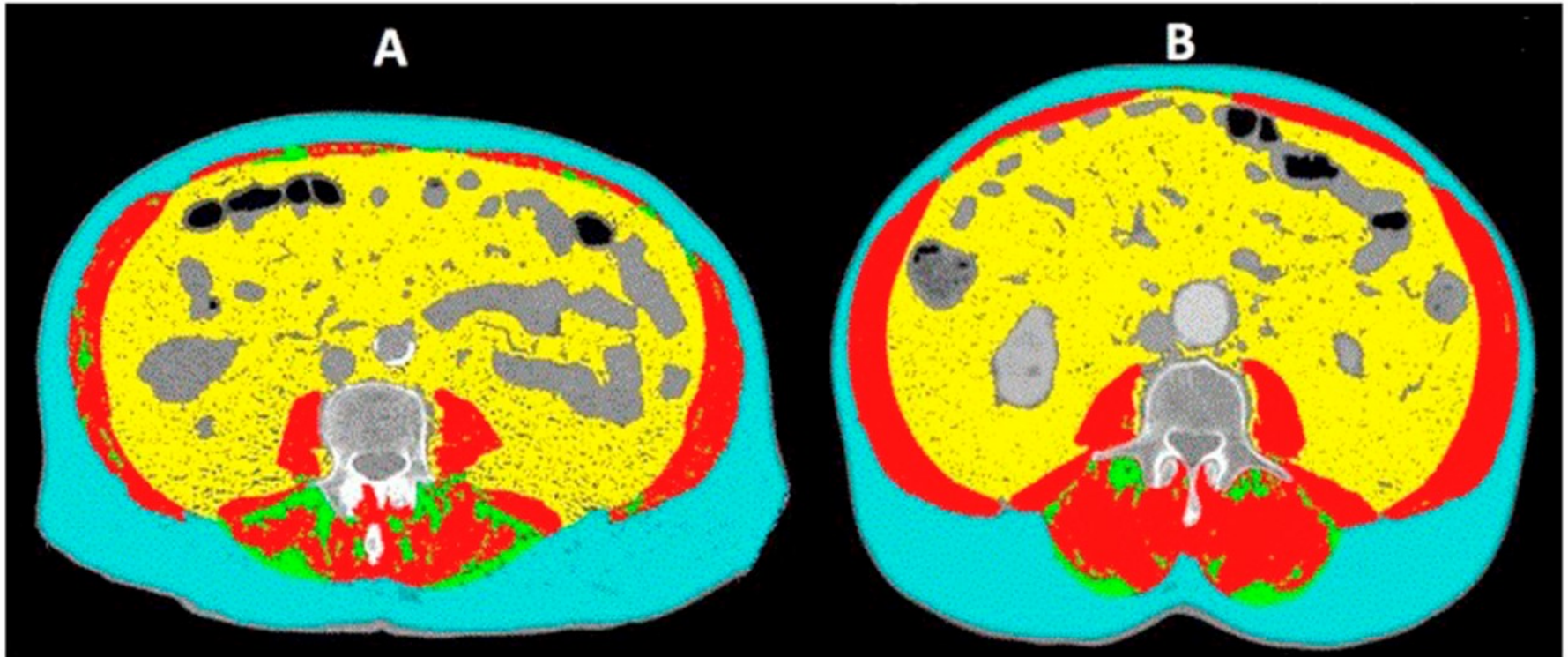
The frailty in major trauma study

- Multicentre prospective study
 - St Mary's, Kings, St George's, Royal London, Southampton



London Major Trauma
System

SARCOPENIA - L3 Segmental CT



Slice-O-Matic software, version 5.0

■ Skeletal Muscle ■ Visceral Adipose Tissue ■ Subcutaneous Adipose Tissue ■ Intramuscular Adipose Tissue

A. 83 year old male sarcopenic patient with a BMI of 30 kg/m², SMI of 33 cm²/m²

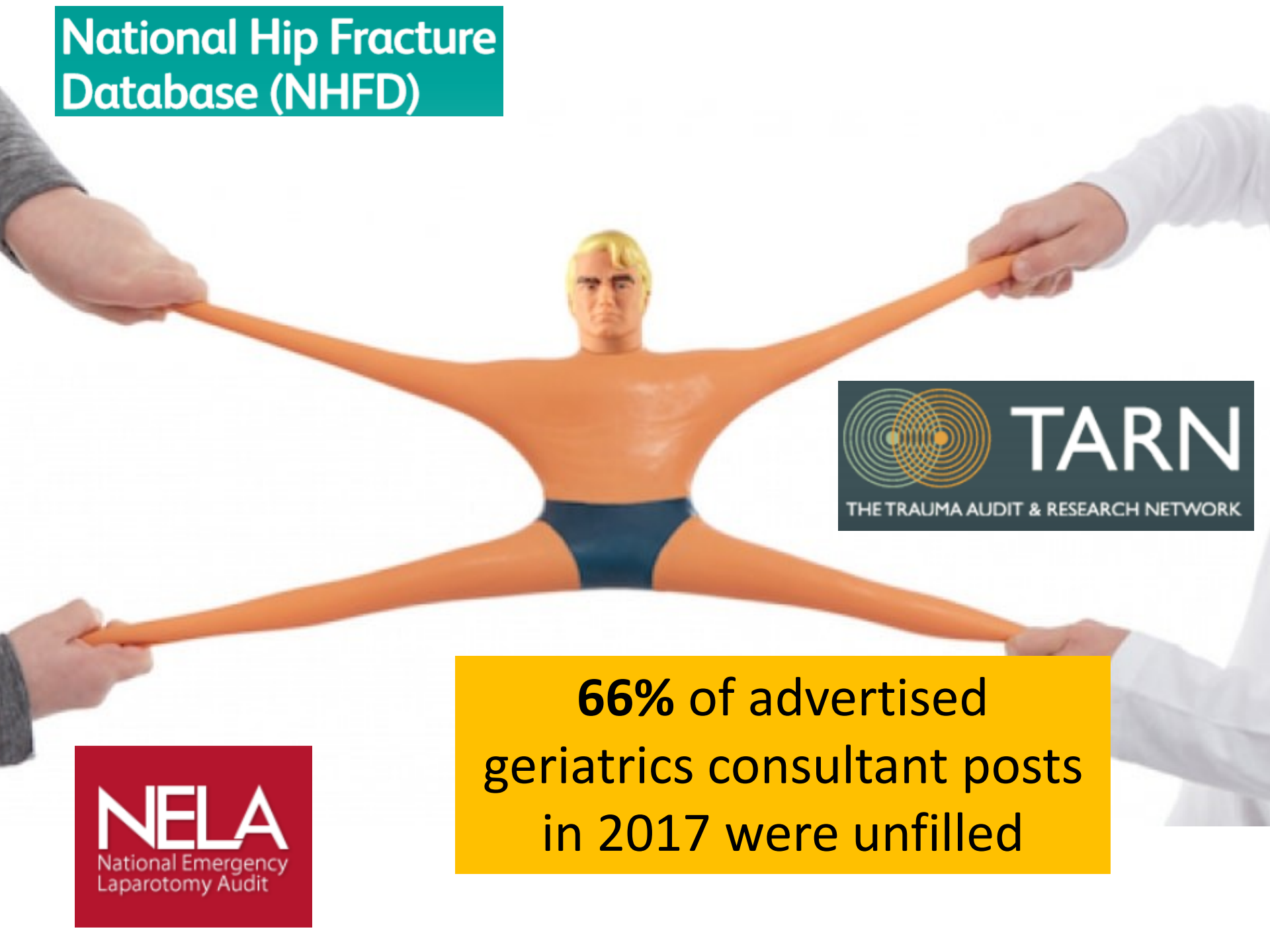
B. 77 year old male non-sarcopenic patient with a BMI of 31 kg/m², SMI of 65 cm²/m²

Major Trauma Geriatrics

Mon	Tues	Wed	Thur	Fri	Sat	Sun
MDT Ward round		MDT Ward round		MDT Ward round		
	Ad hoc reviews		Ad hoc reviews			

- 45 PAs in total \approx 2PAs per MTC
- 50:50 liaison vs scheduled clinical time
- 2/3 participate in MDTs
- 75% can't meet proposed BPT currently
- 80% think the BPT will help improve service provision

National Hip Fracture Database (NHFD)



**66% of advertised
geriatrics consultant posts
in 2017 were unfilled**

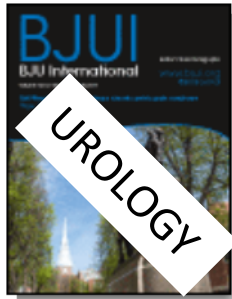


Are Geriatricians Worth Their Salt?

- 25% of >70yr olds undergoing emergency laparotomy die within 90 days
- NELA – 39,903 prospective cohort analysis
- Geriatrician review post-op:
 - 30 day mortality - **OR 0.35** (CI 0.29-0.42, $p < 0.0001$)
 - 90 day mortality - OR 0.64 (CI 0.55-0.73, $p < 0.00$)

Oliver CM et al. Organisational factors and mortality after an emergency laparotomy: multilevel analysis of 39 903 National Emergency Laparotomy Audit patients
British Journal of Anaesthesia. 2018

Are Geriatricians Worth Their Salt?



Evaluation and establishment of a ward-based geriatric liaison service for older urological surgical patients: Proactive care of Older People undergoing Surgery (POPS)-Urology.
Braude P, Goodman A, Elias T, Babic-Illman G, Challacombe B, Harari D, Dhesi JK.
BJU Int. 2017 Jul;120(1):123-129.



Randomized clinical trial of comprehensive geriatric assessment and optimization in vascular surgery.
Partridge JS, Harari D, Martin FC, Peacock JL, Bell R, Mohammed A, Dhesi JK.
Br J Surg. 2017 May;104(6):679-687



Embedded geriatric surgical liaison is associated with reduced inpatient length of stay in older patients admitted for gastrointestinal surgery.
Shipway D et al. Future Hosp J
June 1, 2018 vol. 5 no. 2 108-116



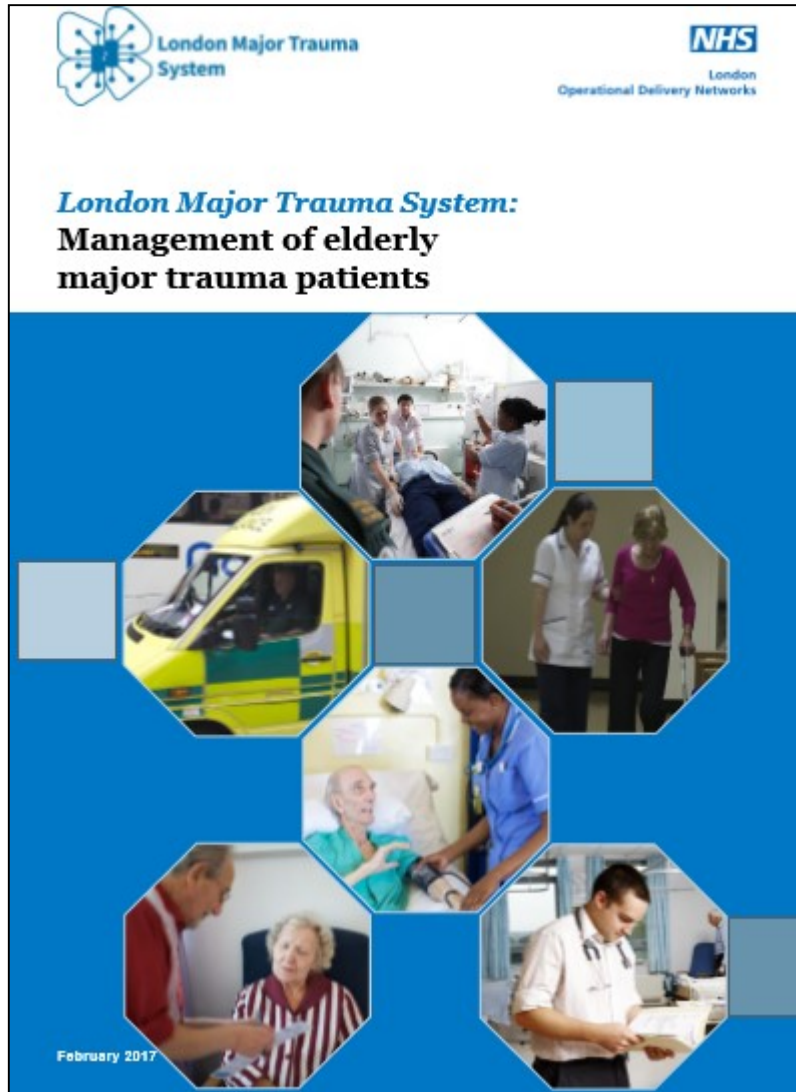
Frailty screening and a frailty pathway decrease length of stay, loss of independence, and 30-day readmission rates in frail geriatric trauma and emergency general surgery patients.
Engelhardt KE et al. J Trauma Acute Care Surg. 2018 Jul;85(1):167-173

- Reduced LOS
- Reduced complications
- Better functional outcomes

QUALITY OF CARE

The background of the slide is a monochromatic, blue-toned photograph. It depicts a vast, calm body of water in the foreground, with subtle ripples and textures on its surface. In the distance, a hazy, misty horizon line separates the water from a pale, overcast sky. The overall atmosphere is serene and contemplative, with the text 'QUALITY OF CARE' centered in the upper half of the image.

National Elderly Major Trauma Guidelines



Adam Woodgate

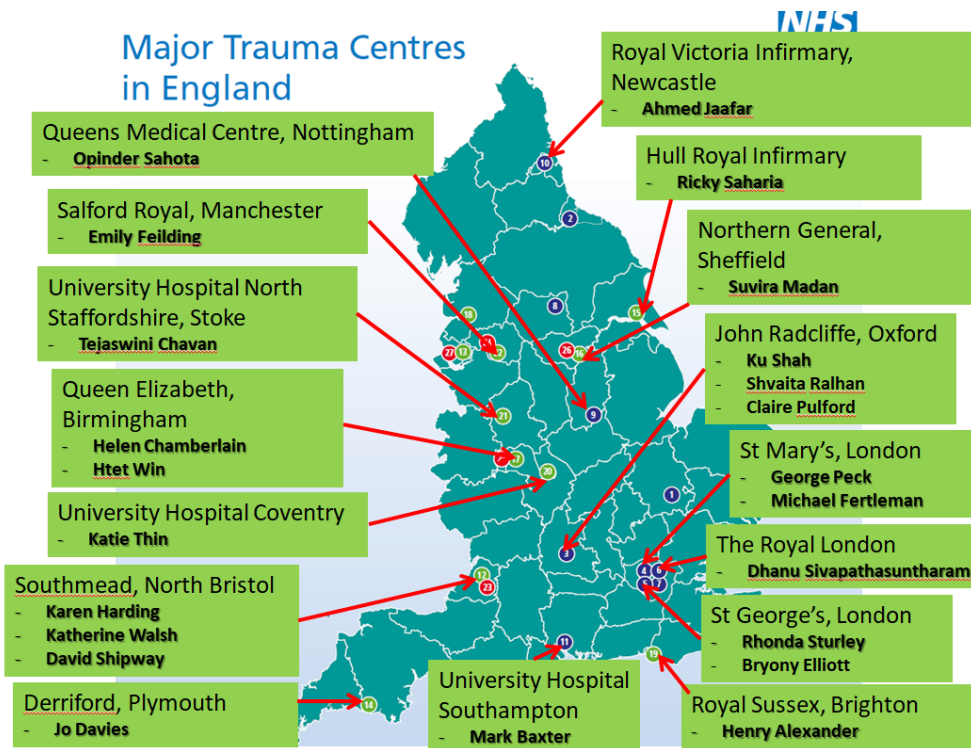
Consultant EM, Royal London Hospital
(Group lead)

Elaine Cole

Director of Research and Innovation, Pan
London Major Trauma System

www.c4ts.qmul.ac.uk

National Elderly Trauma Research Network



- 50% are involved in elderly trauma research
- Cervical immobilisation
- Rib fracture pathways
- Traumatic brain injury and anticoagulation
- Elderly trauma triage

Can we make things better?

