Service Evaluation:

Factors associated with missed or delayed diagnosis of major trauma in older people at a UK level 1 trauma centre.

Author: Melinda (Dolly) McPherson – Trainee Advanced Clinical Practitioner
Supervising consultant: Dr Claire Rowberry

University Hospital Southampton NHS Foundation Trust

Background:

TARN: Major trauma in older persons report

- Commonly under triaged
- Longer waits to be seen
- Assessed by more junior staff
- Not identified early

Poorer overall outcomes .

Results:

Cohort = 190 patients

40%= Missed diagnosis in ED

52.6%= Delayed diagnosis in ED

Missed diagnosis

	Unstandardized coefficients (B)	P-value	Odds ratio	95% Confidence interval
CT vs Plain films	-4.931	0.000	0.007	0.000 – 0.108
Trauma call YorN	-3.589	0.009	0.028	0.002 – 0.412

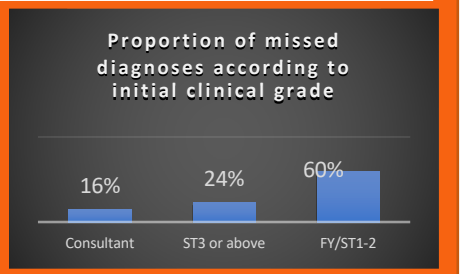
'X-rays only' and 'no trauma call' associated with missed major trauma

Delayed diagnosis

Location of first contact (Triage or pitstop vs Resus)	Unstandardized coefficients (B)	P-value	Odds ratio	95% Confidence interval
	2.907	0.007	18.293	2.254 – 148.47

Being seen in triage or pitstop first (vs the resuscitation room) was associated with delayed diagnosis of major trauma

- 61 trauma pre-alerts
- 49 level 2 trauma calls
- 0 level 1 trauma calls
  - 23 patients eligible for level 1 trauma call on pre-alert.



Referral wards if diagnosis **missed** in ED	
Trauma	37
Medical	39

Referral wards if diagnosis in ED	
Trauma	105
Medical	9

Methods:

TARN audit data and retrospective notes review of 190 patients >65 presenting to UHS ED from 1st January 2018 – 31st December 2018 who did not receive a level 1 trauma call on arrival were used to achieve the dataset. Descriptive statistics were used to outline processes seen and were compared with local and national guidelines. Multiple logistic regression was then applied to the dataset to look for associations between specific process factors and a missed or delayed diagnosis

Aims:

- Evaluate Processes
- Identify improvements
- Inform future QIPs

Discussion:

ED process evaluations follow patient journeys from arrival through to discharge. The results of the evaluation suggest that future improvement projects should be focussed on the early stages of the patient journey to encapsulate trauma team activation and initial location of assessment. Guidelines do not currently offer complete solutions to the optimum management of older persons with major trauma. However, early suspicion of trauma, senior involvement, parity of imaging with 'traditional' major trauma, and processes that facilitate trauma ward admission for those with trauma may have a positive impact on the diagnosis and management of major trauma in the older person.

Actions and recommendations:

Education → Agreed triage tool → Level 65 trauma team