Abstract 332 Figure 2

	Shunt malfunction	No shunt malfunction
Abnormal SS	6	1
Normal SS	16	77

Sensitivity = 0.27 (27%)

Specificity = 0.99 (99%)

PPV = 0.86 (86%)

NPV = 0.83 (83%)

Abstract 332 Figure 1

Results/Conclusions

- Sensitivity and specificity is presented in figure 1 (two by two table).
- 100 radiographs performed in 84 children.
- 22% shunts revised (see flow diagram).
- 7 SSR's were abnormal.
 - 85% (n=6) shunts revised. [5 following abnormal CT].
- Of the normal SSR's; 16 had abnormal CT and revised.
- 85/100 received CT.
 - 64 of 85 CT's (75%) were normal.
 - 6 of the 64 had focal shunt concern.
- SSR's shouldn't be used in isolation. NPV&PPV, Sensitivity&Specificity is low.
- SSR's are beneficial where there's concern over focal shunt problems (injury/pain/swelling) or following abnormal CT.

- VP shunt failure is not well investigated with SSR alone.
- SSR's could be omitted where there is no focal shunt concern/ after normal CT (without impacting clinical outcome) reducing radiation exposure and reduce impact on CED's.

59 SSR's *could* have been avoided without adverse clinical outcome.

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HEAD HOME: A PROSPECTIVE COHORT STUDY OF A NURSE LED PAEDIATRIC HEAD INJURY CLINICAL DECISION TOOL AT A DISTRICT GENERAL HOSPITAL

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Aims/Objectives/Background

Objectives To assess if application of a nurse-led paediatric head injury clinical decision tool would be safe compared to current practice.

Background >700,000 children attend UK hospitals' each year with a head injury. Research indicates <1% undergo neurosurgical intervention. No published evidence for nurse-led discharge of paediatric head injuries exists.

Methods/Design Methods – All paediatric (<17 years) patients with head injuries presenting to our Emergency department (ED) 1st May to 31st October 2018 were prospectively screened by a nurse using a mandated electronic 'Head Injury Discharge At Triage' questionnaire (HIDATq). We determined which patients underwent computed tomography (CT) brain and whether there was a clinically important intracranial injury or re-presentation to ED. The negative predictive value of the screening tool was assessed. We determined what

proportion of patients could have been sent home from triage using HIDATq.

Results/Conclusions Results - Of 1739 patients screened; 61 had CTs performed due to head injury (6 abnormal) with a CT rate of 3.5% and 2% re-presentations. Of the entire cohort, 1052 screened negative. 1 CT occurred in this group showing no abnormalities. Of those screened negative: 349/1052 (33%) had 'no other injuries' and 543/1052 (52%) had 'abrasions or lacerations'. HIDATq's negative predictive value for CT was 99.9% (95% Confidence interval (CI) 99.4–99.9%) and 100% (CI 99.0–100%) for intracranial injury. The

positive predictive value of the tool was low. Five patients screened negative and re-presented within 72hrs but did not require CT imaging.

Conclusion - A negative HIDATq appears safe in our ED. Potentially 20% (349/1739) of all patients with head injuries presenting to our department could be discharged by nurses at triage with adequate safety netting advice. This increases to 50% (543/1739) if patients with lacerations or abrasions were treated and discharged at triage. A large multi-centre study is required to validate the tool.