

**Learning Objectives**

By the conclusion of this session, participants should be able to:


- 1) Understand the referral guidelines in place for head injury referrals to neurosurgery in the UK.
- 2) Appreciate the effect of online referral system on quality of referrals for head injury patients.

**Introduction**

Head injury is the commonest cause of death and disability in people aged 1–40 years in the UK. Annually 1.4 million people present to Hospital with a head injury in England and Wales, and 200,000 of these cases result in admission.

The National Institute for Health and Care Excellence (NICE) head injury guidelines, 2014, state that the neurosurgical service should be consulted in “surgically significant” imaging abnormalities, a definition to be determined locally. Also, regardless of imaging, consultation should be sought for prolonged confusion, GCS deterioration, progressive deficit, seizures without full recovery, penetrating injury and CSF leak.

Leeds Neurosurgery Referral Page



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Downloads:

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- Neurovascular MDT Form
- Pituitary MDT Form
- Tobaccoin Scoring System For Spinal Medicines
- Acute C-Spine Clinic

Medical Students:

- Click here to visit the Leeds Neurosurgery Medical Student Pages, including handbooks from previous years

Useful Websites

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- Leeds Teaching Hospitals NHS Trust
- Neuroscience at Leeds
- School of Neuroscience
- World Federation of Neurological Societies
- The Society of British Neurological Surgeons
- Brain Tumour Research and Support
- Headway
- The General Medical Council (GMC)

Making a Referral to Neurosurgery...

Please follow the flowchart below to make a referral.  
Please note that acute cases of back pain, thoracic/lumbar fractures, dissects and suspected or confirmed aneurysms against oral compression should be referred to the regional on call for orthopaedics at Leeds General Infirmary via the LUT switchboard.  
Click the appropriate box to proceed.

Potential Neurosurgical Referral

St. Catherine's (Emergency)

Neurovascular Emergency MDT

Brain/CSF Tumour Neurosurgical MDT

Headway Tumour/Plasticity MDT

General Neurosurgical Referrals

**Methods**

This was a retrospective review of 50 head injury referrals to neurosurgery, submitted online during a 2 month period in 2015 with the aim of determining how well the referral criteria were adhered to.

The referrals were analysed and compared to the previous audit of 51 referrals, taken over the phone in 2014.

Data Collected Using Microsoft Excel



Referrals by Different Specialities



**Results**

56% of the referrals made in 2015 were deemed “appropriate” according to the referral criteria.

In 2014 however, 73% were classed as “appropriate”. 22% of the 2015 referrals resulted in admission to the neurosurgical service, whereas in 2014 only 13% of referrals resulted in specialist admission.

Accepted for Transfer vs Advise



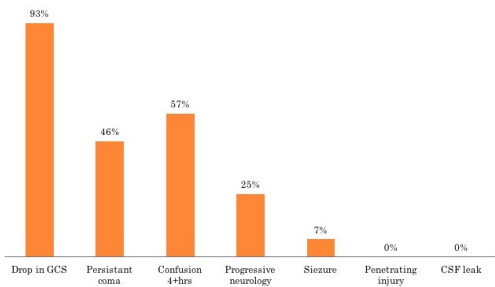
Compliance to Online Referral System



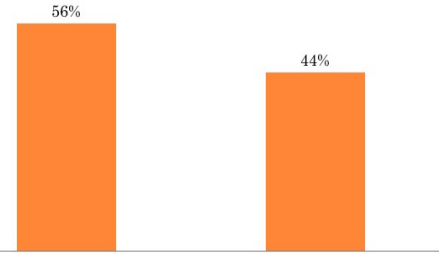
Referral Form Completion Rate



Symptoms in Admitted Patients



NICE Neurosurgical Criteria



**Conclusions**

It appears that the introduction of the online referral system has resulted in poorer quality referrals as a lower percentage are now deemed “appropriate” according to the NICE criteria. The reason for this change needs to be determined in order to ensure referrals are made appropriately in the future however, it is clear more education on the guidelines is needed. The increased admission rate from the 2015 audit is interesting and also requires further examination.

**References**

The National Institute for Health and Care Excellence (NICE). 2014.Head injury: assessment and early management. NICE guidelines [CG176].[Online]. [Accessed 15th March 2016]. Available from: <https://www.nice.org.uk/guidance/cg176>

Conclusion

2014 Audit (verbal referral)

73% appropriate referrals (Other than Surgically significant)

13% of referrals admitted in 2014

2015 Audit (online referral)

56% appropriate referrals (Other than Surgically significant)

22% of referrals admitted in 2015