

Delivering Specialist Multidisciplinary Post-Acute In-patient Neurological Rehabilitation in Northern Lincolnshire: 1st Year Review of Goole Neuro-Rehabilitation Centre (GNRC).

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Background

- Patients admitted for acute medical and surgical care can develop neurological conditions and some have existing long term neurological conditions.
- Specialist neurological rehabilitation services in acute hospitals are mainly provided within dedicated in-patient rehabilitation units.
- The neurological rehabilitation delivery service for northern Lincolnshire is a community oriented model with peripatetic input for patients on acute hospital wards.
- Rehabilitation needs of such patients are unfulfilled during the acute care period with deterioration in functional abilities leading to prolonged hospital stay.
- Transfer to in-patient rehabilitation units (Out of the Northern Lincolnshire region) is often delayed by the patient's acute care needs and also by out of area funding requests.
- Early rehabilitation input has been shown to improve health outcomes (Heiss and Teasal 2006; Biernaskie et al, 2004) and is supported by the National Service Framework for long-term conditions.
- Important window of opportunity to provide this rehabilitation input is missed and secondary complications like muscle contracture can develop.

Service Development

- A 14 bedded dedicated in-patient rehabilitation unit providing essential multidisciplinary post acute neuro-rehabilitation service for adults aged 16-65 years was developed in 2007 to bridge this service gap.
- The unit was developed as a partnership between NLAG and BIRT.
- Clinical service is provided within a ward environment and referrals are received from within the Northern Lincolnshire region and also out of the local area.
- The unit is based at the Goole District Hospital (Part of 990 bed NHS Trust serving a population base of 450,000)
- Team composition is multidisciplinary with medical personnel (2 consultants and 1 Staff grade), Psychologists (1 Neuro, 1 Clinical and a psychology assistant), clinical specialist therapists (Physiotherapy and Occupational therapy), Speech and Language Therapist, Nursing staff and Rehabilitation Support Workers.

Function

- Specialist neurological rehabilitation assessment and treatment of patients with acquired brain injury and other neurological conditions.
- Integrated neuro-behavioural treatment model for acquired brain injury.
- Social and vocational rehabilitation and community re-integration.
- Management of complications (Spasticity) that lead to preventable disability (contracture) thereby optimising outcome.
- Assistance with complex and timely discharge planning from hospital in addition to liaison with community services.
- Teaching, support and guidance of junior staff, and senior staff with specialist knowledge in other clinical areas.
- Advocacy and support for the patient and their family.
- Objective outcome measurement.
- Active involvement in undergraduate medical education with teaching program for HYMS students.
- Sensory stimulation and management of low awareness states.

Aim

Provision of specialist in-patient post acute neurological and social rehabilitation.

References

- Biernaskie J, Chermanenko G, Corbett D. Efficacy of rehabilitation experience declines with time after focal ischemic brain injury. *J Neuroscience* 2004;24:1245-1254
- Department of Health. National Service Framework for Long-term Conditions. Quality requirement 11: Caring for people with neurological conditions in hospital or other health and social care settings. Pg 59-61; March 2005.
- Heiss WD, Teasell RW (2006) Brain recovery and rehabilitation. [Review] *Stroke* Feb;37(2):314-6.

Innovation

- The incorporation of the neuro-behavioural model to rehabilitation of post acute acquired brain injury patients.
 - Seamless rehabilitation with continuity of care provided with medical expertise from Northern Lincolnshire rehabilitation medicine service.
- Social rehabilitation instituted following post acute rehabilitation phase.

Results : Activity analysis for 1 year (Oct 2007–Sep 2008)



Figure 1

Sex	28 Male 3 Female
Age (Years)	Range 20- 76 Mean 43
Length of Stay (Days)	Range 3- 267 Mean 89
Discharge Destination	Home 16 Hospital transfer 1

Table 1. Demographics

Traumatic Brain Injury	19
Anoxic Brain Injury	3
Multiple Sclerosis	2
Guillain-Barre Syndrome	2
Encephalitis	2
Cerebral abscess	1
SLE Paraparesis	1
Total	31

Table 2. Diagnosis



Staff and Patient of GNRC

NE Lincs	11
N Lincs	10
Hull PCT	3
N Yorkshire	2
East Riding	1
Doncaster	1
Calderdale	1
Derby	1
Isle of Man	1
Total	31

Table 3. Funder of Placement

Conclusion

- A Specialist Multidisciplinary in-patient unit as described is effectively poised to respond to the early neurological rehabilitation needs of patients.
- The Unit achieved a 94% home discharge destination in its 1st year of activity.
- Pre-discharge planning is productive but time consuming.
- The Unit could be further strengthened by the expert input of other professionals such as a discharge coordinator and social worker.
- Formal research project using a control group to measure cost effectiveness, length of hospital stay and disability outcomes is indicated for further evaluation.