A Transdisciplinary Approach to Brain Injury Rehabilitation

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Background
The Hunter Brain Injury Service (HBIS) has a multidisciplinary team that provides rehabilitation and care management to patients who have sustained a brain injury. HBIS works under an interdisciplinary rehabilitation model, where clinicians work collaboratively towards patient goals. Transdisciplinary rehabilitation on the other hand, occurs when teams work across traditional discipline boundaries to provide care to the patient as a ‘whole’. Client feedback from 2014 highlighted unwanted clinical duplication at HBIS (particularly related to clinical assessments) and this was the impetus for this project.

Aim
Within 6 months, decrease unwanted duplication of clinical assessment (associated with Occupational Therapy), to zero.

This project’s aim was to address unwanted clinical duplication within the Occupational Therapy (OT) team at HBIS by defining unwanted clinical duplication, identifying areas of clinical overlap, defining roles and responsibilities and by creating shared responsibilities.

Patient Story
Mr B sustained a severe TBI following a home invasion in 2014. Mr B was initially treated in Sydney and discharged home to rural NSW. Mr B was referred to HBIS for review of his: balance, intermittent dizziness, blurred vision, reduced short-term memory, word finding difficulties, and changes in mood.

Mr B was admitted to HBIS Transitional Living Unit (inpatient) for assessment and rehabilitation, due to issues with travel - he lived 2 hours away and did not have a licence. Mr B was seen by both physiotherapy and OT for community access assessment. He was cleared for independent community access on Day 10 by OT (Nb. cleared by physiotherapist on day 1).

Feedback from the patient – “I felt like I was in jail”. 

Problem Identified
A review of the HBIS model of care highlighted key areas where unwanted duplication of clinical assessment was occurring. Patient feedback interviews conducted during 2014 also raised concerns regarding clinical duplication, with some patients raising concern over ‘the same assessments being repeated’ by different clinicians. Staff provided feedback related to workload management issues within OT and highlighted the fact that OT crossed-over with a number of other disciplines and that clear role responsibility was not always known.

Diagnosis
A clinical note audit was undertaken in 2015, finding unwanted duplication of some OT assessments. Unwanted duplication was defined as a clinical assessment that had been (or will be) completed by another clinician, that is not required to be repeated. The results of the audit found 15% of Community Access assessments and 50% of Upper Limb assessments were duplicated between Physiotherapy and OT. This information, coupled with longer waiting times for OT compared with the rest of the team, became the main drivers for change and formed the basis for this project.

Intervention
1. Transdisciplinary Community Access Assessment
A Transdisciplinary Community Access assessment that incorporated both cognitive and physical aspects of community access was developed, to be used by both Physiotherapy and OT. The Community Access assessment was used by HBIS Rehabilitation Assistants to screen patients who had already been living in the community and whom had not identified issues with community access. Furthermore, this assessment could be used by the Rehabilitation Assistants during retraining, to ensure standardised feedback was given to clinicians.

2. ADL Functional Screening Checklist
Standardised ADL Functional assessments to screen patients across common ADLs: meal preparation, showering, shopping, dressing etc were developed that could be used by both OT and HBIS Rehabilitation Assistants.

The ADL Functional assessments were used by the Rehabilitation Assistants to provide structured feedback to clinicians on a patient’s functional ability.

3. Transdisciplinary Upper Limb Assessment
A Transdisciplinary Upper Limb assessment that incorporated motor, sensory and functional aspects of upper limb function was developed, to be used by both Physiotherapy and OT. To coordinate rehabilitation, a shared-care view of the upper limb was undertaken, with the assessment carried out by one discipline (either Physiotherapy or OT) before a discussion about a treatment plan was undertaken.

Results
The outcomes of the project were:
- Reduction in unwanted duplication to 0% (Graph 1)
- Increased utilisation of RA’s in clinical activity (Graph 2)
- Significant reduction in OT wait time (Graph 3)
- Clinicians delivered more efficient and coordinated clinical care
- Patients received more targeted, timely intervention
- A framework of shared responsibilities between OT and other disciplines within HBIS was developed
- Improved staff satisfaction
- Reduced patient complaints
- Potential increases in cost effectiveness (this was not formally assessed during this project).

Plans to Sustain and Spread Change
The development of the transdisciplinary assessments in both hard copy and electronic version helps staff utilise them regularly and effectively. The development of a clinical guideline and updating of the HBIS model of care has embedded the new assessments within the team and helped sustained change.

The key learnings and tools from this project will be shared with the NSW Brain Injury Rehabilitation Directorate and locally with other community teams, within the Greater Newcastle Sector.

Team
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