

MANAGING BEHAVIOURS THAT CHALLENGE IN AN IN-PATIENT NEUROREHABILITATION SETTING TO IMPROVE FUNCTIONAL OUTCOMES FOLLOWING A TRAUMATIC BRAIN INJURY (TBI): A CASE STUDY.

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BACKGROUND

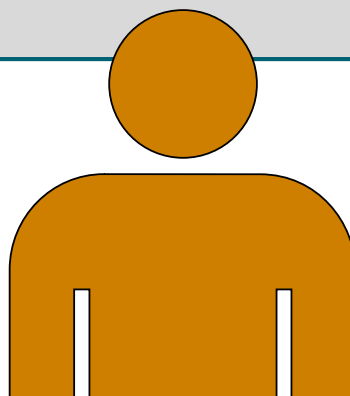
Experiencing behaviours that challenge (BtC) following a moderate or severe traumatic brain injury (TBI) can lead to poorer functional outcomes and quality of life (MacKenzie et al., 2024). Positive Behaviour Support (PBS) is beginning to be investigated in community settings to help behavioural management in people with TBI (Ponsford et al., 2022). However, there is limited high quality evidence addressing behaviour management approaches in in-patient neurorehabilitation.

AIMS

This case study aims to provide a practical example of how implementing PBS in an in-patient setting supported behaviour change, in turn enabling the patient to engage in specialist neurorehabilitation, achieve his goals and improve his functional outcomes.

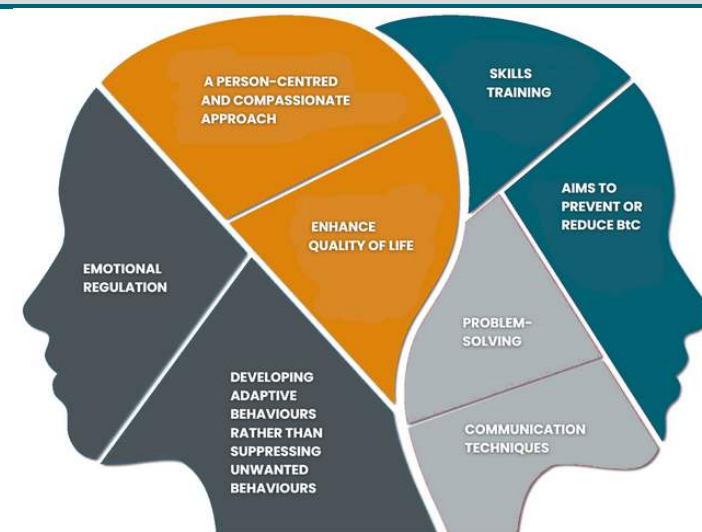
THE PATIENT

- 34-year-old male with severe polytrauma and traumatic brain injury (TBI).
- Emerged from Prolonged Disorder of Consciousness 5 months post injury.
- Transferred for in-patient neurorehabilitation.
- Developed increasingly more frequent episodes of BtC, culminating in significant difficulty providing rehabilitation and inability to meet his needs.
- Conflicting opinions on alternative settings considered: neurobehavioural unit vs alternative in-patient neurorehabilitation.
- 13 months post-injury he was transferred to an in-patient neurological and complex injury rehabilitation centre able to provide specialist behavioural input as part of intensive specialist neurorehabilitation.



WHAT IS PBS?

Positive Behavioural Support (PBS); a person-centred and compassionate approach that aims to prevent or reduce BtC by enhancing the quality of life of the individual and those around them.



Prior to this transfer his rehab potential was stated to be limited with no future potential for community living.

METHOD

IDENTIFIED PATIENT GOALS	- To be able to mobilise with minimal assistance - To live in his own property with support	To become more independent with activities of daily living
IDENTIFIED TRIGGERS TO BEHAVIOUR	Use of behaviour observation charts to help identify triggers: transfers, personal care, pain	
KEY AREAS OF NEED REQUIRING MANAGEMENT STRATEGIES	- Pain: major factor to distress - Behaviour	Communication: English a second language
REACTIVE STRATEGIES	Behaviour plan e.g. "I'm going to leave you for 10 minutes and then return"	- Returning to a low stimulation environment 24-hour consistent approach
REMOVAL OF BARRIERS TO PBS IMPLEMENTATION	- UK government removed Covid restrictions - Ankle surgery 15 month into admission	
PROACTIVE STRATEGIES	- Pain management: analgesia, surgery, spasticity management, de-sensitisation - Structured timetable with rest periods - Advanced preparation for all sessions - Training and communication with the whole team (clinical/ non-clinical) - Making valued activities accessible - Set clear boundaries at the start of every intervention - Interdisciplinary working e.g. psychology joining hydro Important: effectiveness of proactive strategies not permanent and needed continuous review and updating.	

Barriers to implementing PBS:

- (1) Impact of COVID: isolation, PPE related de-personalisation of staff, frustrations around vaccination status.
- (2) Severe ankle pain and inability to mobilise.

Once barriers addressed, behavioural approach could change from **Reactive** (for behaviour **management**) to **Proactive** (crucial for behaviour **change**)

KEY APPROACHES USED TO ENSURE SUCCESSFUL IMPLEMENTATION OF PBS:

CONSISTENCY

ALLOWING TIME

TRAINING

THOROUGH DISCHARGE PLANNING

PAIN MANAGEMENT

RESULTS

PBS enabled continuous behavioural improvement to occur once the implementation barriers were addressed. This in turn enabled increased input by the rehabilitation team to work on functional recovery.

By the end of admission:

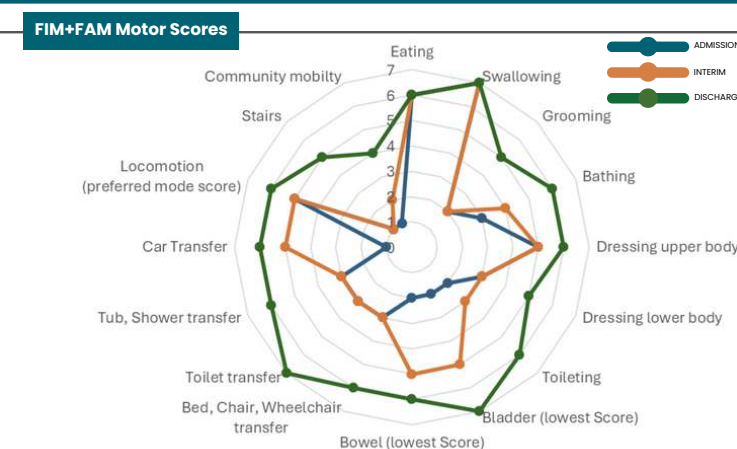
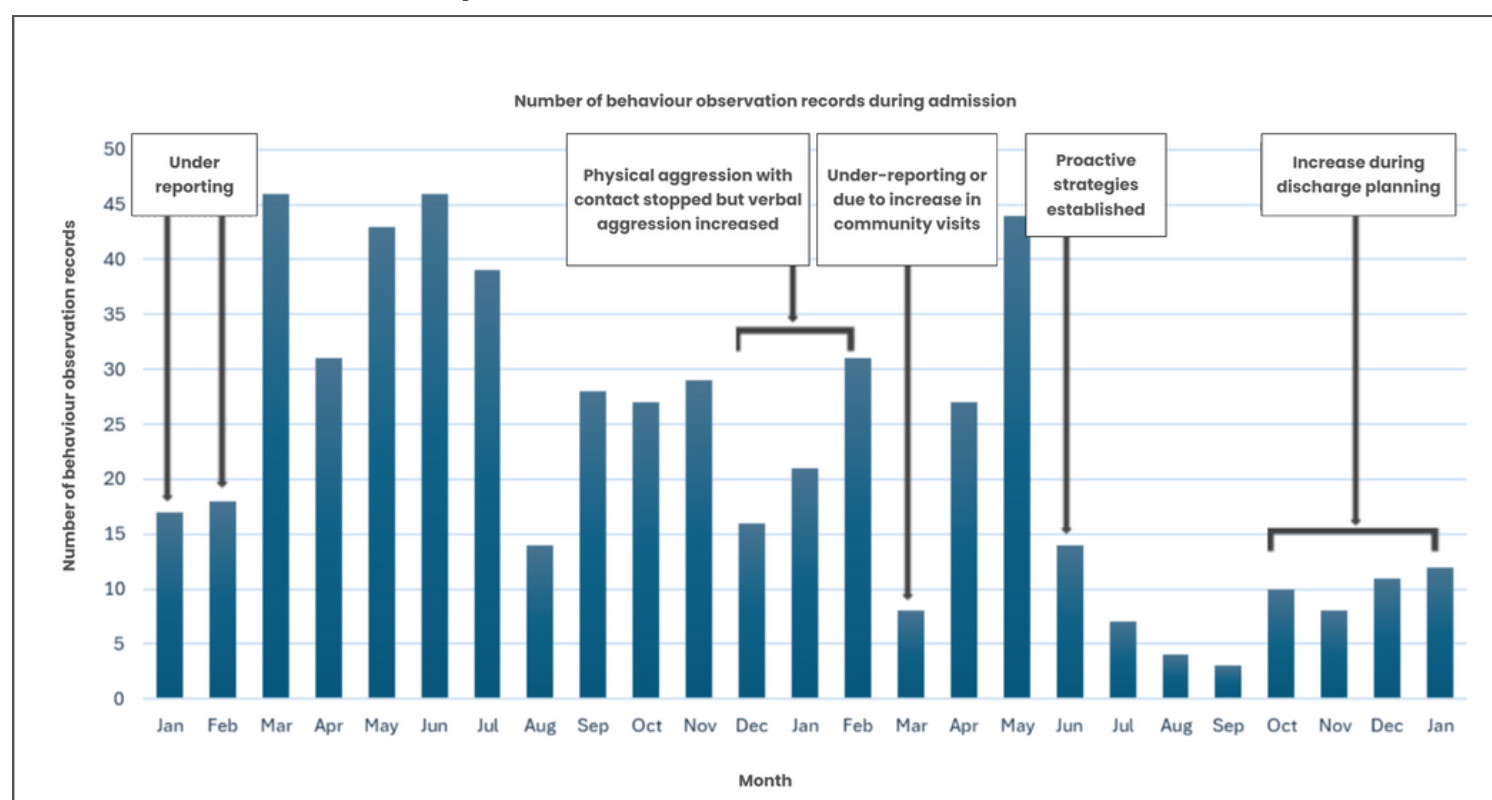
- Discharged to live in his own home (with stairs) with support of 1 carer 24/7.
- Improved quality of life and social integration e.g. cinema and bowling trips.

St Andrew's-Swansea Neurobehavioral Outcome Scale (SASNOS):

206 → 216

Northwick Park Dependency scale (NPDS)

47 → 22



CONCLUSION

This case study demonstrates incorporating PBS within in-patient specialist rehabilitation is possible. In this case, progress was made beyond behaviour management to behaviour change, enabling expectations of his potential to be exceeded. This approach is currently being successfully replicated within this setting. PBS is demanding on staff and requires considerable commitment and resources, so may not be practical to replicate in other settings. However, in this case the long-term care needs were substantially lower than predicted and social integration considerably improved. Therefore, further research into the feasibility, clinical effectiveness and cost-benefit analysis of PBS in other in-patient settings would be beneficial.

REFERENCES

- MacKenzie, H., Velikonja, D., Devito, J., Devito, L., Patsakos, E., Bayley, M., Teasell, R., Mehta, S. (2024). Updated Canadian Clinical Practice Guideline for the Rehabilitation of Adults With Moderate to Severe Traumatic Brain Injury: Behavioral Recommendations. Journal of Head Trauma Rehabilitation 39 (5): 382-394
- Ponsford, J., Hicks, A., Gould, K., Downing, M., Hopwood, M. and Feeney, T. (2022). Positive behaviour support for adults with acquired brain injury and challenging behaviour: A randomised controlled trial. Annals of Physical Rehabilitation Medicine 65 DOI: <https://doi.org/10.1016/j.rehab.2021.101604> [Accessed 21.10.2024]

