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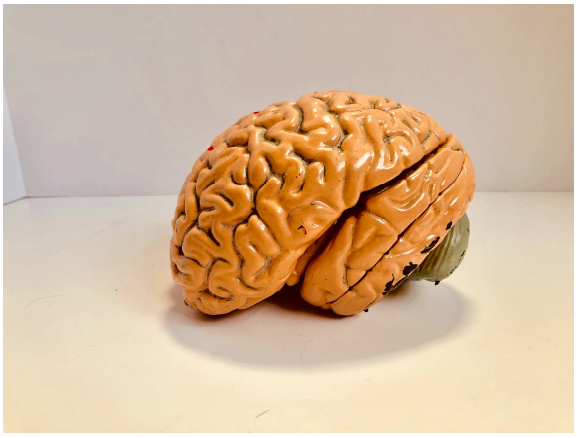
Exeter HS&DR Evidence Synthesis Centre 2020

Evidence for specialist treatment of people with acquired brain injury in secure psychiatric services: systematic review and narrative synthesis

An estimated 1.5 million people in the UK have an acquired brain injury (ABI).[1] ABI can lead to various physical, cognitive or emotional symptoms, with patients also being at increased risk of mental health difficulties.[2] One possible consequence of ABI is the presence of behaviour that threatens the quality of life or safety of the patient or others.[1] Such 'challenging behaviour' includes displays of aggression, sexually inappropriate behaviour or disinhibition. Individuals who display challenging behaviour that endangers their safety or that of others may need to receive their treatment in a secure setting. The availability of secure ABI rehabilitation settings is limited in the UK. The restrictiveness of the setting could constitute an infringement of the human rights of the patient if the referral is not appropriately justified,[3] therefore decisions about referral need to be rigorous and evidence-based.



This is a summary of a nine month project focusing on summarising the available evidence to inform arrangements for the specialist care of adults with ABI. The review was commissioned by the NIHR Health Services & Delivery Research programme. The findings highlight:

- There was a lack of evidence conducted in, or evaluating referral pathways to, secure settings. Urgent primary research is needed in this field to support evidence-based practice.
- 38 primary studies sought to identify predictors of, or variables associated with challenging behaviours which may warrant secure treatment. Whilst tentative associations were found between certain patient characteristics and the occurrence of certain types of challenging behaviour, the conflicting nature of this evidence reduces confidence in these findings
- Evidence focusing on the validity and reliability of tools used to assess challenging behaviours indicated use of these tools was not supported by robust evidence. Addressing this gap should be a research priority.
- Development of care pathways for individuals living with an ABI for whom support within a secure treatment setting may be appropriate should be considered after the research recommendations have been addressed.

Please use the QR code to view the full project report

Exeter HS&DR Evidence Synthesis Centre, University of Exeter
http://medicine.exeter.ac.uk/esmi/workstreams/exeterhsdrevidencesynthesiscentre/
SiftingAndSensemaking.wordpress.com

Funded by NHS National Institute for Health Research

Background to this review

People living with an ABI are more likely to experience mental health difficulties,[4] and are at increased risk of engaging in offending behaviour or drug use and present a higher risk of harm to others and/or themselves.[1] One study estimates that over 60 per cent of the UK prison population have a brain injury.[5]

Delivering services for people with an ABI can be complex as differences in the aetiology and severity of the injury can lead to variations in level of functioning and range of potential needs across different individuals.[6]

The needs of individuals with severe difficulties may mean secure inpatient services are best equipped to care for them. However, the availability of secure ABI rehabilitation settings is limited in the UK and the restrictiveness of the setting could constitute an infringement of the human rights of the patient if the referral is not appropriately justified (Human Rights Act, 1998).[3]

It is important that the assessment, care and/or treatment needs of the patient, match with the availability and referral to an appropriate service.

We wanted to find out:

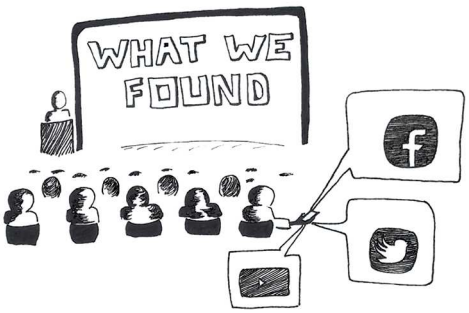
- **If there was evidence to support the differentiation between different groups of adult patients with ABI as a criterion influencing the most appropriate care setting for treatment of adults with ABI?**
- **If there was evidence to support the use of diagnostic, disease- or symptom-severity assessment criteria in influencing the most appropriate setting for care and treatment of adults with ABI?**
- **If there was evidence to support the use of risk assessment tools in influencing the most appropriate setting for care and treatment of adults with ABI?**

How did we do this review?

Finding the literature: We searched seven bibliographic databases. These searches were supplemented with citation searching; inspecting relevant reviews; searching trial registry platforms, searching relevant websites; liaising with clinical experts and affiliation searches.

Eligibility criteria: We sought evidence about adults with non-degenerative ABI placed in, eligible for referral to, or being assessed for eligibility for referral to secure psychiatric services in any high-income country published in English from 2000 onwards. Eligibility for referral to secure services was based on assessment or observation of challenging behaviours. Psychometric studies of tools used in assessments were also eligible for inclusion.

Study selection, data extraction and quality appraisal: All stages were completed independently by two reviewers, with disagreements resolved through discussion.



Title and Abstract screening: 6279 unique records

Full text screening: 328 articles

Number of include studies: 47

Where was this evidence from?	Main Findings
None of the studies were based in secure settings, or evaluated referral pathways to secure settings	There was no evidence to directly answer the research questions.
38 primary studies sought to identify predictors of, or variables associated with challenging behaviours which may warrant secure treatment	♦ This evidence was highly heterogeneous with some important methodological flaws ♦ Associations were found between lower patient age, male gender, fewer years in education and lower-levels of communication and aggressive behaviour, but there is little evidence to suggest they have a bearing on likelihood of sexually inappropriate behaviour or other difficulties of emotional or behavioural regulation ♦ Aggressive behaviour was found to be related to poorer physical functioning in 56% of the analyses evaluating this association. There is some evidence to suggest that the aetiology of ABI, location or type of brain damage, and injury severity may be possible factors affecting the likelihood of challenging behaviours, along with executive dysfunction. Whilst cognitive function appeared not to be relevant to the risk of sexually inappropriate behaviour, it appears to be a relevant consideration for other types of challenging behaviour ♦ There were associations between poorer mental health outcomes and risk of challenging behaviour and whilst no association was found between substance abuse and challenging behaviour, the number of studies conducting these analyses were small (n=12) ♦ Overall, whilst tentative associations were found between certain patient characteristics and the occurrence of certain types of challenging behaviour, the conflicting nature of this evidence reduces confidence in these findings and any associations should be interpreted with caution.
8 primary studies and 1 systematic review evaluated the validity/ reliability of tools used to assess challenging behaviours	Use of these tools was not supported by robust evidence about their psychometric properties.

What are the implications of this review?

There is no direct evidence to support decisions about referral to secure services for people with ABI who display challenging behaviours. There is tentative evidence to suggest that certain patient characteristics, including demographic, symptom and mental health status, may be associated with risk of challenging behaviours, and should form part of future patient assessments. However, urgent primary research is needed in this field to support evidence-based practice.

The results of this review suggest that:

1. To facilitate further research regarding the relationship between patient characteristics and challenging behaviour, research focusing on developing and/or evaluating the psychometric properties of existing measures of challenging behaviour should be a research priority
2. Published evaluations of existing referral pathways or decisions about care would provide valuable insight into the success of these processes
3. Development of future care pathways for individuals living with an ABI for whom support within a secure treatment setting may be appropriate should be considered after the research recommendations detailed within the main report have been addressed.

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We are one of three research groups in the UK commissioned by the National Institute of Health Research HS&DR (Health Services & Delivery Research Programme) to conduct syntheses of evidence about the organisation and delivery of healthcare (Project number 16/47/22).

The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health and Social Care.

References

1. Childs L. Assessing the Need for Secure ABI Services: Submission to the Adult Secure Clinical Reference Group in response to their request for information regarding: What Are The Differences In Terms Of Needs And Clinical Outcomes For Patients In Secure ABI Services, Compared To Mainstream Services? Unpublished report

2. Royal College of Physicians, British Society of Rehabilitation Medicine. Rehabilitation following acquired brain injury: national clinical guidelines (Turner-Stokes L, ed). London: RCP, BSRM; 2003.

3. Human Rights Act 1998. London: The Stationary Office; 1998. URL: https://www.legislation.gov.uk/ukpga/1998/42 (accessed 11 June, 2020).

4. McHugo GJ, Krassenbaum S, Donley S, Corrigan JD, Bogner J, Drake RE. The Prevalence of Traumatic Brain Injury Among People With Co-Occurring Mental Health and Substance Use Disorders. J Head Trauma Rehabil 2017;32:E65-E74. https://doi.org/10.1097/HTR.0000000000000249.

5. Parsonage M. Traumatic brain injury and offending. Centre for Mental Health; 2016. URL: https://www.centreformentalhealth.org.uk/publications/traumatic-brain-injury-and-offending (accessed 24 July, 2019).

6. Laver K, Lannin NA, Bragge P, Hunter P, Holland AE, Tavender E, et al. Organising health care services for people with an acquired brain injury: an overview of systematic reviews and randomised controlled trials. BMC Health Serv Res 2014;14:397. https://doi.org/10.1186/1472-6963-14-397.