

whilst the National Institute for Health and Care Excellence (NICE) recommended DBS should be used for research purposes only in OCD. Variability in the recommendations was also noted; indeed, only NICE undertook a cost-effectiveness analysis, and only the Congress of Neurological Surgeons (CNS) recommended target areas for electrode placement (i.e. subthalamic nucleus and nucleus accumbens). No guidelines clarified DBS settings, nor peri-operative optimisation measures. Patients' preferences, age groups differences, ethnicity or comorbidities were not considered by any guideline. The guidelines' quality ranged from moderate to high (50–92%), as per AGREE-II, with domains 'scope and purpose' and 'editorial independence' scoring the highest and 'applicability' and 'stakeholder involvement' the lowest across all guidelines.

Conclusion. Whilst eight guidelines supported the use of DBS for OCD as last-line therapy, a lack of cost-analysis, specific DBS settings, peri-operative procedures, and patients' circumstances were analysed. Given the lack of randomised controlled trials in this field, more rigorous research is needed prior to wider DBS implementation.

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Staff Perspectives of Emergency Department Pathways for People Attending in Suicidal Crisis: A Qualitative Study

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Aims. Background: The number of suicide-related presentations to emergency departments (EDs) has significantly increased over recent years; thus, making staff often the first point of contact for people in suicidal crisis. Despite this, staff receive minimal psychiatric training and few opportunities for education on the treatment and management of people presenting in suicidal emergencies. Understanding the needs of those who work within EDs is key to maximising the opportunity to reduce suicidal behaviour. **Aims:** To examine staff perspectives and experiences of working with people presenting to emergency departments in suicidal crisis. **Methods.** Qualitative study guided by thematic analysis of semi-structured interviews with ED administrative, medical and mental health staff.

Results. Twenty-three staff participated. Three key themes were identified: (1) factors influencing staff decision-making; (2) quality of care for both staff and patients; (3) staff burnout, mental health and well-being. Staff described an overall lack of confidence and training related to asking patients about suicidal thoughts, which resulted in defensive practice and risk adverse decision-making. Quality of care for both patients and staff were discussed in relation to availability of resources, staffing pressures and team collegiality. **Conclusion.** Staff felt inadequately equipped to deal with suicide-related presentations. Organisational support is lacking with increased staffing pressures, poor service availability and lack of beds. Negative staff attitudes often reflected an inherent unintentional use of language. Changing ED culture from top-down is imperative to address negative language and behaviours towards

suicidal crisis and improve patient pathways and experience. Mandatory and ongoing training is needed to improve staff confidence, knowledge and attitudes.

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Improve Coding Practices for Patients in Suicidal Crisis

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Aims. The recording of suicidal ideation in emergency departments (EDs) is inconsistent and lacks precision, which can impede appropriate referral and follow-up. EDs are often the first point of contact for people experiencing suicide-related distress, but while data are available on attendances for self-harm, no comparable data exist for suicidal crisis.

Methods. Data were collected from six EDs across Cheshire and Merseyside (N = 42,096). Data were derived from presenting complaints, chief complaints and diagnosis codes for all suicidal crisis attendances (suicidal ideation, self-harm, suicide attempt) from January 2019 to December 2021.

Results. There was inconsistent coding within and between ED sites for people presenting in suicidal crisis. Attendances for suicidal ideation were often given the chief complaint code of 'depressive disorder' (12%). There was a high level of missing data related to the coding of suicide-related presentations (65%). Variation in coding was also reported for individual presentations; for example, 12% of attendances reported to be due to 'self-inflicted injury' were given a primary diagnosis code of 'depressive disorder' rather than 'deliberate self-harm'. There was also high variability in the routinely collected data (e.g., demographic information, attendance source and mode, under the influence at time of arrival) both within and between EDs.

Conclusion. Accurate detection and documentation of suicidal crisis is critical to understand future risk and improve services. Research and development in monitoring systems for suicidal crisis should be a priority for health services, and a national data collection tool is urgently needed to maximise accuracy and utility. Better data could be used to inform crisis care policy and to target suicide-prevention resources more effectively.

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Measuring the Permeability of the Blood-Brain Barrier in Alzheimer's Disease Using Dynamic Contrast Enhanced MRI

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Aims. 1) To compare blood brain barrier (BBB) permeability between AD and controls. 2) To examine the relationship between BBB permeability and cognitive decline in AD. 3) To examine the relationship between BBB permeability and peripheral markers of inflammation.

Methods. This pilot study combines the use whole brain DCE-MRI, with measures of peripheral inflammation in serum and urine. This is a clinical cohort study with longitudinal and cross-sectional arms, involving n = 15 AD and n = 17 age and gender matched controls. BBB permeability is measured using DCE-MRI and inflammation is measured by comparing serum cytokine and urine neopterin concentrations. AD participants attend three study visits over 12 months; control participants attend two over one week. Urinary neopterin analysis is being conducted in February 2023. The 12 month follow up visits complete in May 2023. Both neopterin and longitudinal cognitive assessment data will be included in the poster presentation in July.

Results. AD and control groups were well matched with no significant differences in demographics and multi-morbidity. We measured blood cytokine profiles for IL-6, IL-8, IL-2, IL-4, IL-1b, IL-10, IL13, IL-12p70-, TNF-alpha and INF-gamma. Only INF-Gamma was significantly different; higher in AD vs Controls (mean \pm SD; 28.758 \pm 90.226 AD, 3.773 \pm 2.256 Control, P = 0.03). There were no significant differences in markers of neurodegeneration NfL and pTau-181, or vascular markers VCAM1, ICAM1, CRP and SAA between the groups. Ki is being calculated for overall whole brain, white matter, grey matter and hippocampus regions; an interim analysis showed no significant differences between the tissue categories, but analysis is ongoing.

Conclusion. There are currently no prognostic biomarkers that accurately predict decline in AD. We believe this pilot study will add to the literature about the utility and feasibility of DCE-MRI to measure BBB permeability. We hope that combining DCE-MRI with blood and urine biomarkers will further our knowledge of the pathophysiology of AD and help to develop minimally invasive biomarkers for identifying patients with AD, including those who are at risk of faster progression.

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Factors Affecting Compliance for Patients Post First Episode Psychosis

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Aims. Psychosis is a symptom of various health disorders characterised by hallucinations and delusions. Medication and appointment compliance amongst sufferers of psychosis remains a major issue. The aim of this study is to explore factors affecting compliance to inform interventions for improving service quality.

Methods. A rapid systematic review was conducted on PubMed. Following screening, these papers were extracted and assessed using the hawker tool. 161 papers were identified with a search criterion and 33 were screened after removing non- English records, paid articles and pre-2015 papers. Abstracts of 33 papers were screened and 9 studies were looked at in detail.

Results. 33 papers were identified after establishing a search criterion, from this 9 progressed to the inclusion stage. After using the Hawker tool, the quality of the papers averaged 32.8/36 and several significant factors were identified. The most significant factors that affect compliance are: insight, type of treatment, early signs of psychosis, ethnicity, income and qualitative factors.

Conclusion. Various measures can be suggested to help improve medication and appointment adherence for service users. Improving insight through targeted-informative leaflets on medication available at first contact with the Psychiatrist or GP. More frequent medication reviews for select patient groups identified with a higher risk of non-adherence. Greater income assistance through food and travel vouchers or information on how funding can be accessed. Lastly, staff training on increasing insight for psychosis patients delivered through a 1-day course/e-learning module.

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TMS-EEG in the Investigation of Excitation-Inhibition Imbalance in Psychosis and Cognition

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Aims. Transcranial Magnetic Stimulation (TMS) is an in-vivo, non-invasive, and safe method that probes neurophysiological properties associated with cortical glutamatergic (excitatory) and GABAergic (inhibitory) neurotransmission. The combination of TMS with Electroencephalography (EEG) allows us to measure TMS-evoked cortical responses directly from brain activity and it is uniquely placed to elucidate in-vivo cortical Excitatory/Inhibitory processes. Schizophrenia has been associated with Excitation/Inhibition (E/I) imbalance. Cognitive impairment, which is almost ubiquitous in schizophrenia, has been linked with the E/I abnormalities observed in schizophrenia. Among the TMS-EEG evoked potentials (TEPs), the N100 is thought to reflect activation of inhibitory GABA-B cortical circuits and has been associated with attentional processes in healthy individuals, attention deficit hyperactivity disorder (ADHD) and depression. Our aim was to investigate the cortical processes related to the generation of N100 after motor cortex stimulation and its association with attention measures in patients with schizophrenia and healthy controls.

Methods. TEPs were recorded following application of 150 TMS pulses at 90% of resting motor threshold on two brain sites, i.e., left primary motor cortex (M1) and dorsolateral prefrontal cortex (DLPFC) in stable patients with schizophrenia (n = 9) and healthy controls (n = 9). Region of Interest (ROI) analysis was performed to calculate the regional average of the N100 peak amplitude in