

Inventory Nursing Home version (NPI-NH) in 2/5. Network analysis was used to evaluate connectedness of psychopathologic features and a qualitative synthesis distilled recurrent psychopathologic features. Finally, each time point was compared with operationalised diagnoses using an automated classifier and plotted with corresponding symptom complexes over time.

Results All had psychiatric features at onset and were seen first by general practitioners or emergency departments. All received an incorrect initial diagnosis (1 neurological, 4 primary psychiatric). Two patients were referred to mental health services and detained while three were admitted to a general hospital. Psychiatric diagnoses spanned psychotic, mood, and stress categories. None had a personal or family history of serious mental illness or substance misuse. Despite the atypicality all were ascribed to non-specific psycho-social aetiologies. Autoimmune encephalitis was then first suspected between 4–28 days from onset (median=21 days) because of the psychopathology (n=2) or development of clear-cut seizures or movement disorder (n=3). 10 consistently reported features were identified: sleep disturbance, nightmares, mixed unstable mood, perplexity, incoherent repetitive speech, musical \pm visual hallucinosis, catatonic facies, possession-like/drugged, dissociative-disorganised, and regressed behaviour.

The symptom complex peaked rapidly (within 3 weeks). The peak burden was large and crossed multiple psychopathologic domains. Overall the syndrome is poorly-described by any single primary disorder; mixtures of mixed mood-psychotic-catatonic disorders performed best. Furthermore, it showed clear qualitative and hence diagnostic shifts between onset, peak, and resolution.

Conclusions The psychopathology of NMDAR-antibody encephalitis is complex and dynamic, likely contributing to diagnostic difficulties. However, it appears stereotyped between individuals, hence sensitive features can be derived. Inconsistency with psychosis and/or mood disorder constructs and better approximation with 'mixtures of mixtures' suggests specificity is possible but similar studies with primary disorder comparators are needed. As the disease can only be ruled out with cerebrospinal fluid antibody testing the practical implication is that the mental health system needs to embrace lumbar puncture as a routine part of practice in high risk groups.

26 PREDICTORS OF CARER BURDEN IN IMPULSE CONTROL DISORDERS IN PARKINSON'S DISEASE

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Aims/Objectives Impulse control behaviors (ICBs) affect 15%–35% of Parkinson's Disease patients. There is evidence of increased carer strain due to these behaviours; however, little is known about clinical variables mediating this effect. This study aims to investigate the factors predictive of carer burden within a cohort of Parkinson's Disease patients with ICBs. Identification of such factors may allow for targeted therapeutic intervention.

Method Data was collected from 45 patients with clinically significant ICBs and their carers including levodopa equivalent daily dosage, assessments of motor and neuropsychiatric symptoms, cognitive function and ICBs. Carer burden was assessed using the Zarit Burden Interview (ZBI). Univariate analyses

were performed using Spearman's Rank Correlation Coefficient. A backward model was used to remove variables to create a final multivariate model using ZBI score as the dependent variable.

Results Univariate analysis identified significant correlations between ZBI and total NPI (rs=0.50, p<0.0005); four NPI sub-scores: agitation-aggression (rs=0.41, p=0.005), depression-dysphoria (rs=0.47, p=0.001), apathy-indifference (rs=0.49, p=0.001) and irritability-lability (rs=0.38, p=0.03); and carer GHQ (rs=0.52, p<0.0005). Multivariate linear regression retained total NPI and GHQ scores, collectively predictive of 36.6% of variance in ZBI.

Conclusions This is the largest study to date, looking at associations between carer burden and ICBs. Our findings indicate low mood, poor motivation, social disinhibition and neuropsychiatric symptom burden to be significant factors in carer burden. We also observe that carers reporting poorer health had increased carer strain. Further work should explore methods of physical and psychosocial support and coping strategies for carers.

27 MEDICAL STUDENT EDUCATION IN SLEEP AND ITS DISORDERS: HAS IT IMPROVED OVER 20 YEARS?

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Objectives/Aims There is growing recognition that sound sleep is a pillar of health, alongside adequate nutrition and exercise. Sleep problems are common and often treatable, improving lives. Twenty years ago, Stores¹ revealed the paucity of UK medical school-education on sleep disorders, with a median teaching time of 20 min: we investigate here whether this situation has changed.

Methods A cross-sectional survey of 34 medical degree courses in the UK, adapted from Stores' 1998 questionnaire, including time spent on teaching sleep medicine, sub-topics covered, and forms of assessment. Responses were coded and analysed numerically where possible; free text was analysed thematically. We excluded responses not concerned with general undergraduate education.

Results Twenty-five (74%) UK medical schools responded to our survey. The time devoted to teaching sleep medicine during undergraduate training was median 1.5 hours, mode <1 hour, and mean 3.2 hours (standard deviation=-2.6).

Only two schools reported a sleep medicine syllabus or dedicated compulsory module (8%), whilst two had optional student-selected sleep medicine modules (8%). Sleep medicine was generally described as being subsumed into other areas, primarily respiratory medicine, sometimes ENT, Psychiatry and Neurology; coverage of subtopics mirrored this pattern. Asked if enough time is allotted for teaching on sleep medicine, 50% said Yes, 38% No, 13% were unsure.

Free-text comments made by our respondents had recurring themes: sleep medicine is typically **subsumed** into teaching by other specialties, consequently course directors are **uncertain** about the details of provision, **obstructive sleep-apnoea** is often identified as the key or only relevant sleep disorder, knowledge of sleep disorders is regarded as **optional**, and there is **inertia** about the prospect of change. However, a substantial minority of respondents are **enthusiastic** about making

improvements to the sleep education they currently provide, and keen to use additional resources. Examples of good practice exist already, with one school offering an optional 30 hour sleep medicine module annually to 12 students.

Conclusions Little has changed since Stores' previous survey 20 years ago: sleep medicine remains a neglected topic despite agreement on the importance of sleep for general health. Sleep research is the exception rather than the rule. Obstacles to change are akin to those noted by Stores, including the views that 'sleep is not a core topic', or the 'curriculum is too crowded'. However, there is some enthusiasm for improving sleep education. Given its broad importance to health, and the existence of effective therapies, we recommend that medical schools should implement a sleep medicine curriculum.

REFERENCE

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28 USING EXPERIMENTAL SIMULATION OF DEMENTIA TO UNDERSTAND FUNCTIONAL COGNITIVE DISORDERS

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Objectives/Aims Symptoms and signs of functional (psychogenic) motor and sensory disorder often depend on the individual's ideas about symptoms rather than on the rules of anatomy and physiology. The possibility that functional cognitive symptoms might similarly reflect beliefs about cognitive disorders such as dementia has not been widely explored. We aimed to assess the ideas and beliefs of healthy non-medical adults about symptoms of mild dementia.

Methods Healthy adult volunteers aged 18–27, without medical training, underwent a 25 minute assessment during which they were asked to imagine that they in fact had symptoms of 'mild or early stage dementia'. The assessment included the Montreal Cognitive Examination (MOCA), examination of gait, digit span, the Luria 3-step test, interlocking finger test of parietal function, and the 'coin in hand' forced-choice test. Close family history of dementia and specific perceptions about dementia were recorded.

Results In 50 participants, mean age 22, mean MOCA score was 16 (SD 5.5, range 5 – 26). Summed responsetime ranged from 5 minutes 13 seconds to 14 minutes 12 seconds (mean 8 minutes 4 seconds, SD 1 minute 59 seconds). Delayed recall was the most frequently failed item (100%) followed by letter vigilance (86%), forward 5-digit span (82%) and clock-drawing (82%). Cube drawing was the least frequently failed item (42%). 26% failed forward 3-digit span and 36% failed reverse 2-digit span. On the 'coin in hand' test, 30% scored at (22%) or below (8%) the level of chance. 18% successfully completed the Luria 3-step test. 76% successfully copied 3 or 4 interlocking finger positions. 48% had abnormal gait. Inconsistent response patterns and difficulty following and remembering instructions was common. There were no significant differences between those with and without a family history of dementia.

Conclusions Cognitively healthy young adults simulating mild dementia perform similarly to older adults with mild dementia, demonstrating beliefs that dementia is associated with significant global impairment, including of attention and motor function, with relatively poor performance on letter vigilance, but preservation of cube drawing. Inconsistent response patterns were common. Contrary to expectation, family history of dementia did not influence performance. Digit span showed particular promise as a bedside test. Further investigation will establish whether similar patterns of results are produced in individuals with functional cognitive symptoms.

29 ASSESSING POINT-PREVALENCE AND DOCUMENTATION OF HEAD INJURY IN THE NORTH LONDON FORENSIC SERVICE

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Objectives/Aims Traumatic brain injury (TBI) is highly prevalent in prison populations, but little is known about TBI prevalence amongst mentally disordered offenders in secure settings. The North London Forensic Service (NLFS) is a tertiary forensic secure psychiatric service, serving a catchment population of over 1.4 million. We aimed to estimate the point-prevalence of head injury amongst inpatients at NLFS, and audit the quality of documentation of head injury.

Method We performed a retrospective case note review of the NLFS electronic records system to identify all documented head injuries in all NLFS inpatients on a selected day. To increase detection, we reviewed neuroradiology reports, and medical records were electronically screened for the following text-strings: 'brain injury', 'TBI', 'head injury', 'road traffic accident', 'loss of consciousness', 'LOC', 'concussion', 'MRI', 'GCS' and 'boxing'. For each injury identified, we assessed whether amnesia and altered consciousness at the time of the injury were documented, in line with established criteria for assessing severity of TBI (Department of Veterans Affairs/Department of Defence criteria). Injury mechanism and date, patient age, and admission length were recorded. Authors AJB and RM co-rated the findings, and disagreements were resolved by consulting a third party.

Results 100% of inpatient records were screened (n=194, 6% female, 94% male, mean age 40.2 years). 58 documented head injuries were identified, involving 50 patients (25.8%). 43 head injuries occurred prior to admission to NLFS. 16 patients (8.2%) had head injuries associated with clearly documented impairment of consciousness and/or amnesia, suggestive of TBI. 13.7% of all recorded head injuries included explicit documentation of both consciousness level and amnesia (33% when limited to head injuries occurring during admission to NLFS). The most common identified mechanism was assault (n=30). Mean admission length was 1306 days, and was not significantly different in patients with a history of head injury (p=0.825, *Mann-Whitney U*). 34% of inpatients had undergone neuroimaging. Abnormalities were identified in 32% of reports, with leukoaraiosis and generalised cerebral involutions changes being most frequently reported.

Conclusion These findings highlight a local need to improve quality of documentation in assessment of patients with head injuries, and provide an estimate of point-prevalence of head injury and TBI at NLFS. The high frequency of assault