

## The Capacity Crunch: Auditing Mental Capacity Assessments in the Emergency Department

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**Aims:** To evaluate the level of documentation and quality of mental capacity assessments (MCA) in the Emergency Department (ED), specifically examining the frequency, documentation methods, and outcomes of capacity assessments for patients presenting with mental health complaints. We hypothesize that most patients who attend with mental health presentations and leave before treatment is completed do not receive formal capacity assessments.

**Methods:** A retrospective audit was conducted of all patients attending ED triaged under the “Mental Health” category during October 2024 (n=81). Data was collected on demographics, presenting complaints, rates of re-attendance, whether formal and informal capacity assessments were carried out, involvement of Liaison Psychiatry and patient outcomes. Formal capacity assessments were defined as those using the MCA form or explicitly documenting the decision in question, reason for doubt, and assessment of the four key criteria (understanding, retaining, weighing, and communicating information).

**Results:** Of 81 patients (49% female, median age 29, range 13–77), the predominant presenting complaints were suicidal ideation (n=33, 41%), overdose (n=9, 11%), and depressed mood (n=8, 10%). 75 patients (92.6%) left before treatment was completed. 16 (21.3%) of those who left before treatment was completed returned within 24 hours.

Only 7.4% (n=6) had formal capacity assessments documented, with 42% (n=34) having informal assessments noted elsewhere. 5 of 6 formal assessments were done by ED staff and one was conducted by Liaison Psychiatry staff. Of all assessments conducted (n=40), 8 patients (20%) lacked of capacity at the time. The majority of patients (92.6%) left before treatment completion. Liaison Psychiatry was involved in 34.6% (n=28) of cases.

**Conclusion:** This audit highlights significant gaps in the formal documentation of capacity assessments in the ED, with few mental health presentations receiving fully documented assessments despite RCEM and MCA guidance. The high rate of patients leaving before treatment completion underscores the need for further investigation into possible reasons, a standardized assessment approach to capacity assessment and focused training for ED staff. Informal assessments may be more common due to time pressures, limited knowledge of the MCA process, or difficulty accessing forms.

Abstracts were reviewed by the RCPsych Academic Faculty rather than by the standard *BJPsych Open* peer review process and should not be quoted as peer-reviewed by *BJPsych Open* in any subsequent publication.

## Investigating the Relationship Between Thalamic Volumes, Dementia Risk and Sleep in the PREVENT-Dementia Study

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**Aims:** Sleep dysfunction is common in the prodromal stages of Alzheimer's disease. Several thalamic nuclei are implicated in promoting and maintaining sleep. We investigated the relationship between thalamic nuclei volumes and sleep in people without dementia with respect to dementia family history (FHD) and apolipoprotein e4 allele (APOE4) carriership.

**Methods:** 700 participants aged 40–59 years were recruited into the PREVENT Dementia study. 645 participants underwent T1-weighted 3T MRI scans. The thalamus was segmented into six regions; 1) anterior, 2) lateral, 3) ventral, 4) intralaminar, 5) medial and 6) posterior using Freesurfer 7.1.0 and underwent ComBAT harmonisation. Subjective sleep data was assessed using the Pittsburgh sleep quality index, which quantifies sleep using seven components and a total score. 586 participants were included for analysis with respect to FHD and 590 for APOE4 carriership. Logistic regression or robust linear regression with age, sex, total intracranial volume and depression as covariates and false discovery rate correction (FDR) for multiple comparisons was used.

**Results:** Smaller volumes of the whole thalamus (p=0.0391), posterior region (pFDR=0.042), and within the posterior region the lateral geniculate (pFDR=0.019), and pulvinar anterior (pFDR=0.019) and medial nuclei (pFDR=0.019), were associated with worse perceived quality of sleep in the FHD positive group. Smaller volumes of the thalamus (p=0.041) in the FHD positive group were associated with greater sleep disturbances. We did not find any relationship between thalamic volumes and FHD in predicting total scores, sleep duration, latency, efficiency, use of medications to aid sleep or daytime dysfunction.

However, larger thalamic volumes were associated with a significantly lower total Pittsburgh score, indicating less overall sleep dysfunction (p=0.014) in non-carriers. A similar trend was seen with the lateral, ventral and intralaminar subregions, but they did not survive correction for multiple comparisons. We did not find any association between thalamic volumes and APOE4 carriership in predicting sleep quality, duration, latency, efficiency, sleep disturbances, use of sleep medications or daytime dysfunction.

**Conclusion:** Our results suggest some early sleep changes related to thalamic volume, particularly in individuals with dementia family history. It is possible the thalamus and nuclei within the posterior thalamus may exert beneficial effects in preserving the quality of sleep in this group.

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## Immune Dysregulation in Bipolar Disorder: The Role of IL-27 and EBI3

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