

trends and statistically significant changes between 2013 and 2021.

Methods. ECTAS minimal data set has been published for years 2012/13, 2014/15, 2016/17 and 2021. Number of courses, age, gender, diagnoses, legal status, number of treatments, and score on Clinical Global Impression Scale (CGI) for acute treatments has been analysed for trends and statistical differences.

Results. ECTAS data set was not published for the years 2018, 2019 and 2020. In terms of number of courses of treatment per year, 2014/15 was highest with 2148 courses and lowest was in 2016/2017 with 1821 courses. Average number of treatments was 1995 and there was no statistical difference between the years. There was no statistical difference with mean age (61), gender (female 66%), and diagnosis (depression 87.5%). In terms of diagnosis though, there is better documentation of diagnosis in 2021, rather than broad categories such as catatonia used previously, and this has led to schizophrenia as diagnosis in 4% and mixed affective disorder in 5%.

There has been a gradual but not statistically significant trend to increase in treatments per course from 9.3 in 2012/13 to 10.1 in 2021. There is significant increase in number of patients detained at the start of treatment from 42% in 2012/13 to 57% in 2021. Percentage of people in moderate to amongst severely ill categories on CGI at the start has remained the same through the years (mean 96%). CGI at the end of treatment minimal improved to much improved has similarly remained through the year (mean 91%).

The 2021 data set includes subjective memory score with categories showing increases after ECT were 2 (“occasional increased lapses of memory”) and the yet milder category of 1.

Conclusion. Between the published data sets, there is no statistical difference apart from number of patients commencing ECT under the Mental Health Act. This may reflect increasingly better practice in assessing mental capacity, with a greater tendency to appropriate application of Mental Health Act legal framework ensuring legal safeguards for the patient such as right to appeal and statutory access to second opinion.

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From At-Risk Mental State to Psychosis: Demographic Characteristics and Clinical Correlates of Individuals Who Transitioned to Psychosis

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Aims. The at-risk mental state (ARMS) describes individuals at high risk of developing schizophrenia or psychosis. This study aimed at exploring the demographic characteristics of individuals who transitioned to psychosis from a large multicenter factorial design trial.

Methods. This was a secondary analysis of large multicenter randomised controlled trial of minocycline and/or omega-3 fatty acids added to treatment as usual for at-risk mental states. Participants (n = 326) were randomised to minocycline, omega-3, combined minocycline and omega-3 or to double placebo for 6

months. The primary outcome was transition to psychosis at 12 months.

Results. Forty-five (13.8%) participants transitioned to psychosis. The mean age of participants was 23.31 (5.31 SD) and 15.6% no formal education, 8.9% primary, 48.9% matriculation, 8.9% intermediate and 15.6% graduation and above. Majority 66% of participants were male and 71.1% single, 66.7% living in a joint family, 44.4% were employed, 24% students, 17.8% household/housewife and 3% unemployed. Interestingly 36.8% participants had a family history of psychosis, followed by 21.0% any unknown mental illnesses, 15.8% bipolar disorder, 15.8% depression, 5.3% anxiety and 5.3% intellectual disability. The mean total score for the Prodromal Questionnaire was 8.93, with a standard deviation of 1.67. The mean score on the Comprehensive Assessment for At Risk Mental State (CAARMS) unusual thoughts was 3.98 (SD = 0.84), Non-Bizarre Ideas 3.64 (SD = 0.77), Perceptual Abnormalities 3.76 (SD = 0.71) and disorganized speech 2.49 (SD = 1.12). Participants had mean Social and Occupational Functioning (SOFAS) score of 66.67 which suggests moderate difficulty in social, occupational, or school functioning (e.g., few friends, conflicts with peers or co-workers).

Conclusion. Transition to psychosis appears to have different demographic and clinical correlates which may have the causal relationship to transition. The cross-comparative studies are warranted to understand differences and similarities between the groups.

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Isolating and Characterizing the Transcriptome From Human Alzheimer's Disease (AD) Brains

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Aims. Local protein synthesis at the synapse is a key determinant of learning and memory and is predicted to be severely disrupted in Alzheimer's disease (AD). Omics approaches have played a key role in deciphering molecular mechanisms underlying AD pathology. However, isolating the transcriptome may be biased due to inherent variations in transcript levels, or by transcription-on-demand models employed by several genes, whereas mass-spec based proteomics approaches fail to capture low abundance peptides. The transcriptome bypasses these inherent limitations of other omics methods by capturing actively translating mRNA species trapped inside ribosomes and subjecting them to unbiased RNA-seq analysis capturing even very low abundance transcripts.

Methods. Isolating the neuronal ribosomes from human post-mortem brains without interference from non-neuronal cells remains a challenge. We used frozen brain tissue from Alzheimer's patients and healthy controls obtained from the Cambridge Brain Biobank. Synaptonemes were prepared using sucrose gradients in non-denaturing buffers with RNase inhibitors to preserve ribosomal composition and trapped mRNA. We isolated functional ribosomes on affinity columns following recombinant RNase digestion. Finally, actively translating ribosome-trapped mRNAs were