Aims. Video-delivered care is a rapidly emerging area with potential to transform assessment and treatment strategies. The coronavirus (COVID-19) pandemic has accelerated these changes. Limited evidence exists for experiences of video care in secondary mental health services. We aimed to assess the acceptability of video care in mental health clinical practice during COVID-19.

Method. Structured questionnaires were developed with the help of patients and clinicians. The patient experience questionnaire was built into video sessions and completed online, using the Attend Anywhere (AA) platform from July 2020 to March 2021. A Trust-wide clinician views and experiences survey was conducted from July 2020 to October 2020. Descriptive analysis was performed using SPSS (version 27.0).

Result. Of 1,296 patients who completed the online feedback, the majority provided positive feedback for all aspects of video care. Most patients felt their needs were met (90%) and were supported (93%) during the video call. Positive experiences were informed by clinicians' communication skills. For future appointments, just over half (51.7%) of patients preferred using video calls, followed by face-to-face (33%). Future video preference was informed by reasons reducing social anxiety and practical aspects such as child/carer needs, physical disability and travel.

Of 252 clinicians completing the survey, 161 (64.7%) had used video for remote care delivery. Clinicians also provided positive feedback, with Microsoft-teams as the preferred platform. Most clinicians felt the therapeutic relationship (76.4%) and privacy (78.7%) were maintained using video. While 73% felt there were no safeguarding issues that impacted adversely, 30% felt that care quality was affected, and (69.9%) reported limited visual cues for video calls. Most clinicians (73%) felt confident about clinical decision-making remotely, though there were areas where clinicians felt less confident, such as assessing patients' appearance and behaviour. Additionally, compared with face-to-face, video consultations seemed to be effective for social anxiety, but less so for Autism spectrum disorders, and with no perceived difference for depression or self harm. For future, more clinicians preferred face-to-face (40.1%) than video care (36.1%).

Conclusion. Mental health care delivered remotely via video is experienced positively by patients and clinicians alike. However, clinicians felt that quality of care is impacted, and additional remote clinical skills training may be beneficial. Going forward, there is acceptability for the use of video care in routine mental health practice for certain mental health presentations.

Sleep and the risk of cognitive impairment and dementia: further insights from the Caerphilly Prospective Study

James Selwood[1]*, Elizabeth Coulthard[1], Antony Bayer[2], Mark Fish[3], John Gallacher[4] and Yoav Ben-Shlomo[1]

[1]University of Bristol; [2]University of Cardiff; [3]Taunton and Somerset NHS Foundation Trust and [4]University of Oxford
*Corresponding author.

Aims. Sleep disorders are highly prevalent with growing evidence that sleep problems may predict cognitive decline and dementia. A previous analysis of the Caerphilly Prospective Study (CaPS), a cohort of middle-aged men, found that daytime sleepiness predicted vascular dementia and cognitive impairment. We have re-examined this hypothesis with additional events based on further follow-up. The study aimed to examine the role of different sleep problems in predicting cognitive impairment not dementia (CIND) and dementia. Our hypothesis was that sleep problems in mid-life would predict CIND and dementia in later life.

Method. CaPS is a population cohort of men born between 1920 and 1935 and resident in Caerphilly in South Wales, first seen between 1979–1983. Cognitive tests and a sleep questionnaire were introduced at Phase III (men aged 55–69 years). The questionnaire asked about daytime dysfunction, hypnotic use, insomnia, napping, nocturnal limb movements, sleep apnoea, sleep duration, sleep latency and snoring.

At Phase V (men aged 68–82 years), poor performance on the Cambridge Cognition Exam (CAMCOG) was used to select men for detailed clinical assessment. Subjects were classified as having normal cognition, CIND or dementia. Cognitive disorders were sub-classified as vascular or non-vascular. At Phase VII (men aged 78–92 years), new cases were identified and survivors with existing diagnoses were reassessed.

We initially conducted separate logistic regressions for vascular and non-vascular cognitive outcomes with the individual sleep measures, but where there was no evidence of heterogeneity, we combined these outcomes to enhance power. We also ran ordered logistic regression models to test for association of our sleep measures with CIND and dementia from any cause, with no cognitive problems as the reference group. All models were adjusted for potential confounders such as age and lifestyle variables.

Result. There were 256 cases of CIND, 155 dementia and 118 vascular cognitive disorders. 889 had normal cognition. Nocturnal limb movements strongly predicted vascular cognitive disorders (OR 2.59, 95% CI 1.34–4.98, p = 0.004). Poor sleep duration, defined as less than 6 or more than 8 hours, predicted all-cause CIND and all-cause dementia (OR 1.62, 95% CI 1.01–2.61, p = 0.045). The other sleep measures showed weak associations consistent with chance.

Conclusion. We have provided further evidence that sleep problems predict cognitive decline, justifying the growing interest in sleep as a potentially modifiable risk factor for dementia. Future evidence is required from intervention studies that attempt to improve sleep parameters.

Mechanisms of transcranial magnetic stimulation in the treatment of anorexia nervosa

Lydia Shackshaft

King's College London

Aims. Severe and Enduring Anorexia Nervosa (SE-AN) is a challenging condition to treat, with limited therapeutic options, high morbidity, and the highest mortality rates of any psychiatric illness. Repetitive Transcranial Magnetic Stimulation (rTMS) is an emerging treatment option, as evidence demonstrates promising efficacy in improving mood and reducing core Anorexia Nervosa symptoms, as well as safety and tolerability to patients. We aimed to investigate the neurophysiological mechanisms of rTMS use in SE-AN patients by assessing changes in resting state functional connectivity, in the first functional neuroimaging analysis investigating rTMS effects in Anorexia Nervosa patients.

Method. 26 females with a current diagnosis of SE-AN received 20 sessions of sham or real high frequency rTMS (10 hertz) to the left dorsolateral prefrontal cortex in a randomised double-blind trial. Resting-state functional magnetic resonance imaging was performed before and after rTMS. Neural correlates of

rTMS treatment were identified using a seed-based functional connectivity analysis with the left dorsolateral prefrontal cortex and bilateral amygdalae as regions of interest. Functional connectivity differences were analysed using t-contrasts in a mixed ANOVA (flexible factorial analysis) to assess interactions between treatment group (real rTMS vs sham) and time-point (pre or post TMS).

Result. No statistically significant changes in resting-state functional connectivity were observed post-rTMS compared to baseline in participants receiving active rTMS compared to sham. Increased functional connectivity between the left amygdala and left pre-supplementary motor area was observed to reach cluster-wise significance (PFWE < 0.05). However, after Bonferroni correction for multiple comparisons (3 seed regions), this did not reach the significance threshold PFWE <0.017.

Conclusion. This study highlights the need for further investigation of neurophysiological mechanisms, including resting-state functional connectivity modulation, resulting from rTMS to the dorsolateral prefrontal cortex in SE-AN patients. This requires higher powered studies to account for heterogeneity in treatment response. We have provided some indication that high frequency rTMS may have therapeutic benefit in SE-AN by modification of functional connectivity between prefrontal and limbic brain regions, resulting in improved top-down cognitive control over emotional processing and ability to enact goal-directed behaviours, enabling secondary reductions in eating disorder behaviours.

Depression, perceived stress, social support, substance use and related sociodemographic risk factors in medical school residents in Nairobi, Kenya

Sayed Shah Nur Hussein Shah[1]*, Ahmed Laving[2], Violet Okech-Helu[3] and Manasi Kumar[2]

[1]Kiambu Referral Hospital; [2]Senior lecturer, University of Nairobi and [3]Consultant Psychiatrist, Kenyatta National Hospital
*Corresponding author.

Aims. Little is known about mental health risk factors in medical residents and doctors in Sub-Saharan Africa. Residents are at a greater risk of developing depression, stress and substance abuse than the general public owing to the stressful nature of their medical training. Poor mental health in residents leads to decreased clinical efficiency and training satisfaction; it can also lead to substance dependence, self-harm and suicide.Our primary aim was to ascertain depression prevalence among medical residents in Kenya's largest national teaching and referral hospital. Secondary aims were to analyze how depression was associated with perceived stress, perceived social support, substance use, and educational environment.

Method. Self report questionnaires were administered in this cross-sectional survey to 338 residents covering eight specialties (Medicine, Psychiatry, Paediatrics, Obstetrics/Gynaecology, Anaesthesia, General Surgery, Cardiothoracic Surgery, and Ear Nose Throat Surgery). In addition to key sociodemographics, the Centres for Epidemiology Depression Scale - Revised, Perceived Stress Scale, Multidimensional Scale of Perceived Social Support, Alcohol, Smoking and Substance Involvement Screening Test, and Postgraduate Hospital Educational Environment Measure were used.

Result. The mean participant age was 31.8 years and 53.4% were males. Most residents (70.4%) reported mild/no depressive symptoms 12.7% had moderate, and 16.9% had severe symptoms.High social support (71.8%) and moderate stress (61.6%) were reported by most residents. Almost half (46.3%) rated their educational environment as being more positive than negative. Out of 238 respondents 11.3% were at moderate risk of health and other problems due to cocaine use, while 13.3% (out of 240 respondents) were at risk due to alcohol. On bivariate analyses, we found significant correlations between depression, perceived stress, substance use, perceived social support, and educational environment. Multivariate analysis revealed that depression was strongly associated with: fewer hours of sleep ($\beta = -0.683$, $p = 0.002$), high perceived stress ($\beta = 0.709$, $p < 0.001$) and low perceived social support ($\beta = -2.19$, $p < 0.001$).

Conclusion. High perceived social support, low perceived stress, and less sleep were significantly associated with lower depression scores. A large proportion of residents were at risk of developing depression (29.6%). There were high levels of perceived social support (71.8%). A concerning proportion of residents used substances like alcohol and cocaine. This work is one of few that describe the mental health of an important and understudied population group in an LMIC. Priority must be given to protect and promote the mental health of such a vulnerable group.

Acute mania with psychotic symptom in post COVID-19 patient

Sridevi Shanmugam[1]*, Praveen Kumar[2] and Blaga Carr[1]

[1]Essex Partnership University NHS Foundation Trust and [2]NHS highland
*Corresponding author.

Aims. COVID-19 is an on-going pandemic caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Recent evidence suggests that SARS-CoV-2 may be associated with various neuropsychiatric symptoms, including mania. We present a case of a middle aged man presenting with acute mania with psychotic symptoms 20 days post COVID infection in the absence of prior psychiatric illness. This report highlights the need for rigorous neuropsychiatric assessment in patient with symptoms of SARS-CoV-2 infection.

Method. A 52-year-old man of West African origin with past history of hypertension and no previous history of mental health illness presented with acute manic symptoms on background of two weeks of high fever, diarrhoea, mild headache, dry cough and anosmia. He was tested positive for SARS-CoV-2 infection on COVID PCR test. He was under self-isolation along with his family members who exhibited mild symptoms of SARS-CoV-2, none of them required hospital admission. He was initially fearful to seek medical attention but was brought in by family after exhibiting behaviour changes, obsession with toilet cleaning, reckless spending and getting aggressive approximately two weeks after the onset of acute upper respiratory symptoms. He presented elated in mood with pressure of speech and grandiose ideas. Investigations like neuroimaging and bloods were unremarkable. Initial psychiatric assessment found symptoms consistent with acute mania and he was detained under the Mental Health Act. During admission, he was sexually disinhibited and agitated on the ward requiring IM antipsychotics. He was treated with high dose of Olanzapine and Sodium valproate and his symptoms subsided within two weeks.

Result. This case emphasises the manifestation of neuropsychiatric illness post COVID-19 without a background of psychiatric illness, hypoxemia and cerebral infarction.