



**Royal College of Psychiatrists
Annual ECT & Neuromodulation
Conference**

26-27 November 2020

**CONFERENCE
BOOKLET**

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GENERAL INFORMATION

Conferences Resources

Please see the following link to access the [conference resources](#) webpage.

Certificates

Certificates of attendance will be emailed to delegates after the conference.

Speaker presentations

Speaker presentations (subject to speaker permission) can be accessed via the [conference resources](#) webpage. Unfortunately, it is not always possible to supply presentations due to some items being unpublished and copyright issues.

Accreditation

This conference is eligible for up to 1 CPD hour per educational activity subject to peer group approval.

Feedback

A detailed online feedback form can be found at - <https://www.surveymonkey.co.uk/r/D3DXDWV>

All comments received remain confidential and are viewed in an effort to improve future meetings.

If you wish to tweet about the conference use @RCPsych.

On demand

After the conference you will be sent an email with links to the recordings so you will be able to watch the conference on demand.

PRESENTATION ABSTRACTS AND BIOGRAPHIES

(LISTED BY PROGRAMME ORDER)

Thursday 26 November

Welcome and Introduction Dr Richard Braithwaite

Dr Richard Braithwaite completed his training in General Adult and Old Age Psychiatry within the Wessex Deanery in 2010 and has since been employed as a Consultant Old Age Psychiatrist by the Isle of Wight NHS Trust. He gained an interest in electroconvulsive therapy (ECT) at Southampton medical school, taking an active part in delivery of ECT during his basic and higher psychiatric training. He is currently Clinical Tutor and Lead Consultant for ECT on the Isle of Wight and is Vice-Chair of the Royal College of Psychiatrists' Special Committee for ECT and Related Treatments.

Use of ECT, rTMS and tDCS to treat depression Professor Colleen Loo

The practice of ECT continues to evolve. Recent research on heart rate effects and the interaction of anaesthesia and ECT will be presented. rTMS and tDCS have introduced new methods for treating depression, including treatment refractory illness. Considerations for when to use ECT, rTMS and tDCS will be discussed.

Colleen Loo, MBBS (Hons), FRANZCP, MD (research doctorate), is a clinical psychiatrist and Professor of Psychiatry at the University of New South Wales, Sydney; Australia. She is an internationally recognised clinical expert and researcher in the field of electroconvulsive therapy (ECT), Transcranial Magnetic Stimulation (TMS), transcranial Direct Current Stimulation (tDCS) and ketamine, and has led RCTs of these interventions in depression. She has published over 200 peer reviewed papers and has received grant funding from the Australian NHMRC, US-based NARSAD and Stanley Foundations, UK NHS/MRC and Singapore NMC.

She recently served as President of the International Society for ECT and Neurostimulation (ISEN) and has been on the Editorial Boards of the two leading international brain stimulation journals: Journal of ECT, Brain Stimulation.

The ECT Café - a Quality Improvement Initiative Clare Kozlowski, Andy Thompson, Karen Peckover

This presentation focusses on the development of an ECT café from concept to reality.

There will be information on how the concept developed, what were the outcomes for the patient and their families and a brief appraisal of café in the pre covid times.

Clare Kozlowski is a Service Manager at Leicester Partnership NHS Trust.

Andy Thompson has worked as a Psychiatric Nurse within Leicestershire for the last 34 years. During this time I have worked within Elderly, rehabilitation and acute Psychiatry. I was also a CPN in both inner city and rural settings.

Andy's first contact with ECT was in 1999 and then again in 2008 when I took on the lead nurse role for Leicestershire Partnership Trust.

Andy has had the privilege to be directly involved in NALNECT (national association of lead nurses in ECT) and also taught on the ECT nurses course for ECTAS. Andy's current position for NALNECT is treasurer.

Andy has also been involved in developing an ECT APP which although is now several years old is still used and downloaded.

Karen Peckover has lived experience of severe mental ill health and ECT.

Karen feels strongly that the voices of patients and carers should be heard and their views taken into account when decisions are made.

Karen is a Patient Worker for ECTAS and patient representative on the ECT and Related Treatments Committee at the Royal College of Psychiatrists.

ECT provision during covid-19 in Leuven, Belgium Ms Kathleen Bronckaers

ECT in Belgium has been gaining ground in the past 20 years. In 2019, 15294 treatment sessions were performed. A quarter of these treatments were performed in our unit, mostly for unipolar depression.

The pandemic caused about 70% of the ECT-units in Belgium to stop their activities. In our ECT-unit, acute courses were continued, whereas M-ECT and outpatient-ECT was stopped.

Because of covid-19 we had to make a lot of changes in the ECT process. In the treatment and recovery room the number of caregivers was kept to a minimum. Staff-protection was high, as patients were considered contaminated. No PCR tests were done at the start of the lockdown. The rooms were and still are ventilated with 5 air changes per hour. Glycopyrrolate is used to reduce salivation (and aerosol) and between every treatment the surfaces and medical devices are disinfected with ethanol 70%.

These measures have evolved during the past months. Today, a PCR-test is required max 72u before an outpatient treatment, once a week for inpatients. Face shield and FFP2 mask in the treatment room is available but is not mandatory. Surgical facemasks and protective aprons are used. Outpatients have their own chair, family/drivers and students are not allowed on the unit.

Patients whose M-ECT was stopped were followed-up on a weekly basis, via telephone or video-interviews. During the 6 months following the lockdown, 45,68% (N=37/81) relapsed. Of those relapsed 86% restarted ECT. Preliminary analyses suggest that patients that had a shorter interval between M-ECT-sessions and patients with more acute ECT courses in the past relapse more quickly.

Interestingly, the second lockdown (d.d. Oct 30), with all measures mentioned above in place, did not result in a further reduction of ECT-availability.

Kathleen Bronckaers graduated her nurse studies in 2002 with a specialization in social nursing and psychiatric nursing. In 2002 she started working on the closed admission ward of the UPC KULeuven hospital. From 2004 to 2006 she completed her studies master of nursing at the KULeuven in combination with half time work on the closed admission ward. Two years later she began a job as lead nurse on the admission ward for mood disorders and since 2011 she is also lead nurse of the ECT unit at the UPC KULeuven hospital.

ECT provision during covid-19 in Malta Antonio Magro

Antonio Magro received a Diploma in Psychiatric Nursing (2003) and a Bachelor of Science Degree in Mental Health Nursing (2009) from the University of Malta. Antonio is currently in charge of the Brain Stimulation Clinic at Mount Carmel Hospital, which includes the repetitive Transcranial Magnetic Stimulation (rTMS) and Electro Convulsive Therapy (ECT).

Antonio has 17years experience in acute care where he used to work and lead the Mixed Admission Ward. In 2016 he was entrusted to spearhead the CTC project, and today is an important service within the Mental Health Services which functions as a liaison between the acute and community services.

He was an active member of the Maltese Association of Psychiatric Nursing and served the roles of both vice president and treasurer for 10 years.

Ketmaine for mood disorders Dr Roger McIntyre

Dr Roger McIntyre is currently a Professor of Psychiatry and Pharmacology at the University of Toronto and Head of the Mood Disorders Psychopharmacology Unit at the University Health Network, Toronto, Canada.

Dr McIntyre is also Executive Director of the Brain and Cognition Discovery Foundation in Toronto, Canada. Dr. McIntyre is also Director as well as Co-Chair of the Scientific Advisory Board of the Depression and Bipolar Support Alliance (DBSA) from Chicago, Illinois, USA. Dr McIntyre is also Professor and Nanshan Scholar at Guangzhou Medical University, and Adjunct Professor College of

Medicine at Korea University. Dr. McIntyre is also Clinical Professor State University of New York (SUNY) Upstate Medical University, Syracuse, New York, USA and Clinical Professor Department of Psychiatry and Neurosciences University of California School of Medicine, Riverside, California, USA.

Dr. McIntyre was named by Clarivate Analytics in 2014, 2015, 2016, 2017, 2018 and 2019 as one of “The World’s Most Influential Scientific Minds”. This distinction is given by publishing the largest number of articles that rank among those most frequently cited by researchers globally in 21 broad fields of science and social science during the previous decade.

Dr. McIntyre is involved in multiple research endeavours which primarily aim to characterize the association between mood disorders, notably cognitive function, and medical comorbidity. His works broadly aims to characterize the underlying causes of cognitive impairment in individuals with mood disorders and their impact on workplace functioning. This body of work has provided a platform for identifying novel molecular targets to treat and prevent mood disorders and accompanying cognitive impairment.

Current Status and Future Direction of Magnetic Seizure Therapy for Depression Dr Daniel Blumberger

Electroconvulsive therapy (ECT) is effective for treatment resistant depression (TRD) but memory side effects limit its widespread use. Magnetic seizure therapy (MST) is a potential alternative to ECT, which may not produce memory side effects. Methods: Consecutive patients with unipolar TRD were recruited to receive MST in an open-label fashion. MST was applied over the prefrontal cortex. Depressive symptoms were assessed using the 24-item Hamilton Rating Scale for Depression (HRSD-24) and cognition was assessed through a variety of measures including the Autobiographical Memory Inventory and the Montreal Cognitive Assessment and assessments occurring prior to, during and at the end of treatment. Patients that received a minimum of 8 treatments were deemed to have an adequate course of MST, while those who achieved remission $HRSD-24 < 10$ and $> 60\%$ reduction at two consecutive assessments or received 24 treatment completed the trial per-protocol. Patients were treated with high frequency MST (i.e., 100 Hz) (N=24), medium frequency MST (i.e., 60 or 50 Hz) (N=26) or low frequency MST (i.e., 25 Hz MST) (N=36) using 100% stimulator output. Patients were treated 2-3 times per week until they achieved depressive symptom remission or received a maximum of 24 sessions. Results: 140 patients were screened, 86 patients with TRD received an adequate course of MST and 48 completed the trial per-protocol. High frequency (100 Hz) MST produced the greatest remission rates of remission (33.3%). Most measures of cognitive performance were preserved but autobiographical memory was significantly worse whereas brief visuospatial memory task performance was significantly improved. Conclusions: Our results suggest that MST leads to clinically meaningful reduction in depressive symptoms in patients with TRD. Our results also suggest that MST produces negligible impairment on memory. Future studies should consider comparing MST to ECT to establish clinical comparability.

Dr. Daniel Blumberger is a Clinician Scientist and the Medical Head and Director of the Temerty Centre for the Therapeutic Brain Intervention at Centre for Addiction and Mental Health in Toronto, Canada. He is the Co-Chief of the General Adult Psychiatry and Health Systems Division at CAMH and a Professor in the Department of Psychiatry at the University of Toronto. His research focuses on the use of brain stimulation therapies for refractory psychiatric disorders. His main research focuses on clinical intervention trials of novel treatments and understanding the neurophysiology of treatment resistant depression across the lifespan. His research has been funded by the Canadian Institutes of Health Research, National Institute of Health, Brain Canada, Weston Brain Institute, Brain and Behavior Research Foundation, Patient Centered Outcomes Research Institute. He is the principal investigator or co-investigator multiple clinical trials using different brain stimulation modalities including: magnetic seizure therapy (MST), repetitive transcranial magnetic stimulation (rTMS), deep rTMS and transcranial direct current stimulation (tDCS).

Friday 27 November

Welcome and Introduction Dr Richard Braithwaite

Dr Richard Braithwaite completed his training in General Adult and Old Age Psychiatry within the Wessex Deanery in 2010 and has since been employed as a Consultant Old Age Psychiatrist by the Isle of Wight NHS Trust. He gained an interest in electroconvulsive therapy (ECT) at Southampton medical school, taking an active part in delivery of ECT during his basic and higher psychiatric training. He is currently Clinical Tutor and Lead Consultant for ECT on the Isle of Wight and is Vice-Chair of the Royal College of Psychiatrists' Special Committee for ECT and Related Treatments.

The Anaesthetic-ECT time interval Dr Rohan Francis-Taylor

The time interval between the administration of general anaesthesia and ECT stimulus administration has been hypothesized to influence seizure quality, as a proxy marker of anaesthetic concentration (and the degree of anticonvulsant activity present) at the time of treatment. In this presentation, Dr Francis-Taylor will present results from recent retrospective and prospective studies exploring this hypothesis, with results suggesting the time between anaesthetic and ECT stimulus is highly relevant to the ictal seizure quality observed. Given the ease with which this variable is both monitored and manipulated, and its influence on the quality of seizures observed, routine monitoring and potential optimisation of the anaesthetic-ECT time interval is recommended.

Dr Rohan Francis-Taylor is an early career psychiatrist and researcher based in Sydney. His research to date has focused on the impact of the anaesthetic-ECT time interval on ictal seizure quality, and the relevance of seizure quality for ECT technique and outcomes. Dr Francis-Taylor has an interest in all forms of neurostimulation for the treatment of mood disorders - he is currently performing clinical work at the Black Dog Institute Depression Clinic & Neurostimulation Clinic, and is involved in administering ECT at the Wesley Hospital Kogarah.

ECT Anesthesia Ketamin & Propofol Professor Alexander Sartorius

Seizure Quality Index Professor Alexander Sartorius

Anesthesia is an essential component of ECT. Since there are increasing difficulties with several anaesthetics, the lecture will report on the advantages and disadvantages of ketamine, propofol and others. One focus will be on first experiences with mixed anaesthetics like with ketamine and propofol ("ketofol").

In order to estimate the individual antidepressive effectiveness of individual ECT sessions, a seizure quality index can be created. Typically, parameters such as length of seizure, concordance, coherence, sympathetic activity, and seizure amplitude are used for this purpose. This index can also be used to better assess the interference of barbiturates and propofol as anticonvulsant drugs and ECT.

Dr. Sartorius studied Physics at the Technical University in Darmstadt and received his Diploma in nuclear physics in 1991. Afterwards he visited Medical School of the University of Heidelberg and received his M.D. in 1999. He is a medical specialist for Psychiatry and Psychotherapy since 2004 (Geriatrics since 2018) and works at the Central Institute of Mental Health, Department of Psychiatry and Psychotherapy in Mannheim as a senior registrar since 2005. He strongly focusses on two research areas: Clinical brain stimulations techniques like electroconvulsive therapy (ECT) and deep brain stimulation, and, second on preclinical high field functional imaging. Regarding ECT his specific research fields are ECT anesthesia, maintenance ECT, quality markers of ECT, new indications, imaging and biomarkers of ECT, as well as ECT training.

ECT for schizophrenia Professor George Petrides

George Petrides is the Director for the Division of ECT at The Zucker Hillside Hospital, New York.

ECT Anaesthesia during covid-19: Treatment at a major New York Metropolitan Centre Janine Limoncelli, M.D. & Patricia Fogarty Mack, M.D.

Discussion of anesthetic protocols, techniques, and challenges at a major metropolitan hospital in New York performing electroconvulsive therapy during the surge of the COVID-19 pandemic.

Janine Limoncelli, M.D. is Assistant Professor of Anesthesiology and Director of Anesthesia in the Operating Rooms at the David H. Koch Center, Weill Cornell Medical Center/New York Presbyterian.

Patricia Fogarty Mack, M.D. is Associate Professor of Clinical Anesthesiology and Vice Chair for Patient Safety & Quality Improvement, Weill Cornell Medicine Center.

The Liberation of Catatonia: Success of Inducing Seizures as Therapy Professor Max Fink

In the second half of the 1800s, clinicians sought to identify behavior patterns that could lead to treatable pathologies. In 1874 Karl Kahlbaum demarcated "catatonia" using 16 motor criteria, raising persistent fear as the source of the pathology. Quickly, others identified similar cases and in 1899 Emil Kraepelin found catatonia among the hospitalized chronic ill suffering from "dementia praecox". In 1908 Eugen Bleuler relabeled the cases as "schizophrenia." All patients with catatonia were thereafter seen as schizophrenia subtypes.

This burial of catatonia within schizophrenia was reified in the DSM classifications beginning in 1952, despite the experience that high dose amobarbital (1930) and induced seizures (1934) relieved catatonia but not other forms of schizophrenia.

In the 1970s, newly developed Research Diagnostic Criteria found catatonia independent of schizophrenia, and most often in patients with mania and depression. By 1980, a malignant form of catatonia (NMS) was identified that was responsive to ECT, setting the stage for selective mutisms, malignant stupors, delirious mania, self-injurious behaviors in autism, and limbic encephalitis as identifiable, verifiable, and treatable forms of catatonia. In all cases of catatonia, inducing seizures is a successful antagonism.

All forms of catatonia are relieved by inducing repeated grand mal seizures using bitemporal electrode placements, and dosing by age formula. For patients previously treated with benzodiazepines, pre-induction use of the benzodiazepine antagonist flumazenil is essential. For malignant febrile catatonia, daily seizures is often necessary.

Shorter E, Fink M. *The Madness of Fear: A History of Catatonia*. Oxford, 2018

Fink M, Taylor MA. *Catatonia: A Clinician's Guide to Diagnosis and Treatment*. Cambridge, 2003.

After receiving his B.A. and M.D. degrees from New York University in 1942 and 1945, he served as a medical officer in the US Army, 1946-47. He trained to be certified in neurology (1952), psychoanalysis (1953), and psychiatry (1954).

His research career began in 1954 when he established the Research Department at Hillside Hospital with interest in ECT, EEG, and new psychotropic drugs. His RCT of insulin coma and chlorpromazine ended ICT. He developed digital quantitative EEG measures of opioids, antagonists, cannabis, and more than 80 psychoactive drugs. Late in his career he became interested in melancholia and catatonia.

He established the journal *Convulsive Therapy* (now *JECT*) in 1985; published 800 articles in academic journals, eight books on ECT, ethics in ECT, catatonia and melancholia. His archives are established at the Main Library's Special Collections at Stony Brook University on Long Island, NY.

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