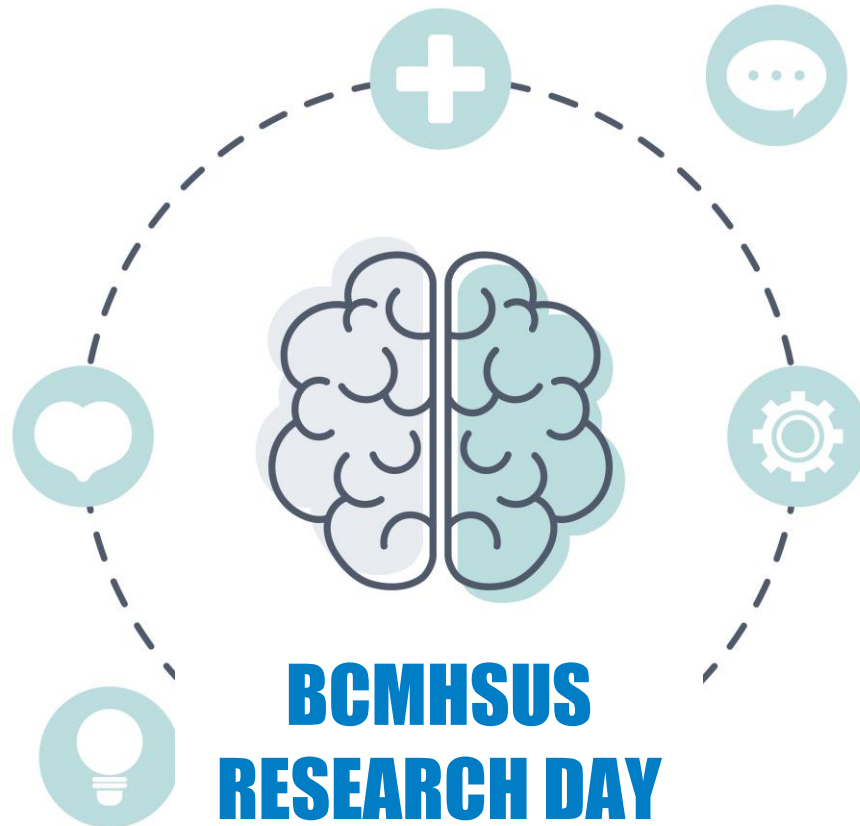




**BC MENTAL HEALTH
& SUBSTANCE USE SERVICES**
Provincial Health Services Authority



BCMHSUS RESEARCH DAY PROGRAM 2023

*Making Connections:
Strengthening Mental Health and Wellness
Through Research*

***Tuesday, November 7
8am - 3pm
Chan Auditorium & Chieng
Family Atrium***

***C&W Oak Street Site
950 W28th Ave***

Joining us virtually?
Please click [here](#) or
use our QR code!



Have other questions re:
research at BCMHSUS?

Email us at
BCMHSUS_Research@phsa.ca



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This event was brought to you by the BCMHSUS Research Day
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Welcome

Welcome Message

Jennifer (Jenn) Duff, MBA, is the COO, BC Mental Health and Substance Use Services at the Provincial Health Services Authority. She has oversight and executive responsibility for forensic psychiatric services, adult specialized mental health and substance use services, correctional health services and provincial contracted programs delivered by PHSA. Jen is also the executive lead for the BC Mental Health and Substance Use Research Institute.



Welcome to the Territory and Opening

Dr. Elder Roberta Price, is a member of the Coast Salish Snuneymuxw and Cowichan Nations, she has been instrumental in helping to create shared spaces for both Indigenous and Western approaches to healing and health. Currently an adjunct clinical professor in the Department of Family Medicine at UBC, she has also been active in the School of Nursing, providing an Indigenous voice and guidance on research projects about women, intimate partner violence, and mental health. For over 30 years, Dr. Elder Roberta Price has actively shared her leadership, wisdom, and teachings at the University of British Columbia (UBC) and throughout British Columbia's lower mainland to assist Indigenous and non-Indigenous community members in achieving improved outcomes in health care. Her service as an Elder for almost 20 years has involved conducting critical research into inequities surrounding health care initiatives at UBC and providing knowledge to support equity-based and culturally-safe research projects.



Opening Remarks

Bev Holmes, PhD, C. Dir. is President and CEO of Michael Smith Health Research BC. Bev chairs and sits on various research advisory groups across Canada and internationally, serves as an associate editor at Implementation Science Communications and represents her organization in the National Alliance of Provincial Health Research Organizations. She is an adjunct professor at SFU's Faculty of Health Sciences and UBC's School of Population and Public Health, and holds a Chartered Director designation from the Degroote School of Business Directors College at McMaster University.





Session 1 – Research in the Past, Present and Future

Moderator – Bev Holmes, PhD, C.Dir

[\(see above\)](#)

Forensic Psychiatry

Tonia Nicholls, PhD, Research Lead, Forensic Psychiatric Services, BCMHSUS, and is a Professor in the Department of Psychiatry, UBC. Her work on the prevention and treatment of violence, crime and mental health has resulted in >100 peer-reviewed journal articles and several chapters, books, and manuals. Her contributions have been acknowledged by the American Psychological Association Award for Distinguished Professional Contributions, Canadian Psychological Association (CPA) President’s New Researcher Award, the Chad Buckle Visiting Fellowship (New Zealand) and the CPA Criminal Justice Section significant contribution award. Tonia is currently President of the International Association of Forensic Mental Health Services.



Flo Ranville, is Pine Creek First Nations, and French on her father's side, and Woodlands Cree, Scottish and French on her mother’s side. Flo has seven children and six grandchildren. Flo has been HIV+ for over 24 years. Flo contracted Hep C in 1998 before contracting HIV in 1999 and successfully completed Interferon treatment with no return in 2002. She has been working in Community Based Research (CBR) for the past 18 years as a peer quantitative/qualitative interviewer; this includes facilitating arts-based qualitative research. She was a peer mentor and most recently peer consultant on several CBR projects. Flo has peer-reviewed abstract papers for journals and co-authored several papers, posters and oral presentations of research findings at conferences.



Flo works part-time as an HIV/HCV Support worker at a Sexual Health Clinic and is passionate about supporting community members who have faced similar barriers to health, drawing on Cree teachings and lived experiences to care for them holistically. Flo loves traditional Medicines & Ceremony. She has four cats and two dogs.



Adult Mental Health & Substance Use

Christian G. Schütz, MD, PhD, FRCPC, Research Lead, Adult Mental Health and Substance Use Services, BCMHSUS, is Associate Professor at the Institute of Mental Health, UBC and a practicing addiction psychiatrist with the Redfish Healing Centre. Trained in Medicine (MD), Chinese Studies (PhD), and Public Health (MPH) he further completed a Fogerty-Fellowship at NIDA/NIH and a DISCA-Fellowship at Yale University. He has published more than 120 peer reviewed articles and a dozen book chapters. His research is focused on addiction and concurrent disorders, as well as impulsivity and cognitive control.



Research in Correctional Health Services

Sofia Bartlett, PhD, is an Adjunct Professor and Senior Scientist with the BC Centre For Disease Control. Dr. Sofia Bartlett is an infectious disease epidemiologist whose research investigates the intersection of sexually transmitted and blood-borne infections (STBBIs), with incarceration, substance use, and digital exclusion. She is a Co-Investigator with the Canadian Network on Hepatitis C, the CIHR Canadian HIV Trials Network (CTN), as well as the BC Hepatitis Testers Cohort (BC-HTC). She is the lead of the Pathways to STBBI Care in Prisons and Test Link Call Projects, as well as Co-Primary Investigator of the ADVANCE COVID-19 Vaccines Study.



Pam Young has worked with Unlocking the Gates Services Society (UTG) since its inception in 2011. She is currently the Program Manager, and previously worked as a Peer-Mentor for many years. She is extremely passionate about the work she does with people leaving prison. She is also the Peer-Coordinator with the UBC Transformative Health & Justice Research Cluster, where she provides leadership and guidance to support social justice-oriented research activities, policy action, and community-driven change for people in prison and post-release.





Session 2 – Community Research

Moderator – Krista English, MBA PhD, Senior Network Lead, BCMHSUS

Krista English, MBA PhD, Senior Network Lead, is passionate about working in partnership with people with lived/ living experience (PWLLE) to learn from and amplify their unique perspective toward addressing unmet needs. Dr English’s academic interests and professional expertise are intrinsically tied to organizing people in ways that support innovation and evidence-informed decision-making. She has developed a novel strategy to apply qualitative and quantitative insights from network modelling of infectious diseases to other contagious phenomenon such as knowledge translation and exchange – both of which are fundamentally embedded in our relationships. Understanding the pathways that facilitate or inhibit propagation leads to improved organizational design and performance. She uses these insights to improve use of appropriate evidence within complex mental health and substance use systems. Dr. English has worked in various research, evaluation and policy areas of population, public and global health, including as a co-director and content expert for the World Health Organization Collaborating Centre on Complexity Science for Health Systems.



Traumatic Brain Injury in Vancouver’s Downtown Eastside

William Panenka, MD, FRCPC, is a dually certified psychiatrist and neurologist and Associate Professor in the Department of Psychiatry at UBC. He is the Research Lead of the BC Provincial Neuropsychiatry program and a Researcher with the BCMHSUS and the Djavad Mowafaghian Centre for Brain Health. He is the Medical Lead at the Neuropsychiatry Concussion Clinic and Neurology Consultant to the Fraser health concussion clinic. His clinical focus is on treating complex neuropsychiatric illness while his research program focuses on mental health, addictions, and traumatic brain injury in multiple populations.





Community-based participatory research in peer support, substance use, and community reintegration after release from correctional institutions

Amanda Slaunwhite, PhD, is a Senior Scientist at the BC Centre for Disease Control where she is the scientific lead of the BC Provincial Overdose Cohort. She is an Assistant Professor in the School of Population and Public Health at UBC and holds a MSFHR Scholar Award (2022-2027). Dr. Slaunwhite leads a program of research that uses administrative health data and community-based participatory methods in the areas of peer support, substance use and community reintegration after release from provincial and federal correctional institutions.



Mo Korchinski is the Executive Director of Unlocking the Gates Service Society (UTG). Mo has had a long history with substance abuse and incarceration. Her lived history and experiences have shaped the program into what it is today. Mo has a Bachelor of Social Work from Nicola Valley Institution of Technology and was one of UTG's first ever Peer-Mentors. Her life's work is now dedicated to helping others break the cycle of incarceration. She is an advocate for people involved in the criminal justice system and continues to push for change at a policy-level and increased supports for her community. Mo feels strongly about the need to address trauma and support healing for people who experience incarceration.





Session 3 – Talking Circle on Indigenous research approaches in mental health, substance use, and wellness

Moderator – Courtney Defriend

Courtney Defriend, DSocSci, (Traditional name is Ti'yuqtunat) was born and raised in Snuneymuxw (Nanaimo territory). Her mother is from Stz'uminus First Nation and her father's family originally comes from Scotland. Working at the Nanaimo Aboriginal Friendship Centre for 13 years, she was exposed to traditional teachings from First Nations people all over Canada while working front line with children and families. Defriend also consulted privately in community development work, cultural competency, and alternative wellness. Courtney has worked with interdisciplinary teams, specifically working on social issues such as mental health, addictions, and homelessness. These interests lead her to work with First Nations Health Authority in mental health, engagement with First Nations communities, and currently serving as the Director, Research and Knowledge Exchange. Within Indigenous research, Courtney recently received the Governor General's Gold Medal for her dissertation work using Indigenous storytelling and qualitative methods. With a Bachelor of Arts in Child and Youth Care (2011), a Master of Arts in Leadership (2015), a certificate in Family Mediation (2017), and a Doctorate in Social Sciences (2023), she is passionate about working with Indigenous communities.



Dr. Elder Roberta Price [\(see above\)](#)

Brittany Bingham, MPH, PhD, (she/her/hers), is a proud member of the shíshálh (Sechelt) nation and holds an MPH and PhD in Health Sciences from Simon Fraser University. Brittany is the Director of Indigenous Research at Vancouver Coastal Health Indigenous Health, the Centre for Gender and Sexual Health Equity (CGSHE) and an Assistant professor in Social Medicine at UBC. Brittany is currently leading Indigenous research strategy at VCH leading a team that conducts research with the primary aim of improving Indigenous experiences in healthcare and informing system transformation. She has worked in various capacities in research with Indigenous communities and policy for over 17 years. She is passionate about community-driven research, Indigenous health equity, implementation science, planetary health, health systems research and cultural safety & humility. Brittany has previously overseen Canadian Institutes of Health Research projects jointly led by First Nations Health Authority (FNHA) and SFU examining co-decision making among key





partners in the transformation of First Nations governance in B.C. She has also held several Indigenous advisory roles including Policy Analyst with the B.C. Ministry and led Indigenous research with Fraser Health teams and VCH Indigenous Health. Brittany has previously served as a board member for the Public Health Association of BC, Mom2Mom and the Combining our Strength Program Council at the Minerva Foundation and is currently a board member for the Society for Children and Youth of BC. Currently, Brittany is PI of a CIHR grant investigating access to sexual and reproductive health care among Indigenous women and LGBTQ2S+ peoples in the context of COVID-19 and is Co-PI on an access to responsive justice project funded by Women and Gender Equality Canada.

Lynnette Lucas is Director of Health for the Nuu-chah-nulth Tribal Council and is a member of the Tla-o-qui-aht First Nations. She is NPI for the Indigenous Health Life Trajectories Initiative Project (CIHR) and the NTC Covid-19 Vaccine Study into Immune response, effectiveness, safety (CITF sero-surveillance). Lynnette completed a Masters in Counselling at the University of Victoria and works collaboratively with Simon Fraser University and the University of British Columbia on the development of Indigenous Led Research projects.



Dawn Hoogeveen, PhD, has been working with the First Nations Health Authority since 2021 cross-appointed with the Faculty of Health Sciences at Simon Fraser University. Her research is in the areas of First Nations environmental health, impact assessment, and climate change. Dawn is of European decent (Dutch/English) and lives as an uninvited guest on the unceded and ancestral territories of the Coast Salish peoples.

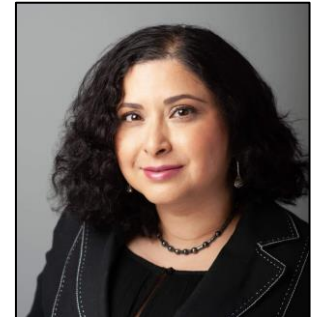




Lightning Rounds – Afternoon Session

Moderator – Anita David

Anita David is a Lived Experience Strategic Advisor for the Research Challenge at BC Mental Health and Substance Use Services where she mentors team leads throughout the research cycle as well as ensuring that patient/family partners are supported and meaningfully engaged. She frequently co-leads presentations on Patient Oriented Research and Knowledge Translation, Anita is also a community based research associate as well as a patient partner and co-lead on multiple patient oriented research projects. As a patient partner, Anita has participated in over 60+ projects/committees. She champions genuine engagement for patients, families and caregivers through her work and sits on the Patient Engagement Research Collaborative which is made up of patient partners from health authorities who guide and promote Patient Oriented Research. She also mentors and trains Peer Researchers through the Canadian Mental Health Association and SPARK (Supporting the Promotion of Activated Research and Knowledge) program participants through the Mental Health Commission of Canada.



Lightning Rounds

- 1. Intimate partner victimization and mental health disorders among adults experiencing homelessness and mental illness: A gender-specific analysis** – Faith Eiboff, PhD Candidate/UBC SPPH/Psychiatry
Supervisor: Dr. Tonia Nicholls, FPS
- 2. Experience is expertise: Improving peer employment in BC’s mental health and substance use sector** – Alexis Erlichman, Senior Policy Advisor, CMHA BC
Supervisor: CMHA BC
- 3. Task-based working memory functional brain networks detectable by fMRI** – Tyrone Ly, MSc Candidate, Neuroscience, UBC
Supervisor: Dr. Todd S. Woodward, BCMHSUS
- 4. The Red Fish Virtual/Digital Innovation Hub. The Wearables Project** – Sarah Muñoz-Violant, Clinical Research Coordinator
Supervisor: Dr. Christian Schütz, BCMHA



- 5. Structural Brain Differences and Cognitive Performance between patients with Long-COVID and Normal Recovery** – Breanna Nelson, PhD Candidate, Experimental Medicine, UBC
Supervisor: Dr. William Panenka, BCMHSUS
- 6. Evaluating the provision of seamless and integrated care in BC correctional centres** – Karen Petersen, Research Fellow and Steve Pelland
Supervisor: Dr. Tonia Nicholls, FPS
- 7. VERDICT: Patients’ Experiences of Video Review Board Hearings Since COVID-19** – Armaan Rajan, Research Assistant
Supervisor: Dr. Tonia Nicholls, FPS
- 8. Patterns of Mental Health service use during the COVID-19 pandemic among immigrant and non-immigrant youth in British Columbia** – Padmini Thakore and Elmira Tayyar, Research Assistants, Centre for Gender and Sexual Health Equity, UBC
Supervisor: Dr. Ruth Lavergne, Dr. Mei-Ling Wiedmeyer, & Dr. Shira Goldenberg
- 9. Age of Onset of Cannabis Use Predicts Anxiety, Psychoticism, and Anger-Hostility Mental Health Symptoms in Severe Concurrent Disorder Inpatients** – Karina A. Thiessen, PhD Neuroscience Student, B.R.A.I.N. Lab
Supervisor: Dr. Christian Schütz, BCMHSUS
- 10. Emotion Dysregulation Fully Mediates the Relationship Between Stress and Impulsivity in Inpatients with Co-occurring Substance Use and Mental Disorders** – Stefanie Todesco, Masters Student
Supervisor: Dr. Christian Schütz, BCMHSUS



Poster Abstracts

Bihelek, Nicole: “Clinical Data Driven Characterization of Clozapine Metabolism Based on Patient-specific Factors: Analysis of Routine Therapeutic Drug Monitoring (TDM) in 172 Individuals with Treatment-Resistant Schizophrenia and schizoaffective disorder”

Introduction: Despite superior efficacy, use of clozapine in treatment-resistant schizophrenia is often delayed due to its association with serious adverse events. Many side effects result from high plasma concentrations, which are affected by intrinsic and extrinsic patient variables. Limited data are available to guide therapeutic drug monitoring based on interacting patient-specific factors. **Objective:** This study's main objective was to assess which patient-specific variables best predict clozapine concentration adjusted by daily dose (C/D) ratios. **Study Population & Methods:** A retrospective EHR review was conducted on inpatients at the BC Psychosis Program from 21/02/2012 – 07/11/2021. Patients were included if they were on clozapine therapy and had steady state plasma concentrations. Demographics, concomitant medications, smoking status, C-reactive protein (CRP), and BMI were collected and analyzed using multiple linear regression. **Results:** The model revealed that fluvoxamine ($\beta=0.30$ (0.24, 0.36)), elevated CRP ($\beta=0.23$ (0.15, 0.31)), obesity ($\beta=0.08$ (0.02, 0.13)), and non-smoking ($\beta=0.07$ (0.01, 0.12)) were significantly associated with increased C/D ratios (n=172). When stratified by fluvoxamine status, exogenous estrogen also had a significant association in patients not on fluvoxamine (n=114, $\beta=0.34$ (0.20, 0.49)); only fluvoxamine dose had significant association in patients on fluvoxamine (n=58). **Relevance & Implications:** Clinically observable patient-specific factors should be routinely used to guide clozapine speed of titration and dosing in conjunction with TDM.

Eiboff, Faith: “I was clean for a year and it was because I wasn’t homeless”: Exploring the mental health and substance use needs of homeless and/or precariously housed women

Introduction: Women experiencing homelessness and/or precarious housing face an array of vulnerabilities and service challenges that are often hidden and not effectively addressed. **Objective/Purpose:** This study aimed to amplify the voices of marginally housed women in Surrey, BC to explore their mental health and substance use needs in their own words. **Study Population:** Women accessing community services including drop-ins, shelters, supportive housing and mobile outreach services for vulnerable women in Surrey, BC. **Methods:** 58 women participated in focus groups or in-depth interviews between January-April 2023. A paper/pencil survey facilitated by front-line outreach was included to access women who can be difficult to reach. Data were analyzed thematically. **Results:** Key themes highlighted the bidirectional effects of mental health, substance use and precarious housing in women’s lives, which was compounded by violence, victimization, and trauma. Those with multiple vulnerabilities found it more difficult to access housing and services, and faced stigmatizing responses by providers, landlords, and authorities. Although addressing trauma was identified as a priority,



many reported extensive wait times and a lack of professionals with trauma expertise. Participants reported needing support communicating their needs to providers but did not know how or where to find this assistance.

Relevance/Implications: These findings highlight the important role of advocates to support marginalized women navigate the housing and healthcare systems, and the importance of implementing trauma-informed care. Training should be available for service providers, landlords, and authorities (e.g., police) to better understand and serve women who face multiple challenges, trauma, and violence across the lifespan.

Frankow, Laura and Mahmood, Hajer: “Association of clozapine treatment and rate of methamphetamine or amphetamine relapses and abstinence among individuals with concurrent schizophrenia spectrum and amphetamine use disorder: A retrospective cohort study”

Introduction: There are high rates of concurrent substance use disorders (SUD) in patients with schizophrenia spectrum disorders (SSD). Substance use relapse results in poorer outcomes in SSD and may be a risk factor for developing treatment-resistance. According to some preliminary evidence, clozapine may have a favorable impact on SUD outcomes. However, there is paucity of evidence on its impact on concurrent methamphetamine use disorder (MAUD) outcomes. **Hypotheses(s):** Clozapine treatment would be associated with significantly lower rates of relapse to methamphetamine use and a higher likelihood of remaining abstinent compared to other antipsychotics. **Methods:** A retrospective EHR review was conducted on inpatients at BCMHA between 12/08/2019-10/08/2021. Included patients had concurrent treatment-resistant SSD and MAUD. Medication exposure was categorized as “on clozapine” or “on other antipsychotic(s)”. Data included demographics, diagnoses, substance use history, medications on admission/discharge, and urine drug screen results. Relapse rates were calculated as the number of relapses to days on antipsychotic treatment; and were confirmed by positive urine drug screens and as-needed confirmatory testing. Logistic and negative binomial regression were utilized to examine associations. **Results:** Majority of 87 included patients were male. Clozapine was associated with increased likelihood of abstinence from MA use (aOR=3.05,95% CI=1.15–8.1,p=0.025), and decreased rate of MA relapses (aRR=0.45,95% CI=0.25–0.82,p=0.009). Co-prescription of psychostimulants was associated with increased rate of MA relapses (aRR=2.43,95% CI=1.16–5.10,p=0.019). **Implications/relevance:** Clozapine treatment was associated with significant reduction in relapse rates to methamphetamine use and higher odds of abstinence in treatment-resistant SSD-SUD. Co-prescription of psychostimulant was associated with poorer outcomes.

Hunka, Sage: “Understanding individual differences in longitudinal tACS neurostimulation protocols”

Introduction: Transcranial Alternating Current Stimulation (tACS) has garnered significant attention in recent decades as a promising and safe non-invasive brain stimulation method. Moreover, its effects tend to be more pronounced following multi-day stimulation sessions. However, these effects exhibit variability among



participants. In this study, we aim to collect information regarding participants' recent emotional experiences and general personality traits to investigate potential individual differences in the effects of tACS, especially in the modulation of alpha oscillations. **Participants:** We intend to recruit 150 undergraduate students from the University of British Columbia (UBC). **Method:** Participants will undergo six sessions of tACS protocols, targeting either alpha frequencies or a random (sham) frequency. Participants will engage in attention tasks during each session, including an oddball paradigm and a resting condition. These tasks will be administered both before and after the tACS sessions. **Results:** We anticipate that individuals with high anxiety levels and pronounced neurotic traits will exhibit the smallest increase in alpha power throughout the study. **Implications:** This research can potentially advance our understanding of neurostimulation protocols and tailor it to individual mental states. Consequently, it could pave the way for developing personalized therapies for a wide range of psychiatric conditions.

Kaoser, Ridhwana: “Pan-Canadian Study of Psychiatric Care (PCPC): protocol for a mixed methods study”

Canadians lack equitable access to psychiatric care despite a steady per-capita supply of psychiatrists. Evidence shows that practice style and characteristics vary substantially among psychiatrists. Our objectives are to develop comparable indicators of the supply of psychiatric care across provinces, analyze variations in the characteristics of the psychiatrist workforce, and study preferences and factors influencing practice style. We will conduct a mixed-methods study in British Columbia, Manitoba, Ontario, and Nova Scotia. We will analyze population-based administrative data between 2012/13 and 2021/22 to develop supply indicators and characterize psychiatric services. We will estimate the probability of different practice styles and map the distribution of supply overlaid with measures of need. We will conduct semi-structured interviews with psychiatrists in each province to explore their preferences and practice choices. Findings from these measures will describe psychiatric services by neighbourhood income quintile, metropolitan vs. non-metropolitan areas, patients' characteristics, and regional supply within provinces. The characteristics of practicing psychiatrists will describe their demographic and practice characteristics. We hypothesize that each province will have three distinct practice styles (high-intensity urban, low-intensity urban, and low-intensity rural). We anticipate 45 to 65 interviews across the four provinces which will provide insight into the factors that shape their practice choices. This will be the first multi-provincial study of the psychiatric workforce in Canada. Results will inform psychiatric workforce planning to improve population access to psychiatric care. Findings will be relevant for policymakers, medical schools and professional associations, and approaches developed for cross-provincial analysis will build capacity for future research.

Ni, Yvette: “Investigating the role of individual alpha frequency on the effects of transcranial alternating current stimulation (tACS)”

Introduction: Transcranial Alternating Current Stimulation (tACS) is a non-invasive brain stimulation technique that involves applying a weak electrical current to specific cortical regions through the scalp. tACS has the potential to modulate brain oscillation in a frequency-specific manner, making it potentially useful as a



therapeutic tool. **Hypothesis:** Our aim was to modulate alpha oscillations using tACS at 10Hz and gain a better understanding of the underlying mechanisms. This was an exploratory study. **Methods:** We employed a double-blind within-subject design where participants (n=19) underwent both alpha (10Hz) and gamma (41Hz) tACS sessions on separate days. Participants performed an oddball task that required them to respond to colour changes to a fixation cross using a keyboard. The experiment consisted of three blocks: the first without stimulation (PRE), the second with either alpha or control stimulation (STIM), and the third without stimulation (POST). **Results:** We used Principal component analysis (PCA) to analyze the variance in alpha power and found a lateralized component that showed significant increase (POST-PRE) in alpha power during the alpha stimulation session compared to gamma stimulation session. Next, we observed that increase in alpha power was positively correlated with individual peak alpha frequency. Participants with a higher peak alpha frequency (10-13Hz) showed more enhancement in alpha power compared to those with a lower peak alpha frequency (8-10Hz). **Implications:** Our results suggest that enhancement of alpha power using tACS is likely due to plastic changes rather than entrainment. These insights into the mechanisms of neuromodulation have the potential to improve therapeutic treatments for psychiatric disorders.

Schmid, Laura: “Model-Based Decision-Making is Related to Reflection Impulsivity: Findings from Exploratory Correlational Analyses Between Computational and Traditional Impulsivity Outcomes”

Introduction: Impulsive decision-making is a well-established risk for drug use. Recent advances in computational modeling have identified distinct cognitive processes involved in impulsive decision-making; however, little is known about how these relate to traditional impulsivity measures. We present findings from exploratory correlational analyses between model-based decision-making and traditional impulsivity outcomes in concurrent disorder inpatients and healthy controls. **Method:** 45 patients (38.5±11.5 years, 14F) and 50 healthy controls (30.9±10.0 years, 25F) completed a battery of impulsivity self-reports and behavioral tasks, including the Cambridge Gambling Task (CGT) and Informational Sampling Task (IST), assessing risky decision-making and reflection impulsivity, respectively. CGT data were used to generate computational outcomes (Probability Distortion, Loss Sensitivity, Delay Discounting, Choice Consistency) based on the Cumulative Model. IST comprised decreasing-/fixed-win conditions, where there was cost/no cost for sampling information. **Results:** In controls, Probability Distortion ($r=.38, p=.009$) and Choice Consistency ($r=.35, p=.02$) were correlated with amount of information sampled under fixed-win condition, and Loss Sensitivity was correlated with amount of information sampling ($r=.34, p=.02$). All computational outcomes, except Choice Consistency, were correlated with ≥ 1 self-report composite score ($r's = |.40| - |.52|, p's < .05$) in controls. No correlations reached significance in patients. **Conclusion:** Findings indicate model-based impulsive decision-making outcomes are associated with features of reflection impulsivity. Patterns of relationships suggest model-assessed decisional processes may reflect the tradeoff between utility of information and its cost. It is worth considering that the absence of such patterns in patients might contribute to decision-making leading to suboptimal outcomes. We present



exploratory data to stimulate future work relating model-based (habitual) and model-free (reflective) decision-making.

Shahki, John: “Profiling the fMRI-Derived Language-Based Network for Pre- and Post-Surgical Monitoring”

Introduction: In neurosurgery, pre- and post-surgical monitoring are crucial in ensuring optimal conservation and recovery of cognitive function. A key focus during this process is on Broca’s and Wernicke’s areas (BWA), as impairment of these areas can negatively impact linguistic function and quality of life. Task-based fMRI has detected a left-lateralized network that simultaneously engages BWA. This study will assess this network’s activation over a range of cognitive fMRI tasks in order to establish a baseline hemodynamic response (HDR) profile for this network. **Methods:** This study included 163 healthy controls from four different cognitive tasks. Constrained Principal Component Analysis for fMRI was employed to identify and characterize functional brain networks that emerged while undergoing tasks and their associated HDRs. **Results:** The studied network was activated during each of the linguistic- and emotion-based tasks and was characterized by left-lateralized activation with simultaneous engagement of BWA. Further, each cognitive task exhibited distinct HDR patterns specific to their conditions. **Conclusion:** Activation of this network during the linguistic and emotion recognition tasks suggests that this network’s function lies in the extraction of linguistic- and emotion-based meaning. The derived task-specific HDR profiles will serve as a baseline against which a patient’s HDR profile can be compared to. This comparison will allow for the monitoring of linguistic changes in patients pre- and post-operation.

Thakore, Padmini: “I’m rowing against the current”: Structural factors shaping im/migrants’ mental health during the COVID-19 pandemic in British Columbia

Introduction: The COVID-19 pandemic and public health mandates had disproportionate mental health (MH) impacts affecting marginalized populations, including im/migrants (immigrants, refugees, migrants). Inequities in im/migrants’ health care access and health outcomes existed prior to the pandemic, and early Canadian evidence suggests negative im/migrant MH outcomes. This literature inadequately explores structural forces (immigration policies, healthcare coverage, and employment laws) contouring im/migrants’ MH during the pandemic response. **Hypothesis:** To examine how structural factors worsened im/migrants’ mental health during the COVID-19 pandemic in British Columbia (BC). **Study population:** Im/migrants living in BC aged 18-49. **Methods:** We interviewed participants in Farsi, Tigrinya, Spanish, and English (N=49). We transcribed, translated, coded, and collaboratively analyzed data using reflexive thematic analysis in a team with lived migration experience. **Results:** Loss of autonomy (agency to make and act on life decisions) emerged as the overarching factor negatively impacting im/migrants’ MH. Three themes surfaced the interaction between structural factors and loss of immigrants’ autonomy: linkages between (i) COVID-19 public health mandates and immigration status impacting personal autonomy, (ii) health insurance and immigration status impacting health autonomy, (iii) employment conditions and immigration status impacting workplace autonomy. These structural



linkages worked either in isolation or collectively to diminish immigrants' ability to make decisions about their lives, health, and workplace which ultimately impacted their MH. **Relevance:** We found critical sites for policy intervention, including decoupling health insurance from immigration status, eliminating status checking at points of care and enforcing employment rights.

Turcott, Alyssa: “Childhood Maltreatment and Overdose in Concurrent Disorder Inpatients: Convergent and Predictive Validity of the ACE and CTQ-SF”

Introduction: The Childhood Trauma Questionnaire (CTQ) and Adverse Childhood Experiences (ACE) scale have been used independently to assess childhood maltreatment in people with substance use disorders and in people with mental illnesses – however, the convergent validity of these scales had yet to be explored in people with concurrent disorders. **Hypothesis:** There would be strong convergent validity between the ACE and CTQ, and strong ability to predict overdose in people with concurrent disorders. **Study Population:** Participants (N=112) were recruited from a psychiatric inpatient care facility in Coquitlam and completed both the ACE and CTQ. **Methods:** Correlational analyses were conducted between each of the five subtypes of maltreatment— emotional, physical, and sexual abuse, and emotional and physical neglect— in the CTQ and ACE, as well as independent t-tests to assess the concordance of both measures. Logistic regressions were conducted using CTQ and ACE total maltreatment scores as predictor variables for lifetime overdose. For subjects with a history of lifetime overdose, linear regressions were conducted on the number of overdoses as an outcome of CTQ and ACE total maltreatment scores. **Results:** No significant associations between total ACE and CTQ child maltreatment scores, or between any of the individual subtypes of the ACE and CTQ. Neither the ACE nor the CTQ could significantly predict lifetime prevalence of overdose. **Relevance/implications:** Findings suggest both the CTQ and ACE should be used together when assessing for childhood maltreatment in individuals with concurrent disorders as they have notable differences.

Zumrawi, Dania: “Factors Influencing Neuropsychological Assessment Participation Rates in the BC Psychosis Program”

Introduction: The BC Psychosis Program (BCPP) provides care for inpatients with treatment-resistant psychosis (TRP), and offers diagnostic neuropsychological assessments as part of routine clinical care. This study explores factors affecting patient participation rates. **Hypothesis:** We hypothesized that a) demographic and clinical profiles would differ among patients completing full assessments, screening assessments, and non-participants, and b) participants would exhibit less severe illness compared to non-participants. **Population:** We analyzed 470 consecutive BCPP admissions from 2012 to November 2021, creating three groups: full assessment (n = 300), screening assessment (n = 84), and non-participants (n = 86). **Methods:** One-way ANOVA with post hoc tests, and chi-square analyses were conducted comparing groups' demographics, symptom severity, and antipsychotic usage. **Results:** Non-participants had a higher proportion of females (p = 0.049) than participants. ECT use was higher among patients completing screening assessments (p < 0.001) than full assessments, non-participants



using it the least ($p < 0.001$). No significant groups differences were observed in education level ($p = 0.328$), primary diagnosis ($p = 0.562$), number of antipsychotics used ($p = 0.707$) or Clozapine use ($p = 0.195$). Patients completing full assessments had shorter illness duration ($p < 0.001$) and better illness insight ($p < 0.001$), than non-participants. Participants had lower admission PANSS scores ($p = 0.001$) than non-participants. **Implication:** This study suggests that more severe clinical presentations may influence neuropsychological assessment participation among TRP inpatients. Thus, the severity of cognitive impairment may be underestimated in TRP as severely ill non-participants are typically excluded from clinical studies.

Closing Address

Deborah Ross, Provincial Director of Strategic Initiatives at BCMHSUS, will provide closing remarks including the highlights of the day, the winners for the People's Choice Award for Favourite Poster and Lightning Talk, and an exciting announcement about BCMHSUS Research Challenge 2024!

Dr. Elder Roberta will send us on our way.



This event was brought to you by the BCMHSUS Research Day Planning Committee



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