DISCIPLINE OF PSYCHIATRY

SCHOLARSHIP DAY

June 18, 2021

Faculty of Medicine

MEMORIAL UNIVERSITY

AGENDA

Time	Topic	Presenter
12:00	Welcome Address	Dr. Weldon Bonnell
12:05	**Keynote Address:** The Grenfell Effect, Medical Memoirs, and Medical Adventures in Newfoundland and Labrador: The 1968 Summer IGA Travelogue of Dr. Don Bates	Dr. J.T.H. Connor

	Completed Research	
12:30	Internet-Based Cognitive Behavioral Therapy for Insomnia in Psychiatric Disorders: A Single Arm Pilot Study	Dr. Chris Earle
12:50	Increasing Awareness of the Connection Between Breastfeeding and Mental Health Through an Educational Session for Healthcare Providers	Dr. Sara Dalley
1:10	Mental Health Nursing Follow Up and Attempted Suicide Risk Reduction	Dr. Jordan Brennan
1:30	A Polarizing Topic: Assessing the Knowledge of and Attitudes Towards Repetitive Transcranial Magnetic Stimulation in NL.	Dr. Graeme Campbell
1:50	Patterns in Psychiatric Emergency Department Utilization	Dr. Stuart Gill
2:10	Perceived Satisfaction With Physical Activity in Resident Physicians at Memorial University	Dr. Kevin Fowler
2:30	The Evaluation of the Level of Comfort of the Individuals of the Interdisciplinary Team in Advocating for the Acquirement of a Clinic for the Use of Ketamine in Adults With Major Depressive Disorder After a Teaching Session About the Current CANMAT Task Force Guidelines on a Virtual Platform	Dr. Gabrielle Lapointe
2:50	Training in Telepsychiatry: Results From a National Study	Dr. Angelique Myles

3:10	Afternoon Break

	Research in Progress	
3:20	Psychosis Management: Early Psychosis Intervention, Risk of Relapse, and Tools To Predict Relapse	Dr. Dave Lundrigan
3:35	Usage of the Adult Acute Care Delirium Protocol Among Residents	Dr. Jordan Power
3:50	Rural Postgraduate Psychiatry Training in Canada: Availability, Incentives, and Barriers	Dr. Drea Uzans
4:05	Retrospective Review of Anticholinergic Burden Before and After Psychiatric Hospitalization in Elderly Patients	Dr. Jessica Hung King Sang
4:20	Effect of the COVID Pandemic on Outpatient No-Show Rates	Dr. Duncan MacIver

4:35	Adjudication	Dr. Paul Moorehead Dr. Holly Etchegary Dr. Timothy Hierlihy
4:45	Adjudication Feedback	
4:55	Closing Remarks	Dr. Weldon Bonnell
5:00	Adjourn	

TABLE OF CONTENTS

Keynote Address 1

The Grenfell Effect, Medical Memoirs, and Medical Adventures in Newfoundland and Labrador: The 1968 Summer IGA Travelogue of Dr. Don Bates 1

Completed Research 2

Internet-Based Cognitive Behavioral Therapy for Insomnia in Psychiatric Disorders: A Single Arm Pilot Study 2

Increasing Awareness of the Connection Between Breastfeeding and Mental Health Through an Educational Session for Healthcare Providers 4

Mental Health Nursing Follow Up and Attempted Suicide Risk Reduction 7

A Polarizing Topic: Assessing the Knowledge of and Attitudes Towards Repetitive Transcranial Magnetic Stimulation in NL 9

Patterns in Psychiatric Emergency Department Utilization 11

Perceived Satisfaction With Physical Activity in Resident Physicians at Memorial University 13

The Evaluation of the Level of Comfort of the Individuals of the Interdisciplinary Team in Advocating for the Acquirement of a Clinic for the Use of Ketamine in Adults With Major Depressive Disorder After a Teaching Session About the Current Canadian Network for Mood and Anxiety Treatments (CANMAT) Task Force Guidelines on a Virtual Platform: A Quality Improvement Study 15

Training in Telepsychiatry: Results From a National Study 17

An Online Psychotherapy Education Resource: Examination of Learner Satisfaction and Interprofessional Learning 20

Research in Progress 24

Psychosis Management: Early Psychosis Intervention, Risk of Relapse, and Tools To Predict Relapse 24

Usage of the Adult Acute Care Delirium Protocol Among Residents 29

Rural Postgraduate Psychiatry Training in Canada: Availability, Incentives, and Barriers 32

Retrospective Review of Anticholinergic Burden Before and After Psychiatric Hospitalization in Elderly Patients 34

Effect of the COVID Pandemic on Outpatient No-Show Rates 37

PGY-1 Research/Scholarly Project Electives 39

Introduction 39

The Role of Caregivers in DBT for Adolescents 40

Developing Additional Curriculum and Rotational Content Focused on Improving Medical Student and Psychiatry Resident Education Regarding Local Underserved Populations 42
A Survey of Physicians' Attitudes Towards and Perception of Supervised Consumption Sites and Other Harm Reduction Services in Newfoundland and Labrador........ 43
Formative Evaluation of Current Automatic Speech Recognition Technology in the Evaluation of Psychiatric Learners: Is Speech to Text Useful in the Academic Psychiatric Context? 45
Effect of Smoke-Free Policies on Aggression in the Psychiatric Inpatient Setting........ 49
ADHD, College and Adulting… Isn't There an App for That?........ 50
Immigrants and Refugees to Canada Are at an Increased Risk of Mental Health Issues With Compounding Barriers to Accessing Mental Health Services. A Literature Review and Idea for a Future Research Project........ 53
Predictive Value of Canadian Triage Acuity Scale Designation for Mental Health Complaints in a Psychiatric Emergency Department Upon Disposition and Length of Hospital Stay........ 55
To Admit or Not To Admit the Borderline Patient........ 58

KEYNOTE ADDRESS

The Grenfell Effect, Medical Memoirs, and Medical Adventures in Newfoundland and Labrador: The 1968 Summer IGA Travelogue of Dr. Don Bates

PRESENTER:

J.T.H. Connor BSc MA MPhil PhD FRHistS

ABSTRACT:

A preponderance of physician autobiographies or medical memoirs are another distinctive feature of writings about Newfoundland and Labrador. Although he did not invent the genre, the English physician-missionary Sir Wilfred Grenfell (1865-1940), founder of the International Grenfell Association (IGA) in 1914, which oversaw a network of hospitals, nursing stations, hospital ships, schools, an orphanage, and co-operative stores across northern Newfoundland and southern Labrador, contributed much to its popularization though his own voluminous writings about Northern medical life and its adventures. The IGA was dependent on the expertise of American, British, and Canadian physicians and nurses, many of whom were permanent staff but some might only have worked seasonally; often these men and women would later emulate Grenfell, knowingly or otherwise, by writing their own autobiographies or medical memoirs. I have termed this process the "Grenfell Effect."

Dr Donald G. (Don) Bates (1933-2001) signed on with IGA as a "travelling doctor" for the summer months of 1968. Bates, a Canadian, graduated MD from Western University in 1958 and then received a PhD in history of medicine from Johns Hopkins University. He was a faculty member first at Hopkins, then in McGill University and is known for his scholarship on 17th-century English medicine. This presentation analyzes the unpublished transcript of tape recordings by Bates regarding his IGA adventure. Bates can be placed in the larger tradition of autobiographical narratives by IGA personnel (mercy mission flights in float planes, sailing on the hospital ship *Strathcona III*, staying at remote nursing stations), but this work affords a perspective that is not only clinical but also social, political, and ethnographical. Bates noted how the place still had Grenfellian overtones. Even then the IGA still functioned as an "old school" colonial outpost: Bates described how he did "house calls" dressed in suit and tie and carrying his doctor's bag as he awkwardly traversed piles of slippery fish guts on outport wharves. As his autobiographical travelogue reveals, Bates proved to himself that he could still be a doctor even though his life was now as a scholar; he discovered he never lost his clinical skills/acumen.

LEARNING OBJECTIVES:

- To review the activities of the International Grenfell Association
- To explicate the "Grenfell Effect"
- To discuss the professional, social, and intellectual significance of Bates's travelogue
- To consider the benefits of doctors writing

COMPLETED RESEARCH

Internet-Based Cognitive Behavioral Therapy for Insomnia in Psychiatric Disorders: A Single Arm Pilot Study

RESIDENT NAME:

Earle, Chris, PGY-5

SUPERVISOR NAME:

Jasinska, Anna, MD FRCPC

BACKGROUND/INTRODUCTION:

Half of patients with insomnia disorder have one or more psychiatric comorbidities. (1) Cognitive Behavioural Therapy for Insomnia (CBT-I) is effective in management of insomnia comorbid with mental disorders (2) but fewer studies exist examining internet-delivered formats. The effects from CBT-I on comorbid psychiatric conditions have received increasing interest as insomnia comorbid with psychiatric disorders is associated with more severe psychiatric symptomologies and CBT-I may improve both insomnia and psychiatric symptomology. (3) Post hoc subsamples of Internet CBT-I showed large effect size changes in depression, anxiety, and mental health quality-of-life (4), indicating this as an area for further study.

OBJECTIVES:

The purpose of this study was to determine the preliminary effectiveness of internet-based CBT-I on sleep, psychological symptoms, and functional outcomes in general psychiatric outpatients with insomnia and co-morbid psychiatric disorders under real world conditions.

METHODOLOGY:

A single arm pilot trial was conducted in 14 patients (93% female, mean age = 44.3, standard deviation = 13.5) with insomnia and psychiatric comorbidities recruited from outpatient psychiatry clinics. Patients had one or more psychiatric comorbidities which included depression (50%), anxiety (43%), OCD (7%), PTSD (7%), ADHD (7%).

Patients received CBT-I over 6 to 10 weekly sessions delivered via telehealth. Sleep parameters were measured using weekly Consensus Sleep Diary to calculate Sleep Latency (SL), Wake After Sleep Onset (WASO), Total Sleep Time (TST), and Sleep Efficiency (SE). Participants completed self-report measures of insomnia (Insomnia Severity Index), depression (Patient Health Questionnaire-9), anxiety (General Anxiety Disorder-7), and general function (Sheehan Disability Scale) at pre- and post-treatment intervals.

RESULTS OBTAINED:

High retention of study participants was observed with 93% of participants completing the intervention. Intention-to-treat analysis was applied. Internet delivered of CBT-I was associated with significant improvement in primary outcome of self-reported insomnia severity (mean difference = 12.6, $p < 0.001$). Statistically significant improvements in self-reported sleep parameters including sleep latency (33.9 min.), wake after sleep onset (44.3 min), and sleep efficiency (18.5%) were observed. Improvements in psychiatric symptoms and general function, although not-statistically significant, were also observed.

CONCLUSION(S):

In psychiatric outpatients with comorbid psychiatric disorders, internet-delivered CBT-I showed effectiveness for insomnia and self-reported sleep parameters under real world conditions. Non-significant improvements in measures of psychiatric symptomatology and general function were also observed. Future randomized controlled trials with active comparator and larger sample size are needed to further test the effect of CBT-I on psychological symptoms and general function in this population.

SYNOPSIS:

A single-arm pilot trial showed effectiveness of internet-delivered CBT-in improving symptoms of insomnia (ISI) and self-reported sleep parameters (SL, WASO, SE) in 14 psychiatric outpatients with mental health comorbidities. Non-significant improvements in measures of psychiatric symptomatology (PHQ9, GAD7) and general function (SDS) were observed indicating an area for further study.

DISCLOSURE STATEMENT:

I have no actual or potential conflict of interest in relation to this program/presentation. I have no financial interests or relationships to disclose.

REFERENCES:

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3. Jansson-Fröjmark M, Norell-Clarke A. Cognitive behavioural therapy for insomnia in psychiatric disorders. Current sleep medicine reports. 2016 Dec;2(4):233-40.
4. Thorndike FP, Ritterband LM, Gonder-Frederick LA, Lord HR, Ingersoll KS, Morin CM. A randomized controlled trial of an internet intervention for adults with insomnia: effects on comorbid psychological and fatigue symptoms. Journal of clinical psychology. 2013 Oct;69(10):1078-93.

Increasing Awareness of the Connection Between Breastfeeding and Mental Health Through an Educational Session for Healthcare Providers

RESIDENT NAME:

Dalley, Sara, PGY-5

SUPERVISOR NAME:

Hickey, Cathy, MD FRCPC

RESEARCH ASSISTANT:

Cole, Rebecca, M.Sc Candidate

BACKGROUND/INTRODUCTION:

There have been numerous studies that have explored the complex relationship between breastfeeding and mental health. Although the directionality (and causal relationship) of this relationship remains unclear, several themes seem to emerge from the literature. One of these themes is that breastfeeding, when going well, may offer protection against stress and depressive symptoms in the postpartum period (1-5). Some studies have also demonstrated a link between breastfeeding challenges and symptoms of depression (6,7). Breastfeeding challenges are common with 60-80% of women experiencing problems (8). Due to the high incidence of breastfeeding challenges, early access to supports and appropriate interventions is likely of utmost importance. A Canadian study by Chaput et al (2006) showed that those who received breastfeeding supports and did not report a negative experience with those supports had lower depression rates.

Perinatal mental illness has also been shown to be associated with an increased risk of psychological and developmental disturbances in children including physical illnesses (9), stunted growth, difficult temperament and emotional and behavioral functioning(10).

Several factors may contribute to a possible association between depression and breastfeeding challenges. For example, challenges may lead to early cessation, which would remove any possible protective effects breastfeeding may have on mental health. The nature of the challenges itself, for example pain, could in turn contribute to depressive symptomatology. One theory suggests that depression may be associated with inflammation manifested by pro-inflammatory cytokines. Such cytokines increase during the 3rd trimester and may further increase in response to postpartum factors such as pain and psychosocial stress (11).

OBJECTIVES:

To determine the effect of a ~45 minute educational session around breastfeeding and its relationship to mental health on attendee awareness, knowledge and attitudes around this issue.

To determine the perceived usefulness of a 45-minute educational session around breastfeeding and mental illness for health care providers.

METHODOLOGY:

Nine educational sessions were provided to various groups of health care providers who were involved in the care of peripartum and breastfeeding women. Three of these sessions were completed virtually (via Webex or Microsoft Teams) secondary to pandemic restrictions. Data was collected from consenting participants in the form of a pre and post session survey. These surveys were anonymously matched by using a unique identifier that the participant made themselves consisting of the first 3 letters of the street they live on and the first 3 letters of their month of birth. The survey consisted of 8 statements assessing perceived knowledge, attitudes and awareness around the topic of breastfeeding and mental illness as well as perceived usefulness and effectiveness of such a session. Statements were rated using Likert scales ranging from 1 (disagreement) to 10 (agreement).

Implied consent was obtained for this study. The survey included a description of the scope of the study and outlined risks as well as plans for dissemination. The survey was confidential and no identifying information was asked outside of profession.

Completion of the survey was completely voluntary.

RESULTS OBTAINED:

Descriptive statistics were used for the demographics of the study population. 163 session attendees completed pre/post session surveys and included nurses (133), medical residents (14), medical students (8), physicians (1), lactation consultants (1) and other (1). Paired t-test was used to find differences between pre- and post-answers of the same participants that were assessed on a Likert scale. The number of participants varied from question to question due to missing data. There were significant differences in post-answers for Q1 to Q5 inclusive as compared to pre-answers. There were no identified differences in mean values for Q6-Q8.

CONCLUSIONS:

Session attendees reported improvements in their awareness of the connection between breastfeeding and mental health, their perceived importance of this topic as being relevant to their practice, their awareness of the complexity of the relationship, their perceived knowledge of the topic and their perceived adequacy of training on this topic. These results suggest that a short educational session such as this one appears promising in improving health care providers awareness and knowledge of this topic. This, in turn could have a positive effect on care provided to women in the perinatal period.

DISCLOSURE STATEMENT:

Author has no conflicts of interest to disclose. Given the fact that this study was used to evaluate an educational session developed by the researcher, ethics approval was not required as per consultation with HREA.

REFERENCES:

5. Yusuf, AS, et al., (2016). Breastfeeding and postnatal depression: a prospective cohort study in Sabah, Malaysia. Journal of Human Lactation, 32 (2), 277-81

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Mental Health Nursing Follow Up and Attempted Suicide Risk Reduction

RESIDENT NAME:

Brennan, Jordan, PGY-5

SUPERVISORS:

- Dolezalek, Jan, MD FRCPC
- Bonnell, Weldon, MD FRCPC

BACKGROUND/INTRODUCTION:

Suicide remains a significant and difficult to predict public health issue. Prior research suggests the initial 3 months post-discharge from a psychiatric facility to be a high-risk time for completion of suicide, necessitating rapid follow-up during this period.

OBJECTIVES:

To determine whether referral to mental health nursing post-discharge might result in reduced suicide attempts during the first 3 months post-discharge from a psychiatric acute care unit. Secondary objective included determining whether nursing referral might reduce rate of completed suicide, or if there was an association between missed nursing follow-up appointments, and suicide attempts post-discharge.

METHODOLOGY:

The present study was a retrospective cohort design, reviewing a total N of 96 charts from psychiatric patients discharged from acute care psychiatric inpatient units, and who were either referred to a mental health discharge liaison nurse, or who had received treatment-as-usual during the 3 month period after their discharge. Clinical diagnoses, presentation severity, and demographic factors were noted as well as whether or not each case had attempted or completed suicide during this period.

RESULTS OBTAINED:

No association was found between nursing referral and severity, or between nursing referral and either attempted or completed suicide. Post-hoc analysis noted that those of younger (<35 years) age as well as those with a diagnosis of Borderline personality disorder (BPD) were more likely to attempt but not complete suicide during the 3-month post-discharge period.

CONCLUSION(S):

Limited evidence exists to support specific individual or wider public health interventions to reduce suicide rates per se at this time. Future research in this area will need to consider other methodological strategies (prospective, as well as retrospective case-controlled studies), while acknowledging the need to address the root societal and individual determinants of suicide moving forward.

SYNOPSIS:

The above study suggests that a significant association exists between diagnosis of BPD, younger age, and attempted suicide post-discharge from acute care services. This highlights the necessity for clinicians to remain aware of this risk, and for further research to determine if and how follow-up services might better serve these populations post-discharge in future

DISCLOSURE STATEMENT:

No conflicts of interest to disclose

REFERENCES:

1. Chung, D.T., Ryan, C.J., Hadzi-Pavlovic, D., Singh, S.P., Stanton, C., & Large, M.M. (2017). Suicide rates after discharge from psychiatric facilities: A systematic review and meta- analysis. JAMA Psychiatry, 74(7), 694-702.

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A Polarizing Topic: Assessing the Knowledge of and Attitudes Towards Repetitive Transcranial Magnetic Stimulation in NL

RESIDENT NAME:

Campbell, Graeme, PGY-4

SUPERVISOR:

Bonnell, Weldon, MD FRCPC

BACKGROUND/INTRODUCTION:

Repetitive Transcranial Magnetic Stimulation (rTMS) has been approved in Canada for use in treatment resistant depression since 2002[1] and is a 1st line treatment for this diagnosis in the 2016 CANMAT clinical guidelines for treatment of adults with MDD[2]. rTMS is available in most Canadian provinces but not yet offered in NL, and at this time there is a lack of formal education or training in rTMS at MUN for medical students and psychiatry residents. This is in keeping with the national trend, as a recent paper by Giacobbe et al[3] revealed that while 56.5% (of 162) PGY 5 Canadian Psychiatry Residents felt rTMS familiarity should be required for licensing, only 3.1% felt they had become competent in rTMS use during training.

OBJECTIVES:

1. Obtain data on perceived levels of knowledge of, exposure to and desire for more education in rTMS.
2. Obtain data on attitudes towards safety, efficacy and potential to consider rTMS as a treatment for depression.

METHODOLOGY:

An online survey containing 6 questions was sent Eastern Health Psychiatry staff and residents, as well as MUN CC4s and CC3s who have completed their core psychiatry rotation. 3 questions assessed knowledge of or exposure to rTMS and 3 questions focused on attitudes towards use of rTMS. Results obtained were anonymous.

RESULTS:

Response rate: staff = 27/41 (66%) residents = 20/26 (85%) clerks = 40/121 (33%)

General trends include poor perceived knowledge of rTMS, with just 41% of staff reporting adequate knowledge level. There was a significant lack of exposure to rTMS and strong desire for more education on this treatment modality across all 3 surveyed groups. Regarding attitudes towards rTMS the results were positive or neutral across all 3 groups, with not a single response disagreeing that rTMS was safe, effective or that they would consider it as a potential treatment option for depression.

Statistical analysis comparing differences between groups to follow.

CONCLUSION(S):

Based on the survey results there appears to be a significant need for more exposure to rTMS during medical school and psychiatry resident training, and a desire for further education on this topic. There were no strong concerns regarding the consideration of rTMS in the treatment of depression, nor in its perceived safety or potential efficacy. Given that rTMS is 1st line for treatment resistant depression and is planned to be offered in NL with completion of the new psychiatric hospital, formal education and training opportunities for medical students, psychiatry residents and staff would be beneficial moving forward.

SYNOPSIS:

An online survey of psychiatry staff, residents and clinical clerks revealed that knowledge of rTMS and exposure to it in training and practice is lacking in NL. There were no disagreements with rTMS as a safe and effective treatment, with responses being positive or neutral in this regard.

DISCLOSURE STATEMENT:

No conflicts of interest.

REFERENCES:

1. Health Quality Ontario. (2016). Repetitive transcranial magnetic stimulation for treatment-resistant depression: An economic analysis. *Ontario Health Technology Assessment Series, 16*(6), 1-51.

2. Roumen, V. M., et al. (2016). CANMAT 2016 clinical guidelines for the management of adults with major depressive disorder: Section 4. Neurostimulation Treatments. *The Canadian Journal of Psychiatry, 61*(9), 561-575. doi:10.1177/0706743716660033

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Patterns in Psychiatric Emergency Department Utilization

RESIDENT NAME:

Gill, Stuart, PGY-5

SUPERVISORS:

- Noble, Sarah, MD FRCPC
- Bonnell, Weldon, MD FRCPC

BACKGROUND/INTRODUCTION:

There is wide variation in numbers of patients that present to the Waterford Hospital emergency Psychiatric Assessment Unit (PAU). It is often speculated that socially determined factors, meteorological, and even astrological events influence this variation. Local longitudinal trends have been observed, but not analysed statistically.

OBJECTIVES:

To identify trends and fluctuations in daily volume of patient presentations based on analysis of the following factors:

1. weekday, seasonal, and year-over-year factors
2. severe weather events
3. NL Income Support payment schedule
4. Holidays and other socially determined factors

METHODOLOGY:

Anonymous and pooled total daily counts of patient presentations to the Waterford Hospital emergency psychiatric assessment unit was acquired from Eastern Health quality assurance team ("Decision Support and Planning"). From this multiple data sub-sets were extracted based on pre-determined factors of interest, and the sub-set means were compared using ANOVA method with post-hoc least significant difference analysis. Significant differences between data subsets were highlighted graphically to illustrate trends and patterns in patient usage of this important clinical service.

RESULTS OBTAINED:

Clear and statistically significant trends were found when analyzing PAU usage by weekday (less traffic on Saturdays (-13.0%, p<0.01) and Sundays (-14.4%, p<0.01), Mondays most busy (12.1%, p<0.01). The months of December and August were least and most busy months respectively (-12.2%, 7.8%, mean LSD p<0.05)). Analysis of yearly totals showed a period of increased patient usage over academic year 2017/18 (15.0%, p<0.05). No significant variations or trends could be attributed to Income Support payday cycle, although this analysis was seriously compromised by weekday-associated confounders. Severe weather was found to have a statistically significant but not clinically significant difference in PAU usage (10.1 pts/day vs 10.7 pts/day one day later, p<0.05).

There was no significant change in PAU usage based on holidays and festivals, nor phase of the moon.

CONCLUSION(S):

These findings indicate that the Waterford PAU usage has varied in statistically significant ways based on calendar year, month, and day. Some of these patterns are most likely socially-driven, although exact cause can only be speculated (i.e. the convention of relaxing on weekend days and working on weekdays). Little can be said about the influence of Income Support payment schedule (e.g. the theoretical stressors of premature/impulsive spending early in the pay period or depleted funds towards the end of the pay period); serious confounding was discovered. No influence was identified from natural events (severe weather, astrology), nor from pure social constructs (e.g. festivals and holidays).

SYNOPSIS:

This study shows the most significant fluctuations in PAU utilization are associated with the day of the week and calendar month. The resulting changes in PAU workload could also be clinically significant, except that the unpredictability makes it difficult to efficiently implement operational changes. Nonetheless, housestaff may take comfort in these findings while they are searching for the true cause of their poor “call karma”.

DISCLOSURE STATEMENT:

No conflicts of interest.

REFERENCES:

1. Conversation with Cynthia King, Manager, NL Adult Education and Skills
2. St. John’s NL Severe Weather data set as provided by Environment Canada
3. www.fullmoonphases.com

Perceived Satisfaction With Physical Activity in Resident Physicians at Memorial University

RESIDENT NAME:

Fowler, Kevin, PGY-5

SUPERVISOR:

Bonnell, Weldon, MD FRCPC

BACKGROUND/INTRODUCTION:

Through residency, physicians seem to find their career, or other obligations superseding time for physical activity. This researcher has a personal interest in physical activity as well as sport in general. The term "burnout" is becoming an increasingly recognized term, and rightfully so. The breath of research on lack of physical activity and burnout is growing, and continues to have a consistent, clear result. That lack of physical activity, structured or otherwise, is a contributing factor leading to burnout. Conversely, maintaining adequate physical activity can be pivotal in staving off burnout. Given the clarity of this research, assessing burnout was not an objective of this project. This researcher set out to perform a qualitative assessment of Resident Physicians at Memorial University to determine their amount of physical activity per week, their subjective satisfaction with this, and their perceived barriers to adequate physical activity, if present.

OBJECTIVES:

The objective of this research project was to investigate Resident Physician's perceived satisfaction with their physical activity levels and understand the perceived limitations/barriers, if any.

METHODOLOGY:

A simple, non-validated, scale was constructed by the researcher. This survey was distributed in person to residents, prior to limitations of physical distancing, during predetermined, mandatory academic time in an effort to maximize uptake. After explanation of the survey and it's intended use implied consent was given by completing the survey.

RESULTS OBTAINED:

Of the 50 properly completed surveys 11% of participants preferred running/walking/jogging. Twenty-four of the participants endorsed getting less than 3 hours of physical activity per week and 21 of the 50 participants felt that their physical activity was adequate. "Hours of work", "study" and "call commitments" were cited most commonly as reasons for decreased physical activity. Written responses citing "laziness", "fatigue" and "motivation" were commonly added. Thirty-seven participants strongly agreed that physical activity positively impacts their mental health and 45 participants either agreed, or strongly agreed that adequate physical activity would improve their

satisfaction with employment as a resident, 44 participants agreed, or strongly agreed that it would improve the quality of their work. The most common response regarding if residency negatively impacted their physical activity and if their residency program supported achieving adequate physical activity was "neutral" with 19 and 28 participants selecting this, respectively.

CONCLUSION(S):

Less than half of Memorial residents sampled felt that their physical activity was adequate, while the majority felt that achieving adequate physical activity positively affects mental health and would improve both the quality of their work and their satisfaction with employment. Employment related factors (hours at work, study, call) were frequently cited barriers to adequate physical activity, as were fatigue and motivation. Largely, residents at Memorial sampled did not agree or disagree that their residency program negatively impacted their ability to achieve adequate physical activity, nor did they agree or disagree that their residency program supports them obtaining it.

SYNOPSIS:

The existing peer-reviewed research is clear that a lack of physical activity amongst physicians, structured or otherwise, is a contributing factor leading to burnout. Conversely, maintaining adequate physical activity can be pivotal in preventing burnout. This qualitative survey on resident physicians at Memorial University did confirm that physical activity positively affects mental health, and would improve both the quality of work and satisfaction with employment. However, there was obvious ambivalence in the survey results as to whether or not a residency program itself negatively impacts (or supports) achieving adequate physical activity.

DISCLOSURE STATEMENT:

The researcher has no monetary conflicts or affiliations to disclose. The researcher (author) is a resident at Memorial University.

REFERENCES:

1. Ishak, W. W. et al (2009). Burnout during residency training. *Journal of Medical Education, 1*(2), 236.

2. Weight, C. J. et al (2013). Physical activity, quality of life, and burnout among physician trainees. *Mayo Clinic Proceedings, 88* (12), 1435-42.

The Evaluation of the Level of Comfort of the Individuals of the Interdisciplinary Team in Advocating for the Acquirement of a Clinic for the Use of Ketamine in Adults With Major Depressive Disorder After a Teaching Session About the Current Canadian Network for Mood and Anxiety Treatments (CANMAT) Task Force Guidelines on a Virtual Platform: A Quality Improvement Study

RESIDENT NAME:

Lapointe, Gabrielle, PGY-5

SUPERVISOR:

Bonnell, Weldon, MD FRCPC

BACKGROUND/INTRODUCTION:

Most available standard antidepressants therapies focus on monoamines targets. There is an ongoing need for more alternative treatment for patients with depression resistant to these targets and ketamine has the potential to fill this role. Recently, The Canadian Network for Mood and Anxiety Treatments (CANMAT) task force made recommendations for the use of racemic ketamine in adults with major depressive disorder.

OBJECTIVES:

Quality Improvement procedures are important in aiding the clinician in the advancement of patient care. By increasing knowledge in the guidelines for new and novel treatments, the clinician could be more equipped in advocating for these treatments, to acquire them in the health authority setting in which the personnel practice. The purpose of this study is to determine if a teaching session could improve the level of comfort of the clinician in advocating for the introduction of such a treatment in their community.

METHODOLOGY:

A teaching session of The Canadian Network for Mood and Anxiety Treatments (CANMAT) task force recommendations for the use of racemic ketamine in adults with major depressive disorder will be held over Webex in a journal club session of 2 hours in length. The targeted audience will be the interdisciplinary team of the department of psychiatry at Memorial University of Newfoundland. A pretest and post-test with consent will be requested to be filled out by each candidate to assess their level of comfort of advocating for the acquirement of this treatment in the clinical setting. Outcomes will be compared between different professions.

RESULTS OBTAINED:

Data collection in progress. Results to be presented at Scholarship Day.

CONCLUSION(S):

Data collection in progress. Conclusions to be presented at Scholarship Day.

SYNOPSIS:

Data collection in progress. Synopsis to be presented at Scholarship Day.

DISCLOSURE STATEMENT:

No conflicts of interest to disclose.

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Training in Telepsychiatry: Results From a National Study

RESIDENT NAME:

Myles, Angelique, PGY-5

SUPERVISOR:

Noble, Sarah, MD FRCPC

INTRODUCTION:

This study examined Canadian psychiatry residents' interest, exposure, and future plans to use telepsychiatry. In addition respondents indicated barriers to implementing telepsychiatry in their future practice.

METHODOLOGY:

A 19-item electronic survey using Likert scales, yes/no and multiple choice was generated using Google Forms. The survey was distributed to 17 psychiatry residency and fellowship programs in Canada. Each Coordinators of Psychiatric Education (COPE) representative was asked to voluntarily distribute the survey to the psychiatry residents attending their University.

RESULTS:

In total 165 respondents completed the survey. The majority of respondents were offered clinical experience in telepsychiatry and indicated an interest in telepsychiatry. Eighty-nine percent of respondents agreed that telepsychiatry is an important aspect of residency or fellowship training and seventy percent stated that it should be a required part of residency.

Of the 147 respondents who had clinical exposure to telepsychiatry and completed the survey, a majority indicated that their experience increased their interest in telepsychiatry. Approximately one-third reported having either a one-time encounter or less than 6 hours of multiple patient experiences via telepsychiatry. Almost half of the respondents who had clinical experience with telepsychiatry reported that it was not equal in quality to face-to-face patient encounters.

Respondents indicated a number of barriers, which included system barriers such as fee codes and compensation as well as access to technology and internet connection. Patient barriers such as, socioeconomic challenges, lack of experience with technology, patients with intellectual disabilities or requiring play-based therapy.

CONCLUSIONS:

The COVID-19 pandemic has rapidly shifted telehealth into the forefront and in doing so an increasing number of Canadians are receiving virtual health care. Psychiatry residents across the country have indicated that although they are receiving exposure to telepsychiatry during their residency training there continues to be gaps and barriers

highlighting the need for Graduate Medical Education requirements for telepsychiatry experiences during training.

SYNOPSIS:

The purpose of this project was to examine Canadian psychiatry residents' interest, exposure, and future plans to use telepsychiatry. An online survey using Likert scales, yes/no, and multiple choice was generated to address these areas in question. The majority of residents indicated that their experience increased their interest in telepsychiatry, however many indicated a number of barriers to implementing the technology into their practice.

DISCLOSURE STATEMENT:

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An Online Psychotherapy Education Resource: Examination of Learner Satisfaction and Interprofessional Learning

RESIDENT NAME:

Myles, Angelique, PGY-5

SUPERVISOR:

Hickey, Catherine, MD FRCPC

BACKGROUND/INTRODUCTION:

There are few online opportunities for mental health practitioners (and students) to learn from one another in the area of psychotherapy education. We developed and offered an online psychotherapy resource for psychotherapist learners of differing backgrounds. We sought to determine if this resource could:

1. Increase learner satisfaction.
2. Enhance readiness and willingness to engage in interprofessional learning.

METHODOLOGY:

We offered an online psychotherapy resource to 520 learners. These learners completed the Readiness of Inter-professional Learning Scale prior to completing the resource and were supposed to complete it after they finished the resource. They also completed a Learner Satisfaction Questionnaire.

RESULTS OBTAINED:

19 learners partook in the study. Results from the Readiness for Interprofessional Learning Scale (RIPLS), indicated that the vast majority of learners felt that learning with other students would make them better members of the team and that patients would benefit from this. The majority also felt that clinical problem solving and communication skills would benefit from inter-professional learning. The respondents also felt that the resource was organized, had a logical flow, and was easy to navigate. However, despite numerous attempts at making the resource more interactive, there was no discussion or communication between any participants on the resource. As such, participants used the resource as independent learners and there was no degree of interprofessional communication or learning.

CONCLUSION(S):

The main conclusion is that an online resource has to be interactive enough for learners to learn from one another. Our resource did not achieve any degree of communication between learners. As such, they could not learn from one another and we could not evaluate our second variable, which is whether the resource enhanced willingness to engage in interprofessional learning. That said, they appeared ready to learn from one another and were satisfied with the resource itself.

SYNOPSIS:

Online learning can be satisfying for individual learners. However, in our case, we did not offer an online resource which resulted in a successful degree of interactivity amongst participants. As such we were unable to determine whether learners were ready and willing to interact with other professions during an online resource.

DISCLOSURE STATEMENT:

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article

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RESEARCH IN PROGRESS

Psychosis Management: Early Psychosis Intervention, Risk of Relapse, and Tools To Predict Relapse

RESIDENT NAME:

Lundrigan, Dave, PGY-4

SUPERVISOR:

Ledrew, Kellie, MD FRCPC

BACKGROUND/INTRODUCTION:

Psychotic disorders represent a group of illnesses that, if left untreated, can cause significant destruction not only to the individual affected and their loved ones but also can place an enormous financial burden on health care systems. An evidence-based approach to the management of these disorders is essential to provide the best possible outcomes for the unfortunate patients affected and their friends and families.

Recent research has shown that there is a "critical period" of about 5 years after the onset of psychotic symptoms before the psychosis becomes truly established (Yap H.L., 2015). It has been shown that during this critical period it is often easier to subdue these symptoms through specialized early psychosis intervention programs. However, relapse of psychotic symptoms is a very common occurrence that can be very discouraging to patients and costly to the healthcare system.

Through the review of literature, I will discuss the basics and the rationale of early psychosis intervention programs, factors that commonly affect psychotic relapse, and tools that have been developed to predict psychotic relapse specifically the SEPRRA tool which is still in the validation process.

OBJECTIVES:

1. **Development of a literature review:** A literature review will be completed focusing on the topic of early psychosis-more specifically relapse in early psychosis. I will narrow my search to include articles dealing with common intervention techniques in early psychosis, factors that predict relapse of psychosis, and articles that deal with relapse predictor tools and questionnaires.

2. **Validation process of the relapse tool developed by the CCEI (The SEPRRA):** Ethics approval has been granted for the "SEPRRA" (a questionnaire-assessment tool for the prediction of relapse in early psychosis) Institutional approval is pending but expected soon. I will work with staff at PIER in a clinical setting and interview approximately 20 patients who meet the criteria for the assessment tool. Data will be collected over a 1-year period to assess the validity of this tool to accurately predict relapse.

METHODOLOGY:

Literature review conducted primarily using PubMed. Searches to include articles dealing with common intervention techniques in early psychosis, factors that predict relapse of psychosis, and articles that deal with relapse predictor tools and questionnaires.

Recruitment of individuals from the PIER program at the Waterford hospital meeting the inclusion criteria set out in the original protocol. Minimum of 20 patients to be recruited. Assessed using the Baseline SEPRRA tool then follow up assessments at least every 3 months using the follow up SEPRRA tool. Follow up to continue for a 1-year period then statistical analysis on results to help validate the SEPRRA study as a tool that can predict relapse in early psychosis.

RESULTS OBTAINED:

Pending: To be completed in December of 2021.

CONCLUSION(S):

Pending.

SYNOPSIS:

Psychotic disorders represent a group of illnesses that, if left untreated, can cause significant dysfunction not only to the individual affected and their loved ones but can also place an enormous financial burden on health care systems. Relapse of psychosis, after first presentation, is a very common occurrence that can be very discouraging to patients and costly to the healthcare system. This research consists of two phases. Phase one will consist of a literature review on early psychosis intervention models and risk factors that affect psychotic relapse. Phase two will test the validity of a tool for the prediction of relapse in early psychosis called the SEPRRA. A minimum of 20 patients who meet the inclusion criteria for the SEPRRA study will be recruited from the PIER program at the Waterford hospital. Once recruited, the patients will be interviewed at baseline and at subsequent visits (minimum of every 3 months) using the SEPRRA tool. This will continue for a 1-year period. Sensitivity, specificity, positive and negative predictive value will be analyzed. Phase one of this research has been completed and ethics approval has been granted and renewed for phase 2. Currently, 21 patients have been recruited at the PIER program and all initial assessments have been completed. 3-month follow up assessments are ongoing and are set to be completed in November of 2021. As per the original protocol, statistical analysis of results will be calculated once 1 year of follow up assessments have been completed and preliminary measures of validity of the SEPRRA tool can then be discussed.

DISCLOSURE STATEMENT:

Nothing to disclose

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Usage of the Adult Acute Care Delirium Protocol Among Residents

RESIDENT NAME:

Power, Jordan, PGY-4

SUPERVISOR:

Grewal, Mandeep, MD FRCPC

BACKGROUND/INTRODUCTION:

Delirium is associated with higher mortality rates, longer lengths of hospital stay, poor functional recovery and increased likelihood of nursing home placement (Kishi, 2007). In a systematic review, the prevalence of delirium at admission ranged from 10 to 31%, and the incidence of new delirium per admission ranged from 3 to 29% (Siddiqi, 2006). Delirium is a frequently missed diagnosis and delayed diagnoses of delirium have been associated with greater mortality than those treated earlier (Heymann, 2010). Two large studies have respectively found that 46% (Armstrong, 1997) and 63% (Swigart, 2011) of referrals to the consult liaison service for other conditions were ultimately found to have a most responsible diagnosis of delirium. While this trend has not been quantified in Eastern Health facilities, the experience of psychiatry staff and residents at Memorial University of Newfoundland is generally felt to be consistent with that found in the literature. In cases of delirium psychiatrists can aid in the diagnosis by clarifying symptoms, assessing cognitive status and advising on supplementary investigation. Unfortunately when diagnoses of delirium are being made by psychiatry it is likely that the diagnosis has been delayed as well as the identification and treatment of the underlying aetiology. Delirium identification is improved when cognitive assessments are used routinely and can be enhanced by using simple screening tools such as the Confusion Assessment Method (CAM) (Inouye, 1990) which is the most widely studied. This test takes less than five minutes to complete and has been found in meta-analysis to have a pooled sensitivity of 86% and pooled specificity of 93% (Wong, 2010) for diagnoses of delirium. In a comparison to detection without standardized scales, a large study of 710 inpatients screened for delirium using the CAM identified 79 patients who had been missed by standard assessments which made up 72% of those ultimately found to be delirious (Collins, 2010). Eastern health policy states that that “positive” or “negative” status of the CAM is assessed by nursing staff every twelve hours. The policy also states that the physician should be notified of a positive result, at which point the Eastern Health Acute Care Delirium Protocol is ordered by the physician. The tool is a four page document, available online, containing investigation order sets as well as guidelines for pharmacologic management of delirium. This pathway is logical as a standard of care based on the literature, but the effectiveness of its function is not known. While the policy describes a multidisciplinary process, I am specifically interested in the usage of standardized assessments for delirium as well as the protocol by physicians.

OBJECTIVES:

The objectives of this qualitative study are to assess the subjective usage of standardized assessment tools for delirium as well as the Eastern Health Adult Acute Care Delirium

Protocol by residents with experience on inpatient rotations at St. John's, NL hospitals. The hypotheses of this study are as follows:

1. Standardized assessment tools for delirium are rarely used.
2. The existence of the Eastern Health protocol is not well known.
3. The protocol is not frequently used in cases in which a diagnosis of delirium has not been ruled out.

The results of this project would serve as a potential pilot project or a needs assessment study for a quantitative analysis of the usage of standardized delirium assessments and the protocol in inpatient settings. The results would also serve as a potential pilot project or a needs assessment study for a future quantitative study assessing the means of improving the use standardized delirium assessments, awareness of the protocol, and ultimately usage of the protocol. The results would also serve as a potential pilot project or a needs assessment study for a future study of the process by which physicians are notified of positive CAM results. The limitations of the study would be its strictly qualitative data. The results could also be influenced by the biases of individual participants. It would not serve an objective analysis of the effectiveness of the protocol.

METHODOLOGY:

A survey will be created which asks the following basic questions:

1. Are you currently a resident physician who has had direct involvement in the management of patients admitted to a St. John's, NL hospital for any length of time in the past 5 years?
2. What is your level of training?
3. For what portion of your patients where a diagnosis of delirium has not been ruled out do you use a standardized screening tool such as the Confusion Assessment Method, the Intensive Care Delirium Screening Checklist, the DSM5 Criteria for Delirium, or other standardized measurements?
4. In your training have you ever been exposed to the Eastern Health Adult Acute Care Delirium Protocol? If the answer is "no" then remaining questions can be left blank.
5. For what portion of your patients where a diagnosis of delirium has not been ruled out was the Eastern Health Adult Acute Care Delirium Protocol completed?

The survey will be distributed via email using a survey software that registers no identifying information. A "no" answer to the first question would result in exclusion from the study. An averaging of the answers to the third question would determine the subjective proportion of patients with potential delirium who are screened using standardized tools. A "no" answer to the forth question would exclude that participant's answers to questions five. Mean, median and mode vales from answers to question five would determine subjective frequency of use of the protocol in patients with Delirium.

RESULTS OBTAINED:

To be determined.

CONCLUSION(S):

To be determined

SYNOPSIS:

To be determined.

DISCLOSURE STATEMENT:

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article

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Rural Postgraduate Psychiatry Training in Canada: Availability, Incentives, and Barriers

RESIDENT NAME:

Uzans, Drea, PGY-4

SUPERVISOR:

Snelgrove, Tara, MD FRCPC

BACKGROUND/INTRODUCTION:

As of 2017 in Canada there were three Psychiatrists per 100 000 population in rural areas compared to 17 Psychiatrists per 100 000 population in urban areas. Furthermore, a greater proportion of Psychiatrists in rural areas were over the age of 55 compared with their urban counterparts. This raises concerns that the mental health needs of rural Canadians are relatively underserviced. There is an urgent need to recruit Psychiatrists to rural practice in Canada. Studies undertaken in Canada and internationally have consistently indicated that a key factor in recruitment of physicians to rural areas is exposure to rural practice during training.

OBJECTIVES:

This study will aim to determine the availability, incentives, and barriers to Postgraduate Psychiatry rural training opportunities in Canada.

METHODOLOGY:

Survey of Postgraduate Psychiatry Program Directors and Psychiatry Residents across Canada.

RESULTS, CONCLUSIONS & SYNOPSIS:

Pending. Research in Progress.

DISCLOSURES:

None

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Retrospective Review of Anticholinergic Burden Before and After Psychiatric Hospitalization in Elderly Patients

RESIDENT NAME:

Hung King Sang, Jessica, PGY-4

SUPERVISOR:

Jat, Khalid, MBBS FRCPC

BACKGROUND/INTRODUCTION:

Medications with anticholinergic properties are widely prescribed in the elderly population but are also known to produce adverse effects. Higher anticholinergic burden, that is the cumulative effect of taking one or more medications with known anticholinergic activity, is a strong predictor for physical and cognitive adverse effects in the elderly (1). This includes cognitive impairment, delirium, and falls (1). Thus, it is imperative to minimize anticholinergic burden where possible. Hospitalization is an important transition point that frequently leads to new prescriptions of anticholinergic medications but can also provide a key opportunity for prescribers to reduce unnecessary anticholinergic burden.

Various scales exist for estimating anticholinergic burden, including the commonly used Anticholinergic Cognitive Burden (ACB) Scale (2). In the current literature, anticholinergic burden scores increased in as many as 50% of elderly patients after hospitalization, and this increase was associated with factors, such as discharge from surgical or medical departments and having a cardiac or psychiatric condition (3-6). When formal medication reviews are implemented, studies show that prescription of anticholinergic medications is effectively reduced (7).

There is a paucity in the literature pertaining to how psychiatric hospitalization of elderly patients impacts anticholinergic burden scores. The geriatric psychiatry population is particularly vulnerable to high anticholinergic burden given the physiologic effects of aging, polypharmacy, and use of psychiatric medications that possess anticholinergic properties. Also of importance, anticholinergic medications counteract procholinergic drugs used in dementia treatment.

My hypothesis is that hospitalization on a geriatric psychiatry unit has an overall positive impact on anticholinergic burden scores on discharge, as careful medication review is an ongoing part of assessment and management of the elderly psychiatric patient.

OBJECTIVES:

The primary objective of this study is to evaluate how hospitalization on a geriatric psychiatry unit affects anticholinergic burden scores on discharge. Secondary objectives include identifying prescribing patterns that contribute to any changes in anticholinergic burden, as well as identifying demographic factors that may be associated with an increase or decrease in anticholinergic burden on discharge.

METHODOLOGY:

Pending ethics approval, a retrospective Meditech chart review will be conducted. It will include patients 65 years and older who are admitted to and discharged from the geriatric psychiatry unit (E2A) of the Waterford Hospital over an 18-month period, which should yield an estimated 100 patients. Patient data, including age, primary diagnosis, comorbidities, length of stay, discharge disposition, history of dementia, delirium and falls during admission, and medication prescription lists on admission and discharge will be collected. Using the ACB Scale, anticholinergic burden scores will be calculated for each patient on admission and discharge. Nonparametric statistical tests will be used to compare anticholinergic burden scores on admission and discharge and to test for significance between demographic factors and change in ACB Scale scores. A P-value of < 0.05 will be considered statistically significant for all tests.

RESULTS OBTAINED:

In progress.

CONCLUSION:

In progress.

SYNOPSIS:

This research-in-progress is a retrospective chart review that will determine how local psychiatric hospitalization of elderly patients impacts anticholinergic burden scores. Factors that may contribute to increased or decreased anticholinergic burden on discharge will also be assessed. The goal is to minimize adverse effects of anticholinergic prescribing in the elderly, all while recognizing the clinical benefit and necessity of some anticholinergic medications.

DISCLOSURE STATEMENT:

There are no conflicts of interest to disclose.

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Effect of the COVID Pandemic on Outpatient No-Show Rates

RESIDENT NAME:

MacIver, Duncan, PGY-3

SUPERVISOR:

SUPERVISOR:

Bonnell, Weldon, MD FRCPC

BACKGROUND/INTRODUCTION:

The ongoing COVID pandemic has radically shifted the landscape of outpatient care. At the onset of the pandemic, many previously booked appointments had to be cancelled or rescheduled, leading to a backlog of appointments. Many clinics have shifted to virtual care as a safety measure. Anecdotally, several physicians have reported decreased rate of patient no-shows since the transition to virtual appointments was made. It is conceivable that virtual appointments may be associated with a greater overall attendance rate compared to in-person appointments.

OBJECTIVES:

I intend to compare patient attendance rates over a one-year period before the onset of the COVID pandemic with a similar period occurring during the course of the pandemic. Attendance data can be compared for adult and paediatric clinics, as well as between male and female patients.

METHODOLOGY:

After obtaining ethics and RPAC approval, I intend to obtain exhaustive data on outpatient psychiatric appointments for a one-year period both before and after the onset of the COVID pandemic. The data set will ideally include patient age cohort (ie paediatric vs. adult), sex, appointment date, and whether or not the appointment was attended. Assuming a normally distributed data set, I can compare no-show rates pre- and post-COVID using an ANOVA test.

RESULTS OBTAINED:

TBD.

CONCLUSIONS:

TBD.

SYNOPSIS:

The COVID pandemic led to a major shift from in-person to virtual care for outpatient psychiatric appointments. I intend to compare patient attendance rates over a one-year

period before the onset of the COVID pandemic with a similar period occurring during the course of the pandemic. Collection of this data is forthcoming; I intend to compare no-show rates between these two patient populations using ANOVA analysis.

DISCLOSURES:

I have no disclosures to report.

REFERENCES:

TBD.

PGY-1 RESEARCH/SCHOLARLY PROJECT ELECTIVES

Introduction

The PGY-1 Research/Scholarly Project Elective has become a popular choice amongst our PGY-1 residents over the past few years. We are including abstracts/summaries of the excellent and hard work that these residents have produced.

This year, due to time constraints, we will not be able to have these residents give brief presentations regarding their work. However, we still wanted to capture and circulate these abstracts/summaries.

While many of these electives did take the form of preparatory work for conventional research, this was not always the case and not the intent. Some of these electives took the form of other scholarly activities. Ultimately, the work begun in these electives will take many final forms, including conventional research, scholarly presentations, such as Grand Rounds, and academic publications.

The Role of Caregivers in DBT for Adolescents

RESIDENT NAME:

Harrison, Rebecca, PGY-2

SUPERVISOR:

Bonnell, Weldon, MD FRCPC

BACKGROUND/INTRODUCTION:

Dialectical Behaviour Therapy (DBT) is widely recognized as one of the most effective therapies for chronic suicidality and Borderline Personality Disorder (BPD). (1–3) It has been adapted to treat adolescents with BPD traits. (4) It has been established that caregiver involvement in adolescent DBT can improve treatment outcomes. (5,6) However, the optimal method for caregiver inclusion has yet to be established. Various approaches to parental inclusion have been undertaken, including holding separate DBT skills groups for caregivers and holding combined caregiver-adolescent skills groups. (7) No study has yet compared the efficacy of these two formats.

OBJECTIVES:

To compare patient treatment outcomes between DBT patients in caregiver-separate and caregiver-combined DBT skills groups.

METHODOLOGY:

DBT skills groups for adolescents are held at the Janeway Hospital in St. John's, Newfoundland. These groups have typically been subdivided into adolescent and caregiver groups. In a pilot project, the caregiver and adolescent groups will be combined for DBT skills education.

Qualitative information will be obtained from the therapists leading the sessions to compare the experiences of the separated groups to those of the combined pilot groups.

Quantitative analyses will compare the groups according to measures of patient satisfaction and frequency of presentations to the ER for suicidal ideation and non-suicidal self-injury.

RESULTS OBTAINED:

This study is currently in progress. No results have yet been obtained.

CONCLUSIONS:

Pending.

SYNOPSIS:

This is a preliminary, limited, retrospective study aimed at exploring the impact of parent participation in adolescent DBT groups with leading separate groups for parents and patients.

DISCLOSURE STATEMENT:

No conflicts of interest to disclose.

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Developing Additional Curriculum and Rotational Content Focused on Improving Medical Student and Psychiatry Resident Education Regarding Local Underserved Populations

RESIDENT NAME:

Alteen, Hilary, PGY-2

SUPERVISOR:

Latus, Andrew, MD FRCPC

ABSTRACT:

Providing culturally sensitive and directed care to underserved populations can be challenging for many physicians. The goal of this literature review was to determine how education regarding underserved populations is best delivered to medical students and residents with the aim of integrating culturally aware care into the curriculum. A total of thirty-six articles were selected to answer the research question. Inclusion criteria required a detailed description of undergraduate and post graduate program design, delivery of services through medical school programming to underserved populations, or focused on teaching cultural competence to medical students and residents for future work serving underserved populations. The introduction of topics early in the curriculum, having strong leadership and mentorship in the faculty, the strategic use of PBL, and ample elective opportunities in areas serving underserved areas were all identified as strategies to improve care to marginalized populations.

A Survey of Physicians' Attitudes Towards and Perception of Supervised Consumption Sites and Other Harm Reduction Services in Newfoundland and Labrador

RESIDENT NAME:

Lilly, Shannon, PGY-1

SUPERVISOR:

Bonnell, Weldon, MD FRCPC

BACKGROUND:

Harm reduction is a pragmatic approach that seeks to minimize the harms associated with substance use and addiction, encompassing a wide variety of treatment modalities, programs, and other services. Interventions under this umbrella have been associated with a significant reduction in the morbidity and mortality for people who use drugs (PWUD) who use these services. In Newfoundland and Labrador several programs are offered, including but not limited to methadone maintenance treatment (MMT), inpatient withdrawal management, and a needle distribution program.

PURPOSE/OBJECTIVES:

Few studies have been done on healthcare practitioners, PWUD, or the general populations' opinions on these services in the province. This information has ramifications for the provision of current harm reduction-based interventions and the development and success of future initiatives. The authors aim to address this gap in the research by surveying current attending and resident physicians regarding their perspectives and knowledge of harm reduction services.

METHODS:

This study will be a mixed methods survey, structured to assess the objectives listed above from a quantitative (using Likert scale-based questions) and qualitative (open-ended questions) perspective. Questions will be developed via a review of existing literature, adapting questions from relevant surveys (including the Medical Condition Regard Scale (MCRS) and the Harm Reduction Attitude Measurement Scale (HRAS)), and adding questions to capture key concepts specific to the local context, The survey will be designed to capture the participants views on the following topics: knowledge of harm reduction services, exposure in clinical practice, attitudes towards harm reduction services in general and towards them being offered locally, the perceived need for these services in the province, the perceived benefit of offering these services, perceived drawbacks to offering these services, and perceived difficulties to implementing harm reduction related programs locally. Participants will be compiled via an online search of provincial databases of healthcare professionals and by contacting Memorial University's Faculty of Medicine for lists of staff associated with their programs. The survey will be disseminated to participants via email and as well as a paper copy during Grand Rounds and other

academic sessions. Following the collection of the survey results, the authors will perform a thematic analysis of the qualitative results and a statistical analysis of the qualitative results.

CONCLUSION:

This study aims to provide important insights into the views of healthcare providers within the province and has implications for the provision of current and future harm reduction services in Newfoundland and Labrador.

Formative Evaluation of Current Automatic Speech Recognition Technology in the Evaluation of Psychiatric Learners: Is Speech to Text Useful in the Academic Psychiatric Context?

RESIDENT NAME:

Bateman, Alain, PGY-1

SUPERVISOR:

Bonnell, Weldon, MD FRCPC

BACKGROUND/INTRODUCTION:

Psychiatry is dialogue based discipline in which symptoms of psychopathology are often solicited through conversation. A patient's answers to inquiries made during the psychiatric interview are often clues to psychopathology, personality disorders, good mental health or some combination of the above. Many interviewers in the medical academic millieux are learners who assess patients for potential psychiatric illness then receive feedback on their performance from college-licensed psychiatrists. Automatic speech recognition (ASR) technology allows for transcripts to be automatically generated from such interviews.

Currently feedback to learners in post graduate programs do not consistently leverage records of the actual conversations the patient has with the learner. And yet one imagines that this record would provide for some of the most objective data as to how the trainee has performed in the interview. Were valuable and salient screening questions posed such as for anxiety? Did the trainee assess the patient's safety? Did they cover the common risk factors for suicide. Transcripts of conversations provide an immutable, verifiable source against which the above questions can be validated.

Despite this strength, there is no trace of using transcripts to improve psychiatric interview assessment in the current literature. Randomized trials with ASR vs dictated notes suggest that the former may be less effective in generating accurate transcripts. [MOHR]. However, one does not require perfect acuracy to assist in assessment. Work in transcribing audio in order to facilitate searches tolerates up to a 25% word error rate.[MUNTENAU] In the case transcribing magesterial lectures from various speakers a a 39% word error rate was tolerated. [LEEUWIS]

Several products that perform speech to text exist on the market and are widely used by physicians to transcribe notes. Perhaps some of these can track and record interviews at a level of accuracy that would make the resulting transcript useful to the psychiatric learners and their assessors.

OBJECTIVES:

1. To identify which existing ASR implementation in the current state is most accurate in treating psychiatric audio.

2. To identify to which extent, if any, the most accurate near-real-time ASR-generated transcripts provide insight into formative psychiatric interviews.

METHODOLOGY:

Objective 1: Appraising available technology

Speech-to-text processing services were identified using the Google and Bing search engines as well as in dicussion with researchers and students in online communities. Only services that provided an application programming interface were considered. Products identified this way included Google Speech, IBM's Watson, Microsoft's Azure and the VOSK API for Kaldi, the latter being open-source projects. A small 30 second introductory statement of the kind done in psychiatric interviews was recorded. A ten minute recording of a simulated psychiatric interview was recorded. A 15 minute reading of a psychiatric text was recorded. These recordings were manually transcribed and the audiotranscoded into an file format compatible with all services.

Validating the success of each solution necessitates that a transcript of an audiofile be compared against a verified transcription of the audio. This authoritative transcription is sometimes referred to as the "ground truth" or the reference. Actual transcription for each file was painstakingly done manually to generate a reference of each audio.Python code was generated to upload an audio file to each of the services and download the proferred transcript. Services that allowed for speaker diarization were signalled to perform the same on the audio files. One exception is VOSK. The VOSK speech-to-text service is entirely local. A trained model was downloaded from the provider and python code was written to directly interface with model.Python code was the developped to score the accuracy of each transcription. The common metric in the industry is Word Error Rate (WER). WER is calculated as follows, where

$$WER = \frac{S + D + I}{N}$$

S is the number of words incorrectly substituted in the resulting transcript. D is the number of words deleted (or omitted) in the transcript. I is the number of words inserted into the transcript and N is the total number of words in the transcript.

The WER was calculated for each audio file created as processed by each solution by comparing it against the prior generated reference transcript for each. It is noted that in order to identify substitutions, insertions and deletions between proferred solutions and authoritative transcripts, the two must be aligned in some way. The alignment here was done using the Levenshtein distance, a typical approach for this task. A detailed explanation of the recursive Levenshtein distance is outside the scope of this report but it's implementation is to be found in the appendices.

Criteria and capabilities for speech recognition technology performance were grouped among the following categories: Accuracy of transcription: how accurate the service is at recognizing the correct word spoken. Privacy: does the service have policies and governance suited to health care data. Timings capacity: whether the service can provide

the time and duration each word is spoken. This is included for potential future results around calculating rate of speech. Speaker diarization: the ability of the service to recognize and accurately label individual speakers. Cost of the service. Speed of the service.

Objective 2: Evaluating the utility of the highest performing technology.

With the above criteria utilized to identify the technology most suitable to the endeavor we formulated an immutable qualitative research design intended to evaluate the feasability of larger trials based on principles articulated by Whitley et al. [WHITLEY]

Several standardized patient scenarios were developped and volunteer learners in psychiatry were recruited to participate in the above standardized patient scenario. No incentive was provided to participants. The interviews were recorded using rudimentary audio technology (entry-level microphones found on phones and laptops.) The audio of the interview was parsed by the ASR technology and read through by the learner and the researcher together. Then a standard interview questionnaire was performed with the learner. The researcher also made some notes on any further insights elicited by the reaction of the learner to the transcript.

RESULTS OBTAINED:

This is a work in progress.

With regards to the first objective, we show that ASR generated transcripts of heavy psychiatric jargon acheive between a 10% and a 25% error rate by platform with the open source VOSK platform performing on the far end of the failure rate and the Microsoft solution performing best. The cost of each technology is comparible and the word timings necessary for further calculations such as speech rate are present in all platform. All platforms offer privacy integration appropriate to meet North American and European standars that are required for Health Service providers. Only 2 of the solutions tested offered speaker diarization and the better performing option, IBM, was chosen for the second objective.

The results of the second objective are being finalized. However, six psychiatric residents have thus far utilized ASR in the context of a standardized patient interview and undergone interviews on the perceived utility of tool as a result. Reception is favorable with a common caveat that the technology cannot be relied upon for accuracy. Roughly half of the participants have identified an unconscious linguistic habit while reviewing their speech patterns, such as saying "okay" or "mhm" more often than they had perceived. Two participants indicated that they would like to change that habit. None of the participants endorsed the idea that they would have asked different questions after reviewing the transcript. All of them endorsed the idea that ASR has a role in formative psychiatric interviews.

CONCLUSION(S):

This is a work in progress.

SYNOPSIS:

This is a work in progress.

DISCLOSURE STATEMENT:

The author declares that he has no conflict of interest. This research proposal was presented to the ethical board for preliminary assessment and no further ethics review was found to be necessary. Informed consent was obtained from all participants in the study. No medical residents were intentionally harmed over the course of this research.

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Effect of Smoke-Free Policies on Aggression in the Psychiatric Inpatient Setting

RESIDENT NAME:

Gale, Laura, PGY-1

SUPERVISOR:

Bonnell, Weldon, MD FRCPC

PROPOSED RESEARCH STUDY:

In March of 2020, the COVID-19 pandemic and associated public health restrictions gave rise to smoking policy changes within acute care units at the Waterford Hospital. The proposed study will analyze staff perceptions and reported incidents of aggression before and after this change, which allowed patients to smoke in designated balcony areas on the previously smoke-free units. This research is timely because the COVID-19 pandemic has altered the ability of inpatients to come and go freely, thus precipitating a need for policy change. During my recent research elective, I completed a review of available literature to learn more about smoking policies in the psychiatric inpatient setting. The purpose of this literature review was to explore: 1) the prevalence of smoking in individuals with psychiatric disorders, 2) symptoms of withdrawal following abrupt smoking cessation, as is mandated by smoking bans, and 3) the effect of smoking bans on patient aggression in psychiatric inpatient settings. The results of this literature review will be discussed in my future Grand Rounds presentation. The results of the study as a whole may be used practically to inform decisions about smoking policy.

ADHD, College and Adulting… Isn't There an App for That?

RESIDENT NAME:

Marchak, Amanda, PGY-2

SUPERVISOR:

Bonnell, Weldon, MD FRCPC

BACKGROUND/INTRODUCTION:

Turning eighteen marks the transition from childhood to adulthood. What is often forgotten is that the freedom of adulthood comes at the cost of increasing responsibilities – pursuing post-secondary education (usually required for securing a job with a livable wage); taking over the mundane, but necessary, tasks of day-to-day life that were previously left to their parents; transitioning from the pediatric to adult healthcare system. With so many changes occurring in close succession, it is understandable that students will encounter some degree of difficulty when beginning post-graduate studies. Further, when executive functions are impaired, it is apparent why students with attention-deficit hyperactivity disorder (ADHD) are less successful academically – on average, ten percentage points or a full letter grade behind (Weyandt, et al., 2013) – and have been found to withdraw from significantly more classes than their peers without ADHD (Advokat, Lane, & Luo, 2011).

OBJECTIVES:

Complete a literature review to determine:

1. what can be, or is already being done, to aid individuals with ADHD in their transition into post-secondary education; and
2. if, in today's technologically-dependent society, there is a way to harness technology to facilitate individuals with ADHD in their transition into post-secondary education.

Based on the results of the literature review:

1. develop a curriculum for a multi-week group program targeted at teaching adolescents and young adults with ADHD about various technologic resources that can be employed in time management and the self-management of ADHD; and
2. using pre- and post-surveys completed by group participants, determine if dedicated teaching surrounding technological resources increases the use of these tools, thereby facilitating the transition into post-secondary studies.

METHODOLOGY:

A literature review was conducted after PubMED, PsychINFO, and EPIC database searches were carried out on July 8, 2019. Six search strings were created to encompass the topic of interest:

1. ADHD
2. college students/young adults
3. technology and reminder systems
4. time management
5. transitions
6. life skills.

Permutations of terms were included in the search. Further, the MeSH function was used when searching the PubMED database, while the equivalent Thesaurus function was used when searching the PsychINFO and EPIC databases.

Abstracts of all identified articles were reviewed to determine applicability to the research objectives. Relevant articles were reviewed in full prior to inclusion in the literature review.

RESULTS OBTAINED:

A combination of all search strings yielded no results when searching the PubMED, PsychINFO or EPIC databases. Indicative of a gap in the literature, the search field was broadened by examining the different components of the initial query of the use of technology amongst individuals with ADHD in the transition to post-secondary education. This included:

1. transitioning from high school to post-secondary education amongst individuals with ADHD.
2. organizational, time management and life skills training in adolescents with ADHD.
3. the use of technology amongst individuals with ADHD.
4. transitioning from pediatric to adult care amongst individuals with ADHD.

CONCLUSION(S):

The literature review highlighted that adolescents with ADHD transitioning into post-secondary education are disadvantaged compared to their peers. On top of the challenges associated with attending university, they also have to contend with the challenges of transitioning to adult health care services and their ADHD symptomatology. Unfortunately, a number of these challenges are long-standing, systemic issues. Technology has the potential to be a tool, but the evidence surrounding the use of it in the self-management of ADHD is scant. Future research into this area is required.

Unfortunately, secondary to the onset of the COVID-19 pandemic and the associated physical distancing requirements implemented in response to same, development of the proposed multi-week group program has had to be suspended. However, this does not mean that technology cannot be used effectively in the interim. If choosing to incorporate it into an ADHD management plan, careful consideration needs to be given as to *what* purpose it will be serving and if an alternate, better validated option exists.

DISCLOSURE STATEMENT:

No financial disclosure or conflicts of interest with the presented material.

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Immigrants and Refugees to Canada Are at an Increased Risk of Mental Health Issues With Compounding Barriers to Accessing Mental Health Services. A Literature Review and Idea for a Future Research Project

RESIDENT NAME:

Tau, Mahlodi, PGY-2

SUPERVISOR:

Bonnell, Weldon, MD FRCPC

BACKGROUND:

The demographics of Canada have changed over the years with an influx of immigrants and refugees into the country. This is also reflected in our public health, including our mental health system. The World Health Organization's concept of mental health includes the promotion of mental well-being, the prevention and treatment of mental illness, as well as the rehabilitation of persons affected by mental illness. Statistics Canada showed that in 2011 over 20% of the Canadian population was foreign-born.

Research shows that factors such as acculturative stress, poverty and low socioeconomic status, lack of social support, history of trauma and ethnic discrimination (real or perceived), all contribute to mental illness.

Immigrants encounter barriers availing of these services.

Research has shown that health practitioners can help immigrants improve and access social and professional networks. Mental health education can be incorporated into supports and services available.

OBJECTIVES:

Possible objectives for my future research project would be:

1. To explore barriers that refugees and immigrants face to obtain a timely mental health referral and seeing mental health personnel;
2. Better understanding of the expression of mental health issues in immigrants; and
3. Acculturative stress and its impact on mental health

METHODS USED:

Unknown at this time. Planning on talking to staff at the refugee clinic and Association for New Canadians (ANC). Possible chart review.

RESULTS OBTAINED:

Unknown at this time

CONCLUSIONS:

Unknown at this time.

Predictive Value of Canadian Triage Acuity Scale Designation for Mental Health Complaints in a Psychiatric Emergency Department Upon Disposition and Length of Hospital Stay

RESIDENT:

Fitzgerald, Emily, PGY-2

SUPERVISOR:

Mercer, Robert, MD FRCPC

BACKGROUND:

The Canadian Emergency Department (ED) Triage and Acuity Scale (CTAS) was adopted widely in Canadian Emergency Departments to provide an efficient method to allocate healthcare resources in a timely and reliable method to ensure patients were being assessed in an order that reflects the urgency of their condition. To our knowledge there is no available literature that evaluates the impact of CTAS score on disposition of patients attending a psychiatric ED.

OBJECTIVES:

Our study aims to identify how CTAS score is related to not only disposition of patients with mental health concerns at the PAU but also the length of hospital stay for those admitted to an acute care psychiatric unit.

METHODOLOGY:

This will be a retrospective single-center chart review study conducted in the PAU of the WFH, St. John's, NL which is a center that almost exclusively serves adult patients. Our study population will be all patients presenting to the PAU for a mental health complaint during given time period. Identifying data (health card number, age, and sex) will be collected for each patient presentation as well as CTAS score, discharge date, admission location if appropriate, and length of hospital stay if appropriate. After obtaining approval from the Newfoundland and Labrador Health Research Ethics Board and Research Integrity and Ethics, we will be completing a regression analysis looking at CTAS score, rate of admission, and length of stay in hospital.

RESULTS, CONCLUSION, SYNPOSIS, AND DISCLOSURES

Pending.

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To Admit or Not To Admit the Borderline Patient

RESIDENT NAME:

Wang, Mingyang, PGY-3

SUPERVISOR:

Bonnell, Weldon, MD FRCPC

BACKGROUND:

Patients with borderline personality disorder (BPD) can be challenging to manage. Healthcare professionals often face the dilemma of hospital admission versus outpatient management when presented with the BPD patient with the risk of suicide. However, the relationship between hospitalization and suicide rate has not been clearly established.

OBJECTIVES:

The current literature review aims to evaluate the effect of various lengths of hospitalization on the suicide rate in this population.

METHODOLOGY:

Key terms were searched through the search engines PubMed and PsycINFO. Additionally, articles were further gathered through the references of the articles found in the initial search. The types of sources used included journal articles, online textbooks, and consensus guidelines. The inclusion criteria included patients meeting diagnostic criteria for borderline personality disorder in DSM-IV or DSM-V, admissions into a hospital setting, and a study outcome that includes severity of suicidal ideation or suicide attempt. Exclusion criteria included a lack of borderline personality disorder or traits, and lack of suicide ideation or attempt as an outcome.

RESULTS:

Drawbacks of long-term hospitalization

Several studies have shown modest benefits of short-term hospitalization or outpatient management over long-term hospitalization. Many experts do not quite agree on the optimal management, particularly about the value of hospital admission. Some studies suggest that admission is often counterproductive and should be avoided. Other studies suggest that despite the counterproductivity of admission in certain situations, serious suicide attempt and acute psychotic symptoms may warrant admission; nonetheless, brief stays are preferable.

Benefits of hospitalization

Two studies suggest greater symptom improvement with hospitalization. One of which is an RCT that showed greater decrease in suicide attempt, self-harm, and self-reported

measures of depression, anxiety and interpersonal function in partial hospitalization compared to standard outpatient psychiatric care.

CONCLUSIONS:

The current literature does not define a clear consensus on the effect of hospitalization on suicide rate in patients with BPD. The findings showed mixed evidence with neither a strong consensus on long-term inpatient management nor outpatient psychiatric care. There is, however, modest support for the notion of partial hospitalization for the management of BPD.

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