

**The University of Calgary, Department of Psychiatry Presents
The Sebastian Littmann Research Day
Amphitheatre Alberta Children's Hospital
Friday, March 14, 2014**

Title: ASSEMBLY LINE OR FULL COURT PRESS? THE IMPACT OF PARALLEL PROCESSING OF EMERGENCY MENTAL HEALTH PATIENTS ON OPERATIONAL AND SAFETY METRICS IN THE CALGARY ZONE

Author(s): Rosalyn McAuley, Alexander Arnold, Shawn Currie, Kerry Greenaway, Dongmei Wang, David Tano, Eddy Lang

Background: The timely evaluation of patients in the Emergency Department (ED) has been a major focus for Alberta Health Services in recent years. A comprehensive evaluation of the Psychiatric Emergency Services (PES) in the then Calgary Health Region (PES Process Evaluation Final Report, 2006) looked specifically at the flow of patients presenting with mental health concerns, and found that patients averaged a 4 hour wait time between triage and consultation with PES. During this 4 hour period, a medical evaluation or clearance was to be completed before a PES evaluation could begin, with the goal of differentiating patients that may be intoxicated or experiencing psychiatric symptoms secondary to a general medical condition. It was hypothesized that a Parallel Processing Model (adopted by three hospitals in the Calgary-area in September 2012) allowing PES staff to begin their evaluation prior to medical clearance, when appropriate, would decrease the overall time to disposition.

Objective: The primary objective of this study is to determine if parallel processing resulted in a significant impact on length of stay in the ED. Secondary objectives include assessing for unintended consequences of parallel processing, such as undue delays to medical consultation for patients with psychiatric symptoms of organic etiology.

Methods: Administrative information was collected from the participating hospitals' electronic record system for all patients seen in their EDs for mental health complaints from the 12 months prior to, and following, September 2012. The length of time from triage to psychiatric consult, and subsequently, to discharge or admission will be calculated for each patient. Any significant differences in the number of medical vs psychiatric dispositions for patients in the period before and after the introduction of parallel processing will also be examined. **Results:** This study is ongoing. It is expected that the analysis of this data will be completed and ready to present by March 14, 2014.

Please provide three learning objectives for your presentation:

- (1) Review the history and concept behind the parallel processing model, used currently in the four Emergency Departments in Calgary
- (2) To examine the effect parallel clearance has had on these Emergency Departments and their patients
- (3) To initiate discussion and educate Psychiatrists, residents, RNs, and allied health providers in attendance about efforts to improve appropriate access to care in our Emergency departments

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Title: Examples of Health of the Nation Outcome Scales (HoNOS) Use from New Zealand and Australia

Author(s): Ambrose, Aleta

The Health of the Nation Outcome Scales (HoNOS) has been widely implemented as a standard client level outcome measure within mental health services around the world. First developed in the United Kingdom by the Royal College of Psychiatry, it has been adopted by both New Zealand and Australia as part of their national mandatory data set for mental health services. Calgary Zone Addiction and Mental Health implemented HoNOS in 2010 and has over 130,000 adult and geriatric forms submitted and 30,000 child and adolescent forms.

This presentation will show examples of how the HoNOS has been analyzed in other jurisdictions for the purposes of planning, decision making, benchmarking, casemix, program evaluation, client profiling, research, and quality improvement; for example, using the HoNOS to predict length of stay in an inpatient setting. This presentation will promote discussion about what questions locally can be asked and answered using HoNOS data.

Please provide three learning objectives for your presentation:

- (1) To inform all local stakeholders of the possible HoNOS analysis and how to apply it any given Addiction and Mental Health program.
- (2) To increase the awareness of the benefits of analyzing HoNOS for quality improvement, decision making, and planning.
- (3) To promote the use of HoNOS by all practitioners working with Addiction and Mental Health services in the Calgary Zone.

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Title: Engaging Patients in Evaluating Patient Experience in Addiction and Mental Health

Author(s): Priscilla Liu, Jassandre Adamyk-Simpson, Shawn Currie

Background: The need for greater participation of clients in the design, delivery, and evaluation of Addiction and Mental Health (AMH) services is well recognized. The recently released Alberta Addiction and Mental Health Strategy (Creating Connections, 2011) indicates that one of the high priority initiatives is:

- Engage individuals with lived experience and their families in planning at the system program and service levels, as well as monitoring and evaluation.

Objective: This research project aims to create opportunities for clients to be proactively involved in the full cycle of evaluating their experience - identifying measures, developing an instrument, collecting and analyzing data, reporting, and action planning. **Methods:** The perspective and experiences of clients and families will be brought forward using different engagement strategies. Clients and families are invited to be advisors on the research project advisory committee. Clients will also be engaged through focus groups, surveys, and client forums. **Project Components:**

There are multiple components and stages to the project. Clients will have an active role in all stages of gathering and using client experience feedback. These include:

- Developing/improving a client experience measurement tool
- Collecting client experience data
- Interpreting and understanding client experience results
- Reporting and dissemination of results
- Action planning and utilizing the results to bring about improvement to services

Adding Value and Creating Change: Improving the experience of clients of AMH services is essential and an important priority in AHS and AMH services. This project is about transforming the way clients are traditionally engaged in AMH services and innovatively advancing the assessment of client experience. Clients and families are partners in evaluating their services and are a part of the solution to improving their care. By engaging clients to better measure and understand their experience, this project aims to ultimately have an impact on improving quality of care and bettering the experience of clients in AMH services.

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Title: The Inter-Rater Reliability of HoNOS Within Calgary Zone Addiction and Mental Health Services

Author(s): Brian Marriott, Aleta Ambrose, Erin Cassidy, Donna Rutherford

Background: HoNOS (Health of the Nation Outcome Scales) is a clinician completed, client-level outcome measure comprised of twelve scales measuring different aspects of health and social functioning. HoNOS is used consistently across all Alberta Health Services (AHS) - Calgary Zone inpatient, outpatient and community-based Addiction and Mental Health (AMH) services. Each of the twelve scales are rated on a five point scale ranging from 0 (no problem) to 4 (severe problem). Clinical ratings are guided by an annotated glossary, and all AHS AMH clinical staff receive training prior to using HoNOS. Inter-rater reliability assesses the extent to which clinical staff agree on ratings given common clinical information. The IRR of HoNOS within Calgary Zone was explored. **Methods:** There are many ways to measure the inter-rater reliability of an outcome measure like HoNOS. This study explored the percent of staff who agreed with pre-determined "guru" ratings. To assess this, a video vignette highlighting both addiction and mental health issues was distributed to AHS (Calgary Zone) AMH staff. Staff were asked to view the video vignette, rate it independently, and submit their ratings for data entry and analysis. Ratings from clinical staff were compared to the "guru" ratings to determine the percent agreement for each of the twelve HoNOS scales. **Results:** 398 staff responded from 34 different adult and geriatric AMH services in the Calgary Zone. Percent agreement among the twelve HoNOS scales varied from 37% to 95%. Eight scales had 78% agreement or greater; two scales had less than 50% agreement. **Conclusions:** The IRR findings show clear areas of strength as well as areas for improvement in HoNOS IRR. Quantifying the IRR within a local context helps clarify the level of confidence decision makers can have in the data, and helps to prioritize ongoing training efforts.

Please provide three learning objectives for your presentation:

- (1) Provide an overview of HoNOS, including its structure and scoring process.
- (2) Discuss the method used to assess IRR in this study and its strengths and limitations.
- (3) Review the results and implications of the study.

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Title: The Role of Endothelial Dysfunction in Major Depressive Disorder

Author(s): Arjun S Dhoopar, Martin Vetter, Todd Anderson, Thomas J Raedler

Background: Major Depression affects 8% of adults at some point in their lives. There are an estimated 70,000 heart attacks each year in Canada, equaling one heart attack every seven minutes. There is a growing body of literature suggesting that depression increases the risk of developing cardiovascular disease by two to four folds. One of the hypothesized mechanisms is an elevation in inflammatory markers; these markers are also implicated in pathogenesis of atherosclerosis. Endothelial dysfunction is an emerging early marker for cardiovascular disease and has been shown to have predictive value for future cardiovascular events. We have previously shown that subjects with schizophrenia under the age of 45 have high rates of endothelial dysfunction. So far, little is known about endothelial function in subjects with major depression. **Methods:** We are currently recruiting 25 subjects under the age of 45 with major depressive disorder of at least 5 years duration. We are comparing this group to 25 age-, gender- and smoking status-matched control volunteers. Endothelial function will be assessed non-invasively at the brachial artery via ultrasound. **Results and Conclusion:** We will present first results of this study and discuss whether this approach will help to identify people with major depressive disorder who are at particular high risk of cardiovascular complications. We will also discuss how we can improve medical care in people with mental illness in general.

Please provide three learning objectives for your presentation:

- (1) recognize physical health issues in people with major depression
- (2) understand the role of endothelial dysfunction in cardiovascular risk assessment
- (3) appreciate the interface of mental and physical health

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Title: Development of new rating scale for bipolar depression.

Author(s): Oloruntoba Oluboka, Aisha Shaukat, Glenda MacQueen.

BACKGROUND: Patients with bipolar disorder (BD) spend a significant portion of time with depressive symptoms. There is controversy regarding the optimal treatment of bipolar depression that arises in part because of a paucity of high-quality studies examining the utility of various agents in treating depression. There are few rating scales that have been designed to address bipolar depression which may have contributed to difficulty in conducting and interpreting studies of bipolar depression. This review examines extant depression rating scales and considers commonalities and differences amongst scales that are used in studies of bipolar depression. **METHODS:** We did a systematic review using MESH terms. Search strategy is described in detail in the text. Data sources were Medline, Psychinfo, Cochrane database of systematic reviews, Embase, Health and Psychosocial Instruments. Retrieved articles were reviewed for item content. Nineteen instruments were identified and the items were compared across the scales. **RESULTS:** Most scales were designed to measure unipolar depression; only a few recognized BD as a distinct entity. The scales for BD were looking primarily at mania or mixed features. Key features of bipolar depression were often missed in the available scales. **LIMITATIONS:** Single research assistant reviewing the literature. **CONCLUSION:** Development of an optimal measure of bipolar depression might enhance accurate assessment and management of BD. **Key words:** Bipolar disorder; Bipolar depression rating scale; Bipolar depression; Validity and reliability; Sensitivity and specificity

Please provide three learning objectives for your presentation:

- (1) Understanding problems in management of patients with bipolar disorder.
- (2) Existing literature and scales being used for bipolar depression.
- (3) Common features in presentations with bipolar depression.

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Title: The risk of mortality associated with depression in primary care

Author(s): Isabelle A. Vallerand, Andrew G. M. Bulloch & Scott B. Patten

People with depression are at an increased risk of morbidity and mortality from a variety of causes across the lifespan. While previous studies have investigated this risk, most datasets used to date have had several weaknesses including small sample sizes, insufficient follow-up periods and limited data on potential risk factors, thereby limiting the ability to conduct proper assessments of mortality risks over the course of the illness. As such, the purpose of this study is to determine the risk of death over time from several different causes and at different ages among people with depression. The study uses The Health Improvement Network (THIN) database, which is one of the largest medical databases in the world and comprises over 1 million recorded cases of depression in general practice. These medical records contain demographic information about patients' ages, sex, smoking status and alcohol use as well as data on medications, and whether they have any concurrent medical conditions. This information will be used to first validate diagnoses of depression using this large database, and also to identify the average age at which new cases of depression are diagnosed in primary care as the starting point of longitudinal follow-up. Survival analyses will then be conducted to estimate unadjusted and adjusted hazard ratios for depression by age and sex. This study will be one of the first to identify the time frame associated with the highest risk of mortality from depression. The lifetime perspective taken in this study may provide a unique contribution towards advancing mental health research and knowledge gained on risk factors for premature mortality may help health care providers with the prevention of mortality for people of all ages with depression.

Please provide three learning objectives for your presentation:

- (1) Learn about existing literature on the morbidity and mortality associated with depression as well as knowledge-gaps in the field
- (2) Introduce the Health Improvement Network (THIN) database as a prominent resource for mental health research
- (3) Gain knowledge on analytic approaches to studying mental disorders longitudinally.

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Title: Prevalence of Bipolar I and Bipolar II Disorder in Canada.

Author(s): McDonald, Keltie., Patten, S., Bulloch, A., Bresee, L., Duffy, A., Williams, J. Lavorato, D

Prevalence estimates form the basis for establishing research and population health priorities. In Canada, only three prevalence studies of bipolar disorder have been conducted. The 2002 Canadian Community Health Survey-Mental Health and Well-being provides the most recent prevalence estimates, and is the only study that has examined prevalence using a nationally representative sample. However, a major limitation of the study was the inability to differentiate the subtypes of bipolar disorder. Our study provides prevalence estimates for bipolar I and bipolar II subtypes using a nationally representative sample in Canada. The 2012 Canadian Community Health Survey-Mental Health and Well-being is a cross-sectional survey of the household population ages 15 years and older living in the 10 provinces. The response rate for the survey was 68.9% yielding a final sample size of 25,113. From these data, we estimated crude, sex- and age-specific prevalence of bipolar I and II using binary regression. Estimates of the treated prevalence were also obtained. Preliminary results will be presented. The results of our study have important implications for setting future research priorities and providing a framework and direction for mental health policy for those with bipolar disorder.

Please provide three learning objectives for your presentation:

- (1) To review the latest (most up to date?) estimated prevalence of bipolar disorder in Canada.
- (2) To highlight demographic groups with differential prevalence of bipolar disorder in Canada.
- (3) To identify the gap between prevalence of bipolar disorder and utilization of treatment by persons in Canada.

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Title: Questions about outcome measurement: Why measure them? What measures are good measures? How can we make outcome data useful and useable?

Author(s): Ambrose, Aleta & Donna Rutherford

The Information Management, Evaluation and Research Unit (IMER) has been supporting client outcome measurement in the Calgary Zone for many years. From disorder-specific session-by-session measures to a high-level system wide measure, outcome measurement can serve multiple purposes. This presentation will discuss and provide examples of some of those purposes, give a brief overview of the process and criteria for selecting a measure, and share some of IMER's learnings about how to make outcome data useful to clinical and program decision-making.

Please provide three learning objectives for your presentation:

- (1) To present examples of the standard client level outcome measurement analysis done locally.
- (2) To increase the awareness of the benefits of using client level outcome measures
- (3) To promote the use of client level outcome measures by all practitioners working with Addiction and Mental Health services in the Calgary Zone.

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Title: Answering research questions with mental health services data

Author(s): Shawn Currie, Cindy Beck

As the largest integrated health service organization in North America, Alberta Health Services provides researchers with a unique 'living lab' to examine the real world perspective on the treatment of mental disorders. Administrative data (also called 'hospital data,' 'health records data,' 'utilization data,' 'coded healthcare data') on mental health patients continues to be underutilized for conducting research. The quality and comprehensiveness of administrative data has improved in recent years. Advantages of using mental health services data for research include: lower costs compared to primary data collection, avoidance of the recall bias that can often impact the validity of survey data, and diagnoses that are based on clinical assessment by mental health professionals. Health services data has been used locally to examine the effectiveness of mental health programs, adherence to clinical practice guidelines, the gap between those needing treatment for depression and those accessing treatment, and the impact of early intervention for psychotic disorders. These examples, along with the limitations and ethical issues concerning administrative data will be presented.

Please provide three learning objectives for your presentation:

- (1) Identify research questions that could be appropriately answered with administrative data
- (2) Become familiar with the types and validity of data available on mental health service users in Alberta
- (3) Learn about the advantages and disadvantages of using health services data for mental health research.

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Revised: 2014-06-10

Title: Transforming Interpersonal Patterns (TIPs) in Individual, Couple, and Family Therapy

Author(s): Tomm, K., Sametband, I., Gaete, J.

Karl Tomm and his colleagues at the Calgary Family Therapy Centre developed a systemic framework for assessing and working with families to support a therapist's focus on relationship dynamics and the ability to facilitate therapeutic change. The framework includes Pathologizing Interpersonal Patterns (PIPs), Transforming Interpersonal Patterns (TIPs), Healing Interpersonal Patterns (HIPs), Wellness Interpersonal Patterns (WIPs), Deteriorating Interpersonal Patterns (DIPs), and Socio-Cultural Interpersonal Patterns (SCIPs). TIPs are particularly relevant during the conduct of therapy, since they enable a shift from PIPs to HIPs and WIPs.

This presentation will outline the overall framework and then focus on different kinds of TIPs that can be initiated by therapists in therapeutic interviews. Deconstructive TIPs serve to undermine existing PIPs, while constructive TIPs focus on bringing forth preferred patterns. TIP attempts versus TIP accomplishments will also be discussed.

Please provide three learning objectives for your presentation:

- (1)** Participants will be able to distinguish PIPs, TIPs, HIPs, WIPs, DIPs and SCIPs in a systemic assessment
- (2)** Participants will be able to differentiate constructive TIPs and deconstructive TIPs
- (3)** Participants will be able to describe TIP attempts and TIP accomplishments

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Title: Using the IPscope to Teach Family Therapy

Author(s): Shari Couture, Karl Tomm

Educators teaching family therapy encourage students to move away from skin-bounded individual understandings to focus on behavioural couplings in the interpersonal space. The IPscope is a pragmatic tool used at the Calgary Family Therapy Centre (CFTC) that helps instructors invite students into such conversations that give priority to expanding their relational understanding of problems and solutions with a variety of mental health concerns. In this presentation we will describe how we use the IPscope at CFTC to encourage students to make the gestalt shift to work within a relational perspective. We highlight the Wellness Interactional Patterns (WIPS) between student and teacher that seem to enable a unique generative learning process. We will discuss several domains of learning that we use to conceptually understand this process and offer details of how we accomplish this learning in our relationships with our students.

Please provide three learning objectives for your presentation:

- (1) Understand what the IPscope is and how it is used as a learning tool to teach family therapy.
- (2) Understand the multiple domains of learning used at CFTC to help facilitate this process.
- (3) Understand how key the interactional pattern between student and teacher is to facilitate generative learning.

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Title: Measuring Depression Outcomes in Community Practice

Author(s): R. Babins-Wagner, S. Berzins, L. Guyn

Background: Through our Feedback Informed Treatment (FIT) session-by-session client outcome measurement program, we are incorporating results into treatment, interventions and program development on a 'real-time' basis. The outcome measure tool 'Outcome Questionnaire (OQ-45)' was designed to be used on a regular basis to track treatment progress and outcome. It is quick to complete, sensitive to change over short time periods, inexpensive and transferable between clinical treatment settings. Depression is one of the most common reasons clients attend services at Calgary Counselling Centre and will be used as an example of how outcome measures can be effectively used for treatment and program planning. **Research**

questions: What is the relationship between number of total therapy sessions and outcome in the depression program? What is the optimum number of total therapy sessions? What is the relationship between number of individual therapy sessions before group therapy and outcome?

Method: Mental health status was measured on a session by session basis for both individual and group counselling depression clients with the OQ 45.2. Descriptive statistics for client characteristics and outcome were calculated; t-tests and Fisher exact tests were used to compare pre- post mean OQ scores. **Results:** Information was available for 5,252 depression clients who had intakes during 2006 to 2013 and had completed therapy. The mean number of individual sessions attended was 5.5 (SD=6.4). First & last session OQ results were available for 3408 clients; 51.5% were improved or recovered after their last session. Overall, a rapid increase in proportion of clients with reliable Outcome Questionnaire (OQ) change was observed up until the 5th therapy session. When those clients with a rapid early treatment response (reliable change by 4th session) were separated, the remainder reported increasing rates of reliable change up until the 15th session. Of clients transitioning from individual to group therapy, the best results were observed for clients who had 4 to 6 individual sessions prior to group and completed group therapy. **Conclusions:** When used within a practice-based evidence framework, outcome measurement can help us effectively narrow the gap between knowledge, treatment and lasting change for mental health clients. Using outcome measures at each session provides valuable feedback for clinicians, and can improve clinical practice, treatment outcomes and services at a systems level.

Please provide three learning objectives for your presentation:
At the end of this presentation participants will be able to:

- (1) Increase knowledge about outcome measurement at a client, program and agency levels.
- (2) Describe patterns of outcome over time for clients in depression counselling treatment.
- (3) Increase awareness of outcome measurement programs for enhancing client mental health treatment results

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Title: Tools to Screen for Depression in Epilepsy

Author(s): Kirsten M Fiest, Nathalie Jette, Andrew GM Bulloch, Samuel Wlebe, & Scott B Patten

Background: Depression is one of the most commonly reported psychiatric disorders in persons with epilepsy (PWE). The most appropriate scale for determining the presence of depression in PWE has yet to be definitively established. **Methods:** 300 consecutive PWE were recruited from the only epilepsy programme in a large tertiary care center. Participants completed a questionnaire (demographics, the Patient Health Questionnaire (PHQ)-9 & -2 and the Hospital Anxiety and Depression Scale (HADS)). Within two weeks of their appointment, participants underwent a Structured Clinical Interview for DSM-IV (SCID) diagnostic interview. The diagnostic properties and areas under the curve (AUC) were compared for all questionnaires against the gold standard (SCID). **Results:** Of the 300 people presented with the full study consent, 268 agreed to participate (89.3%) and 185 PWE completed the SCID. The PHQ-9 cut-point method resulted in a 24.2% prevalence of depression with a sensitivity compared to the SCID of 70.0%, specificity 84.9%, positive predictive value 47.7% and negative predictive value 93.5%. The PHQ-2 had a significantly smaller AUC (63.4%) than both the PHQ-9 cut-point (77.4%) and the HADS (75.7%). The PHQ-9 algorithm had a significantly smaller AUC (59.7%) than the PHQ-9 cut-point and the HADS. The AUC did not differ between the PHQ-9 cut-point and HADS or between the PHQ-2 and the PHQ-9 algorithm. **Conclusions:** Four scales were compared to a gold-standard to determine their diagnostic accuracy in measuring depression in PWE. The PHQ-9, using the cut-point scoring method, produced the best sensitivity and specificity, as evidenced by the largest AUC. The PHQ-9 appears to be the ideal choice amongst the examined questionnaires.

Please provide three learning objectives for your presentation:

- (1) To understand the method for comparing a gold-standard to candidate screening tool
- (2) To understand which screening tool is optimal for screening for depression in epilepsy
- (3) To understand how new scoring cutpoints may be more useful in this population

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Title: Impact of substance use on conversion to psychosis in clinically high risk youth: Findings from the Enhancing the Prospective Prediction of Psychosis (PREDICT) study

Author(s): Lisa Buchy, Diana Perkins, Scott Woods, Lu Liu & Jean Addington

Background Elevated rates of substance use (alcohol, tobacco, cannabis) have been reported in people at clinical high risk (CHR) of developing psychosis and there is some evidence that substance use may be higher in those who convert to a psychosis compared to non-converters. However little is known about the predictive value of substance use on risk of conversion to psychosis in those at CHR of psychosis.

Methods One hundred seventy people at CHR of psychosis were assessed at baseline on severity of alcohol, tobacco and cannabis using the Alcohol and Drug Use Scale. Participants were recruited across three sites over a four year period as part of the Enhancing the Prospective Prediction of Psychosis (PREDICT) study. Predictors of conversion to psychosis were examined using Cox proportional hazards models.

Results People at CHR of psychosis with tobacco abuse (HR=14.22, 95%CI=1.67-119.89, p=0.01) and tobacco dependence (HR=14.96, 95%CI=1.69-132.31, p=0.02) were more likely to experience conversion to psychosis than people at CHR of psychosis who maintain abstinence from tobacco. Neither alcohol (P=0.10) nor cannabis use at baseline (P=0.63) contributed to the prediction of psychosis in the CHR sample. **Conclusion** Tobacco abuse and dependence, but not alcohol or cannabis use at baseline, appears to contribute to risk of conversion to psychosis in this CHR sample. Prediction algorithms incorporating combinations of additional baseline variables known to be associated with psychotic conversion may result in increased predictive power compared with substance use alone.

Please provide three learning objectives for your presentation:

- (1) To become familiar with substance use patterns in youth at clinical high risk (CHR) of psychosis
- (2) To learn the impact of substance use on conversion to psychosis in a multi-site CHR sample
- (3) To interpret the findings in the context of additional variables known to be associated with psychotic conversion

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Title: AISH Recipients with Schizophrenia - The Impact of Raising Employment Income Exemption Limits on Employment

Author(s): Brian Marriott, Gillian Currie, Herb Emery, Scott Patten

Background: Alberta's Assured Income for the Severely Handicapped (AISH) program provides financial and health-related assistance to adults who have a permanent disability that prevents them from fully participating in the labour market. Recognizing the benefits of employment, the AISH program encourages its clients to work to the extent that they are able. However, employment income earned beyond a set exemption limit reduces the assistance received. In 2008, the upper threshold of the exemption limit increased by \$500. This study explored the policy's impact on AISH recipients with schizophrenia compared to those with other mental health disorders. **Methods:** This study was a natural experiment examining the impact of the 2008 policy amendment. Data was obtained from the AISH program. Using employment income as a surrogate measure for employment status, multiple linear regression was used to compare individuals' mean monthly employment income before and after the policy amendment. Covariates included diagnosis, gender, marital status, number of children, age and place of residence. **Results:** It was hypothesized that the policy change would provide an incentive to work more. However, the findings suggest that employment did not increase after the policy amendment for either group – rather it decreased for both. There was, however, a positive effect based on marital status – married recipients did see an increase in employment after the policy change. **Conclusions:** The employment incentive created by the policy amendment was not successful in changing the labour decisions of this population – except for married recipients. Married recipients may have better social supports putting them in a better position to respond to the policy change; or perhaps marital status may be an indicator of the severity of disease. Policy makers should explore different approaches to providing employment related supports to AISH recipients with schizophrenia.

Please provide three learning objectives for your presentation:

- (1) Discuss employment as it relates to individuals with schizophrenia, namely: the benefits of employment and (dis)incentives associated with public policy.
- (2) Explain relevant aspects of the AISH program, namely its employment income exemption limits.
- (3) Describe the analytic model that was used, and review the results and policy implications of the study.

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Title: Disordered gambling and schizophrenia: Phenomenology and clinical implications

Author(s): Igor Yakovenko, Cameron M. Clark, David C. Hodgins, Vina M. Goghari

Background: Disordered gambling may affect as many as 1 in 5 individuals with schizophrenia. Despite this, little research has examined the association between disordered gambling and psychosis. The aims of the present study were to qualitatively explore the reciprocal associations between schizophrenia and disordered gambling through content and functional analyses. **Methods:** Eight participants who met DSM-IV criteria for disordered gambling and schizophrenia were assessed on their gambling habits, gambling cognitive distortions, and impulsivity. In addition, they participated in a semi-structured interview assessing key antecedents associated with their gambling, perceived functional consequences of gambling, and any interactions between symptoms of schizophrenia and disordered gambling. Responses were coded via content analysis to derive general categories of responses based on domains of problem gambling (e.g., motivations for gambling, interaction between schizophrenia and gambling behaviour). Final data were compared to gamblers without schizophrenia to ascertain differences between the two populations. **Results:** Qualitative results showed that individuals with both schizophrenia and disordered gambling endorse unique motivations for gambling, such as a feeling of connectedness with the world. Clear interactions between the two disorders were present including direct exacerbation of symptoms and indirect effects via increased anxiety/depression. Antecedent and consequences of gambling appeared to be predominantly internalized. Additional quantitative and qualitative results, as well as comparisons to gamblers without schizophrenia will be presented. **Discussion:** The current study is the first in-depth exploration of the complex reciprocal interactions between schizophrenia and disordered gambling. The results shed light on these interactions and highlight the need for improved awareness of these processes among healthcare professionals and researchers. Specifically, these findings suggest that the impact of comorbid disordered gambling in individuals with schizophrenia is not trivial and should not be overlooked.

Please provide three learning objectives for your presentation:

- (1) To highlight the prevalence of comorbid disordered gambling and schizophrenia.
- (2) To help healthcare professionals understand the potential ways in which the two influence one another.
- (3) To provide an understanding of why and how treatment of schizophrenia can be enhanced by incorporating screening and assessment for disordered gambling.

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Title: Psychosis due to limbic encephalitis: a case of recurrent anti-N-methyl-D-aspartate receptor encephalitis

Author(s): Ray Purdy, Rupang Pandya

Background: Limbic encephalitis (including anti-NMDA receptor encephalitis) is an increasingly recognized cause of unexplained psychotic symptoms. **Objective:** The authors present a case of recurrent Anti-NMDA receptor encephalitis presenting in a female of reproductive age with unexplained neuropsychiatric symptoms. **Method:** While initial medical work-up was negative, CSF was positive for anti-NMDA receptor antibodies, and PET imaging of the brain showed marked hypometabolism. The patient improved following steroids and plasmapheresis. **Results:** The pt successfully received a second course of plasmapheresis after presenting several months later with psychotic symptoms, positive CSF titres and a recurrence of hypometabolism on PET images of the brain. **Conclusion:** NMDA Receptor encephalitis, one of the limbic encephalitides, is a treatable cause of psychosis with a high chance of recurrence.

Please provide three learning objectives for your presentation:

- (1) Describe the clinical features of limbic encephalitis
- (2) Describe some of the common etiologies of limbic encephalitis
- (3) Describe the management of a patient with anti-NMDA receptor encephalitis

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The University of Calgary, Department of Psychiatry Presents
The Sebastian Littmann Research Day
Amphitheatre Alberta Children's Hospital
Friday, March 14, 2014

POSTER PRESENTATIONS

Title: Assessment of Social Cognition in Bipolar Disorder

Author(s): Jacqueline Bobyn, Bernice Fonseca, Glenda MacQueen, Stefanie Hassel

Background: Impairment in social cognition may contribute to deficits in social functioning in patients with bipolar disorder (BD). In this study, a complex social cognition task was administered during a neuroimaging session. The behavioral and neural correlates of social cognition in patients with BD were compared to healthy comparison (HC) subjects. **Methods:** The task was administered to 25 HC and 25 patients with depression scores ranging from euthymic to depressed at the time of assessment. The task required participants to evaluate situations that were "enhancing" or "threatening" to self-esteem, directed at both oneself, and at other people. For instance, self-esteem enhancing scenarios involved vignettes of activities such as receiving praise during a sports game, while a threatening scenario involved, for example, receiving criticism at a party. Participants were then required to evaluate characters in the scenarios on the basis of positive ("kind") or negative ("mean") descriptors. Evaluations were classified from extremely negative to extremely positive. The frequencies of behavioral responses were analyzed using chi-square tests and fMRI data were analyzed using Statistical Parametric Mapping software. **Results:** Patients differed significantly from HCs in their evaluation of threatening scenarios, directed at both oneself and at other people ($p < 0.001$). Patients had a lower proportion of responses in the neutral category, and more responses in the positive and negative categories, relative to HCs. Neuroimaging results reveal differential patterns of prefrontal-cortical and limbic-subcortical activation in BDs throughout the task [$p < 0.05$ (unc.)]. **Conclusion:** Findings will contribute to understanding difficulty in interpersonal functioning in patients with BD.

Please provide three learning objectives for your presentation:

- (1) Acknowledge the relationship between impairment in social cognition in patients with bipolar disorder and deficits in interpersonal functioning.
- (2) Understand the behavioral correlates of impaired social cognition in bipolar patients.
- (3) Understand the neural correlates of impaired social cognition in bipolar patients.

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Title: A comparison of the frequency of physical disorders in patients with and without associated Conduct Disorder

Author(s): Himanish Panda, David Cawthorpe

Conduct disorder (CD) is a psychological disorder that is characterized by sustained symptoms of antisocial behaviors. The objective of this study was to identify the relationship between associated physical disorders in CD patients, and physical disorders in patients not diagnosed with any psychiatric disorder (PD). This was done through a population based analysis of health records spanning 16 years of 16,474 unique individuals with CD in the Calgary Health Zone catchment area.

Results showed that back problems and various non-allopathic lesions of the body were evidenced at fivefold and twofold the frequency in patients with CD compared to the no-PD group. Furthermore, cardiovascular problems were observed at double the rate in patients with CD as opposed to patients with no PD.

A proposed mechanism that explains the higher correlation between CD and the top physical disorders associated with it can be speculated from a physiological standpoint. Research has shown that CD patients display abnormally disrupted activity in the brain cortex. This abnormality results in upregulated production of corticotropin releasing factors (CRF). As per normal activity of the hypothalamic-pituitary-adrenal axis, CRFs ultimately result in the production of corticosteroids such as cortisol. Cortisol functions by elevating blood glucose (BG) levels so it can be speculated that an increased and sustained level of energy is available to CD patients. Although more evidence needs to be gathered to validate a concrete biological mechanism, increased BG has been associated with increased blood pressure, explaining the higher rate of cardiovascular problems.

The data indicate that CD patients have a higher risk of certain somatic diagnosis than the comparison no-PD group. This finding has significant implications for the administration of healthcare policy.

Please provide three learning objectives for your presentation:

- (1) Learn what Conduct disorder is
- (2) Learn the physical symptoms which co-occur most frequently with CD
- (3) Understand a proposed link between CD and cardiovascular issues.

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Title: Key Ingredients for Anti-Stigma Programs Targeting Healthcare Providers: Results of a Data Synthesis

Author(s): Geeta Modgill, Stephanie Knaak, & Scott Patten

Background: As part of its ongoing effort to combat stigma against mental illness among healthcare providers, the Mental Health Commission of Canada (MHCC) partnered with organizations conducting anti-stigma interventions. The objective was to evaluate program effectiveness and to better understand what makes some programs more effective than others. In this poster presentation, we report the elements of these programs found to be most strongly associated with favorable outcomes. **Methods:** This study employed a mixed methods design. First, key program ingredients were identified from the results of a previously conducted qualitative study. Each program for which we had outcomes data (n=22) was then coded according to the presence or absence of the identified key program ingredients. Next, a random-effects meta-analysis and meta-regression modeling was used to examine the association between program outcomes and the key ingredients. **Results:** The qualitative analysis identified six intervention elements viewed as being particularly important. Results of the quantitative analysis showed that programs that included all six of these ingredients performed significantly better than those that did not. Individual analyses of each of the six ingredients showed that including multiple forms of social contact and emphasizing recovery were the most important predictors of program effectiveness. **Conclusions:** The results provide validation of the overall qualitative model. Emphasizing recovery and including multiple types of social contact are of particular importance for designing and delivering effective anti-stigma programs to healthcare providers.

Please provide three learning objectives for your presentation:

- (1) To demonstrate mixed methods research
- (2) To demonstrate meta analysis and meta regression techniques
- (3) To increase understanding about how to effectively combat stigma against mental illness

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Title: Anxiety as a Co-Morbid Concern in Youth at Clinical High Risk for Psychosis

Author(s): Laina McAusland, Lisa Buchy & Jean Addington

Background: High rates of comorbidity have been observed in young people who are at clinical high risk (CHR) of developing psychosis. Anxiety is often one of the first noticed symptoms to individuals at clinical high risk (CHR). An examination of the extent of specific anxiety disorders in those at CHR of psychosis and of potential associations between anxiety and at-risk symptomatology may be informative for interventions that could potentially benefit this group. The aim of this study was to examine the prevalence of specific anxiety disorders in young people at CHR for developing psychosis and to determine the associations of anxiety with symptoms and functioning. **Methods:** The sample consisted of 765 individuals, who met criteria for being at CHR of developing psychosis based on the Structured Interview of Prodromal Syndromes, and 280 healthy controls. Diagnoses of anxiety were made using the SCID. Severity of anxiety was assessed with two self-report scales. The participants were assessed on a range of psychopathology and functioning. **Results:** More than 50% of the CHR sample met DSM-IV criteria for an anxiety disorder. CHR individuals reported significantly more anxiety than healthy controls on both the SCID ($X^2=191.247$, $p<0.001$) and the self-report measures ($t= -19.16$, $p<0.001$; $t=-21.72$, $p<0.001$). Individuals with anxiety disorders scored significantly lower on Global Assessment of Functioning than those without ($t=3.08$, $p<0.01$) and people with both anxiety and depression had the most impairment on measures of functioning ($F=23.65$, $p<0.001$). Those who were diagnosed with an anxiety disorder rated significantly higher on suspiciousness and persecutory sub-threshold psychotic symptoms ($U=55893.500$, $p<0.001$). **Conclusion:** There is a high prevalence of comorbid anxiety in this sample of young people at CHR. Functioning was more impaired for CHR individuals diagnosed with anxiety than those without and there is preliminary support that there may be a connection between anxiety and suspiciousness.

Please provide three learning objectives for your presentation:

- (1) Understand what it means to be at clinical high risk for psychosis
- (2) Recognize anxiety as a comorbid concern that warrants attention for this group
- (3) Understand some of the clinical implications of having a comorbid anxiety disorder

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Title: Psychosocial Coping and Depression in Multiple Sclerosis

Author(s): Sandy Berzins, Andrew Bulloch, Jodie M. Burton, Keith Dobson, Gordon Fick, Scott Patten

Mental illness is an important dimension of multiple sclerosis (MS). People with MS have an elevated prevalence of anxiety, psychotic and mood disorders. The objective of this study was to estimate the incidence and potential determinants of depression in people with MS.

Methods: Participants in this prospective cohort study (n=190) were followed for six months, starting with two baseline risk factor assessments then completing a depression screening instrument, the PHQ-9, every 2 weeks. At monthly intervals, information was collected on potential risk factors, using standard items from existing validated scales and instruments. Associations were estimated using prevalence ratios (PR) and hazard ratios (HR).

Results: Baseline cross-sectional analyses found a depression prevalence estimate of 22% using the PHQ-9 cut-point. Psychosocial predictors for depression prevalence included low self-esteem (PR=5.1), a perceived inability to cope with unexpected problems (PR=3.8) and negative life events (PR=4.0); task oriented (PR=0.3) and social diversion coping (PR=0.4) were protective factors. Predictors of incidence risk included self-esteem (HR=4.9), perceived inability to cope with demands of daily life (HR=5.4) low self-efficacy (HR=5.0) and task oriented coping (HR=0.2). Coping style was a key determinant that ameliorated the risk associated with factors such as childhood trauma and stressful events.

Conclusion: Depression in MS is often regarded as being neurologically induced due to brain lesions, inflammation or axonal loss. While these results do not obviate this possibility, they provide a clear indication that depression in MS exhibits a risk factor profile characterized prominently by psychological and social factors. Future research should adopt a greater focus on such determinants, particularly coping with stress style, which may provide unrecognized opportunities for prevention and/or treatment of depression in this population.

Please provide three learning objectives for your presentation:

- (1) Participants will be able to describe potential determinants of depression in people with multiple sclerosis.
- (2) Participants will learn the prevalence estimates for depression in people with MS in southern Alberta.
- (3) Participants will learn the incidence estimates for depression in people with MS in southern Alberta.

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Title: Sebastian Littmann: The U of C's Head of Psychiatry (1982-1986)

Author(s): Stephen Pow

Sebastian Littmann (1931-1986) was something of an unlikely candidate to become a physician, let alone the Head of Calgary's fledgling Department of Psychiatry at the Foothills Hospital in the 1980s. His father had been killed on the Eastern Front during World War II, he was himself a student for a time at a National Socialist school for young officers in training, and in the postwar period, he was living a directionless, transient existence in the economically ruined West Germany. All of this changed, however, with his adoption by John W. Thompson, a North American psychiatrist who had been instrumental in the Nuremberg War Crimes Trials, and who believed that it was necessary to heal Germans from the terrible effects of war and Nazi indoctrination.

Under Thompson's guidance, Littmann pursued studies of psychology and philosophy at Oxford in the early 1950s. He continued with medicine at Edinburgh, and by 1969 he had won the Gaskell Medal and Prize, the most prestigious award for psychiatry in the United Kingdom. His career carried him from Scotland, to New York, where the stark conditions of mental health for the poor left a strong impression. He continued at the University of Toronto, before he eventually took up his role at the University of Calgary in 1982 – a role cut tragically short by illness.

This presentation will look at Sebastian Littmann's unique approaches to psychiatry, influenced by attitudes which emerged from his life-changing relationship with Dr. Thompson, Catholic humanism, and his own clinical experiences. It will also look at his lasting legacy to the teaching of psychiatry in Calgary.

Please provide three learning objectives for your presentation:

- (1) To share a significant part of the history of Calgary's Psychiatry Department
- (2) To highlight the life and career of a psychiatrist who worked at U of C
- (3) To highlight the larger 20th century trends that ended up bringing European psychiatrists here

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