

THE UNIVERSITY OF CALGARY,
FACULTY OF MEDICINE,
DEPARTMENT OF PSYCHIATRY
PRESENTS
THE 2001 SEBASTIAN K. LITTMAN RESEARCH DAY
FRIDAY March 2, 2001
Foothills Medical Centre
Coombs Theater

- ABSTRACT FORM -

To be submitted by February 16, 2001 to Dr. Malcolm West, Department of Psychiatry, Peter Lougheed Hospital, 3500 – 26 Ave. NE Calgary AB. T1Y 6J4

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Title: Attachment Status and Dysthymic Disorder in Women

Authors: West, M., George, C.

Presenter: West, Malcolm, Department of Psychiatry

Objective: The purpose of this study was to examine the association between current states of mind with regard to attachment and dysthymic disorder in women.

Method: The study assessed 21 dysthymic women in a sample of 428 women from the urban community of Calgary. Attachment status was assessed using the Adult Attachment Interview (AAI). Dysthymic disorder was assessed using the Structured Clinical Interview for DSM-III-R-Non-Patient edition.

Results: Using the four-group AAI coding system, 14 of the 21 women (67%) were classified preoccupied. Of the remaining 7 women, 2 (11%) were classified as secure, 3 (14%) were dismissing and 2 (11%) were unresolved for loss.

Conclusions: The strong association between dysthymic disorder and preoccupied attachment is discussed in terms of the attachment concept of agency of self.

DEVELOPMENT OF A MEASURE OF PERCEIVED CONTINUITY OF CARE FOR PERSONS WITH SEVERE MENTAL ILLNESS

CE Adair, TC Wild, AS Joyce, GM McDougall, A Gordon, NP Costigan, A Beckie, CR Mitton, P Beausejour, M Lu, F Barnes, LO Kowalsky, GA Pasmenny
CE Adair

Continuity of care (COC) is considered essential to effective treatment of persons with severe mental illness (SMI). Attempts to operationalize COC have typically relied on simple definitions with unknown reliability, and without the patient's perspective. In the Continuity of Mental Health Services Study of Alberta (COMHS), we developed a multi-dimensional COC measure with both perceived (subjective) and objective items - the Alberta Continuity of Services Scale-Mental Health (ACSS-MH). Qualitative analyses of 305 articles (1975-1999) and 36 semi-structured interviews of SMI patients/family produced 121 subjective items. Pre-testing with 41 providers/patients for face validity, utility and wording reduced the pool to 47 items, which were field-tested with 325 patients in 17 outpatient and inpatient sites in three health regions for factor structure and internal consistency. Preliminary analysis (N=103);(62% female, mean age 44 years, 49% schizophrenia, 25% with >10 hospitalizations) revealed good variability and normal distributions on most items. One factor arising was provider engagement ($\alpha=.82$). Additional analyses will identify other factors and compare them across diagnostic categories and sociodemographic variables. The ACSS-MH holds promise as a COC measure that will be used in a prospective cohort study to examine associations with costs and patient outcomes.

Canadian Clinical Practice Guidelines for the Treatment of Schizophrenia: adherence and awareness.

Donald Addington MD, University of Calgary
Nady el Guebaly MD, University of Calgary
Praful Chandarana MD, University of Western Ontario
Mark Atkinson Ph.D. University of Calgary

Abstract

Background: In 1998, the Canadian Psychiatric Association published a Clinical Practice Guideline (CPG) for the treatment of schizophrenia. This was followed by an implementation phase that included a survey that compared clinician's practice to the guideline recommendations. This paper reports the results of this survey.

Method: A self report survey was sent to 467 psychiatrists, one third comprised the entire membership of the Psychiatric Research Network (PRN) the other two thirds a random sample of Canadian Psychiatric Association members. The survey addressed 13 areas, including issues of assessment, clinical management, the use of psychosocial programs, attitudes to working with people with schizophrenia and awareness of the schizophrenia CPG. The clinicians were asked to derive their answers where possible, from the chart of the last appropriate patient with schizophrenia, seen in their practice.

Results: Response rates were high, 74% from the PRN members and 42% from the randomly selected members. This yielded two approximately equal groups of respondents. The majority of respondents had patients with schizophrenia in their practices. Most of the 15 assessment items were found to be recorded in the chart in over 80% of the time. A few items related to assessment of physical health mood and substance abuse were less frequently recorded. In the treatment of patients with persistent intrusive psychotic symptoms 4 of 5 CPG recommendations were used in over 70% of cases. 70% of respondents recommended adequate duration of prophylactic antipsychotic medication following first episode schizophrenia and 89% conformed to recommendations for prophylaxis in multi-episode schizophrenia.

Conclusions: This survey represents an important step in the process of Clinical Practice Guideline development, dissemination and evaluation. The self-report methodology provides an economical and practical method for large scale testing of CPGs. This methodology needs to be complemented with more objective surveys. The process also reflects a mature approach to self-evaluation by the members of a professional association. The results point to a satisfactory level of conformance to CPG recommendations but highlight some particular areas where continuing professional development needs to be targeted.

ABSTRACT

High Risk for Emotional Disorders in High School Adolescents

Assen Alladin, Ph.D., Hildegard Robinson, B.ED., Kamla Bissoonauth, M.ED., Caroline Brookes, B.A., Stephen Rimac, B.Sc., Wanda Dennis & Mark Atkinson, Ph.D.

The Beck Anxiety Inventory (BAI), the revised Beck Depression Inventory (BDI-II), and the Beck Hopelessness Scale (BHS) were administered to 811 high school students in a rural district in Saskatchewan (N = 406; M = 213, F = 192) and in the Island of Mauritius (N = 405; M = 213, F = 193). In addition the average grade marks were recorded. The results indicate that 37.0%, 25.0% and 21.0% of the students are presenting moderate to severe symptoms of anxiety, depression and hopelessness respectively, as measured by the three self-rating scales. The Mauritian students are significantly more anxious (51.0%) and depressed (28.8%) than the Saskatchewan students (23.0% and 21.25 respectively). These results are contrary to the findings reported in the literature. The reasons for the high level of emotional distress in the Mauritian high school students will be discussed.

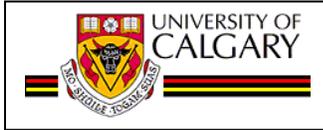
Title: Platelet glutamate receptor sensitivity assay in Schizophrenia

Author(s): An, M., Arato, M., Luider, J., Johnson, P., Addington, D., Addington, J., and Zamponi, G.

Presenter: Mary T. An

Abstract:

Schizophrenia is a psychotic disorder marked by severe impaired thinking, emotions, and behaviors. Increasing attention has been focused on the role of glutamate, and its receptors, particularly the N-methyl-D-aspartate (NMDA) receptor, in this devastating mental illness (Weinberger, 1997). NMDA receptor dysfunction is hypothesized as an etiological factor in the pathogenesis of schizophrenia. Phencyclidine (PCP, “angel’s dust”), a NMDA antagonist, was found to induce positive, negative, and cognitive schizophrenic-like symptoms in healthy volunteers, and exacerbate symptoms seen in patients with schizophrenia (Abi-Saab et al., 1998). Recently, NMDA receptors have been identified on platelet membranes, and two studies have found that NMDA receptor-mediated, increased platelet calcium mobilization in people with schizophrenia (Das et al., 1995; Berk et al., 1999). The aim of this study is to examine the platelet intracellular calcium response to NMDA stimulation, using a new innovative flow cytometry technique, in a large well-controlled schizophrenic patient population. This new method is a non-lysing and non-centrifugation assay that ensures optimal and unaltered platelet performance/response. Recent results from this study show that there is a subgroup of patients with schizophrenia that have higher intracellular calcium response to the NMDA stimulation than age-matched healthy controls. This finding suggest that the platelet glutamate receptors may be supersensitive in schizophrenia. Furthermore, the hypersensitivity of the NMDA receptors on the platelets may be a possible peripheral marker of glutamate abnormality, and this measurement can serve as an in vitro functional test for schizophrenia.



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Title: **Biological Markers in Early Detection of Schizophrenia**

Author(s): M. Arató, C. Beck, M. An, A. Papp, J. Luider, V. Bharadia
In collaboration with D. Addington, J. Addington, G. Zamponi
Presenter(s): M. Arató

Schizophrenia is an inborn heterogeneous disorder with a complex genetics that typically manifests itself after puberty, and very rarely beyond the reproductive age. A long-term disturbed neurodevelopmental and/or a neurodegenerative process precede the occurrence of the typical symptoms seen in the illness. In addition to the neurocognitive test results several early biological abnormalities may predict the occurrence of the illness. Biological markers with sufficient sensitivity and specificity may identify subjects who will later develop schizophrenia. Such markers offer the prospect of early intervention, the possibility of improved prognosis and better treatment outcome. In four approved and funded research projects we are working on in the development of a battery of tests that could be used in the earliest detection of the illness:

Smooth pursuit eye movement (SPEM) study The increased number of saccades in SPEM is one of the most robust and replicated findings in patients with schizophrenia. Our goal is to develop an objective and exact computerized evaluation method to measure these saccades. This study will also include family members of patients, to analyze the specificity of this procedure.

Platelet glutamate sensitivity test Platelets with NMDA receptors provide us a feasible *in vitro* functional test to investigate the possible glutamatergic abnormalities in the background of the illness.

Digit pattern (neuroendocrine marker) The inborn digit pattern (relative length of fingers) reflects the endocrine influence during fetal development. This hormonal environment also affects hemispheric lateralization and sexual differentiation processes in the human brain. Our preliminary data examining the relationship between schizophrenia and digit length suggests an endocrine component in the pathogenesis of schizophrenia.

Pharmacogenetics of treatment response The treatment response of patients with schizophrenia to antipsychotic drugs is mediated by an array of genetic determinants. The genetic basis of treatment response may therefore represent a new classification to identify the different subtypes of schizophrenia.

Title: No-smoking Policies and Implications for Mental Health Populations

Authors: Cathcart, J, El-Guebaly, N, Currie, S, Brown, D & Gloster, S

Presenters: Janice Cathcart, M.Ed.

There is growing movement toward making health care facilities in the region non-smoking. Persons with mental illness and substance use disorders have an extraordinarily high rate of smoking, and forced smoking cessation for this population has unique implications. This paper reviews the literature on the role of nicotine in psychiatric symptom and medication management; the impact of smoke-free policies in psychiatric and addiction treatment units; and smoking cessation approaches for persons with psychiatric and addiction disorders. Although there is little controlled research on the impact of mandatory smoking cessation policies on psychiatric inpatients, the evidence to date suggests that fears of patients causing behavioural disturbances and becoming difficult to manage following policy implementation are largely unfounded. Moreover, staff attitudes appear to shift in favour of smoke-free units after the smoking ban is in place. On the other hand, there is a large body of literature strongly suggesting that nicotine withdrawal has a significant impact on psychiatric symptom and medication management. This discrepancy will be addressed and presented for discussion.

ECT for Psychotic Depression in a Patient with a Metallic Skull Plate: A case report and Review of the Literature

Dr. Suparna Madan

Electroconvulsive Therapy (ECT) is a safe and effective treatment for a variety of psychiatric conditions. The APA Task Force Report and the Royal College of Psychiatrists identify no absolute contraindications to ECT, however list several relative contraindications. The presence of a metallic skull plate is not addressed, nor has it been previously documented in the literature. As a result, there is reluctance among some psychiatrists to perform ECT under such circumstances.

This paper reviews the literature for ECT done in the presence of skull defects and intracranial metallic bodies. A case report of ECT being performed on an elderly patient with a metallic skull plate is presented.

In the presence of a skull defect, it is advisable to place electrodes equidistant from the defect to reduce the risk of damage. The case report presented adds to the literature to show that ECT may safely be performed in the presence of a metallic skull plate.

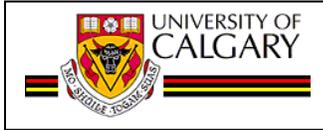
HOLLYWOOD PERCEPTIONS OF SHOCK THERAPY: 1930s – PRESENT.

Dr. Rup Pandya* and Dr. J.K. Crellin

***Department of Psychiatry, The University of Calgary.**

Images of psychiatrists and shock therapy as a treatment modality in cinema exert a powerful force on peoples' attitudes. The presentation, which includes film clips, reviews Hollywood films from 1939 to the present that depict insulin shock and electric shock treatment. Reasons for consistently negative images will be considered in the context of constant and changing public opinions. The reasons include: (1) the portrayal of shock therapy as a punishment rather than a legitimate treatment of many psychiatric illnesses; (2) the negative stereotyping of psychiatrists in movies; (3) suspicions of science after early films presented shock therapy as a scientific advance; (4) powerful films such as *One Flew over the Cuckoo's Nest* (1975) that have made indelible imprints in the minds of viewers; and (5) the slow acceptance into popular culture of the more "humane" ECT (electroconvulsive therapy), which makes use of muscle relaxants and general anesthesia. At the conclusion, the question will be posed: Will Hollywood Change?

Objective: The objective of this study was to develop an epidemiological model quantifying the impact of treatment for depression on population health. **Methods:** Data collection utilized reviews of existing literature and computer modeling utilized a program called *Scientist*. An epidemiological parameter, the lifetime sick day proportion, was calculated as an estimate of age-standardized prevalence. **Results:** Although a minority of depressed persons seek or receive treatment, mathematical modeling suggests that the proportion receiving treatment is sufficient to substantially reduce major depression prevalence in the community (by at least 15%, and possibly much more). The most dramatic benefits come from potential reductions in the number of recurrences rather than from reduced episode duration. Encouraging untreated persons to seek treatment (assuming that the health care system could accommodate these demands) could reduce the prevalence by a further 25%. Improving outcomes achieved in “real world” practice to the levels reported in clinical trials would have only a minor impact on prevalence. **Conclusions:** Mathematical models can provide a conceptual link between treatment provision and population health status. However, because of assumptions employed, these approaches to modeling remain somewhat speculative.



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Title: Critical Dimensions of Relapse in Problem Gambling

Author(s): Nicole E. Peden, David C. Hodgins, Nady el-Guebaly & Susan Armstrong

Presenter(s): Nicole E. Peden

We have recently completed a prospective study of relapse in problem gambling. Participants (N=101) who had recently quit gambling were followed for a one-year period. Sixty-five men and 36 women with an average age of 39 years comprised the sample. Mean SOGS score was 12 (SD=3) with 89% of the participants also meeting DSM criteria for pathological gambling. Eighty-two percent of participants reported problematic involvement with video lottery terminals, followed by casinos (12%), bingo (3%), and other (3%), with reported mean age of developing the gambling problem being 34 years. The number of mean days abstinent from gambling at initial interview was 19. Over the 12 month follow-up period, relapses were reported by 78.2%. A variety of reasons for relapsing were offered with “wanting to win” and “needing to win back money” being the most frequently reported. A description of the context of relapses and information concerning moods before relapses and the role that financial pressure plays will be discussed. Finally, the reports of men and women gamblers and precipitants for minor relapses versus major relapses will be compared.

Comparing Characteristics of Psychiatric and non-Psychiatric Patients at a Complementary Therapy Clinic

Badri Rickhi^{1,2}, Hude Quan^{1,3}, Sabine Moritz¹, Heather Stuart^{4,5}, Julio Arboleda-Florez⁵ ¹Research Centre for Alternative Medicine, ²Psychiatry, ³Community Health Sciences, University of Calgary, ⁴Community Health and Epidemiology, ⁵Psychiatry, Queen's University at Kingston.

Objective: Current study shows that about 50% of psychiatric patients used complementary/alternative medicine (CAM), and 10% visited a CAM practitioner within the past year. Little is known about what motivates a psychiatric patient to seek CAM. We investigated the differences in presenting complaints, reason for seeking CAM and physical health between psychiatric and non-psychiatric patients at a CAM clinic.

Methods: This study involved new patients who attended a CAM clinic in Calgary during 1993-1995. At that time, the clinic provided mainly acupuncture therapy. Data were obtained from a patient self-administered questionnaire and through physician assessment of mental and physical conditions using the DSM-III-R criteria.

Results: Of the 826 patients included in this study, 578 (70%) presented with a mental disorder. Of this psychiatric population, depression was the most frequent diagnosis (48.3%), followed by adjustment disorder (32.0%) and anxiety (19.7%). Compared with non-psychiatric patients, psychiatric patients were more likely to be female (75.6% vs. 66.5%, $P < 0.001$) and less likely to be aged 65 and over (5.7% vs. 10.5%, $P = 0.015$). The majority of these psychiatric patients visited the CAM practitioner for physical symptoms, including musculoskeletal and connective tissue disorders (44.1%), fatigue (26.6%) and headache (15.2%), compared to non-psychiatric patients (51.1%, 19.4% and 12.9% respectively). Only a minority of the psychiatric patients attended the clinic for treatment of psychiatric disorders, 13.5% for depression and 6.4% for anxiety. The major reasons for choosing CAM were personal preference, interest or belief in CAM (44.3% for psychiatric patients vs. 40.3% for non-psychiatric patients, $P > 0.05$), and CAM as a last treatment resort (30.7% for psychiatric patients vs. 32.0% for non-psychiatric patients, $P > 0.05$). The most frequent physical illnesses diagnosed by the physician were not significantly different between psychiatric and non-psychiatric patients, 42.6% vs. 42.3% for diseases of musculoskeletal and connective tissue systems and 15.0% vs. 17.3% for central nervous system disorders.

Conclusion: Similar to non-psychiatric patients, psychiatric patients seek CAM practitioners for chronic and functional physical illnesses rather than for mental disorders. Motivation to use CAM is driven by the patient's values, beliefs and philosophical orientation toward health and lifestyle. This fits with their philosophy of CAM and their dissatisfaction with conventional medical treatments.

Gambling craving and its relation to addiction and personality

Hermano Tavares, Nady el-Guebaly, David C. Hodgins

Hermano Tavares

Specific aims: craving can be understood as a consequence of chronic exposure to psychoactive substances, or as the expression of a personality trait as Intolerance to Frustration. Pathological Gambling resembles addiction, but it is not clear if gambling craving is similar to substance craving. Specific aims of this project are to: I) investigate the correlation between craving and personality factors in gamblers, and alcoholics; II) investigate the correlation of Intolerance to Frustration to other personality factors for gamblers, alcoholics, and normal controls.

Hypothesis: I) gambling craving correlates with the same personality factors that alcohol craving; II) Intolerance to Frustration is a personality trait associated with craving for gambling and alcohol; III) Intolerance to Frustration regards the same correlation to other personality factors for gamblers, alcoholics, and normal controls.

Sample and Methods: 40 pathological gamblers, 40 alcoholics, and 40 normal controls will be selected. Self-report and visual analogue scales will be used to assess craving. Self-report questionnaires will be applied to assess Intolerance to Frustration, and other personality factors. The personality factors correlated to gambling craving will be compared to the personality factors correlated to alcohol craving. Correlation between Intolerance to Frustration and craving for gambling, and alcohol will be tested. Intolerance to Frustration will be compared to other personality traits for gamblers, alcoholics, and normal controls.

Potential Significance: if hypothesis are confirmed, then strategies aiming craving control for alcohol would have potential effectiveness on gambling, and personality traits associated to craving could be focused on future addiction prevention studies.

Title: Report on Province Wide Family Therapy Education Program

Presenters: Nicholas Cooney, Darlene Harris, Joanne Schultz Hall, Alan Parry, Karl Tomm and Chee-Ping Tsai.

Abstract:

The need for family therapy training was a priority education/training need identified in the Assessment of Training Needs August 1999 by the Alberta Mental Health Board. The Family Therapy Program was invited to be one of the providers of this provincial training initiative, which came to be known as the Family Therapy Educational Program. The purpose of the program is to provide education and experience in family assessment, interviewing and systemic family therapy for mental health professionals working with families with children and adolescents. Fort McMurray, Grande Prairie, Leduc and Calgary were the sites chosen for the Family Therapy Program to provide this service. The specific educational needs in each location necessitated the generation of unique responses and presentations. Some of the in-progress learnings from this province wide initiative will be presented.

Title: Does Caffeine-Augmented Electroconvulsive Therapy (ECT) Cause Hippocampal Neuronal Damage in Humans?: A Research Grant Proposal

Authors: William D. White, MD, MSc
Cynthia A. Beck, MD, MASc, FRCPC
Mohamed A. A. Abdel-Keriem, MB, ChB, FRCPC
Kent S. Anderson, MD, FRCPC
Robert J. Sevick, MD, FRCPC
Garnette R. Sutherland, MD, FRSCS

Presenter: William D. White, MD, MSc, Resident, Department of Psychiatry

ECT is an important, effective and widespread treatment in psychiatry. Its most common application is in severe or refractory depression. Other indications include mania, psychosis, and catatonia, usually when these conditions are severe, refractory to treatment with medications, or when medications are contraindicated. Response to ECT is often dramatic and can be lifesaving.

Seizure duration in ECT has been historically associated with therapeutic outcome. Caffeine is a recommended adjuvant to lengthen short seizures in ECT. One well-controlled animal study (Enns et al 1996) has clearly shown that hippocampal and striatal neurons in rats are irreversibly damaged by caffeine-augmented electroconvulsive seizures (caECS). Although important, reassuring differences exist between the animal study and caffeine-augmented ECT (caECT) practice, no study has investigated the possibility of neuronal damage in humans with caECT. Using magnetic resonance (MR) imaging, the proposed study would prospectively compare patients undergoing routine caECT with matched controls undergoing routine ECT without caffeine. The study outcome would determine whether routine caECT in human patients causes neuronal damage detectable by presently available MR imaging technology. A positive finding of damage would raise serious questions about the continued practice of caECT. A finding of no damage would reassure clinicians as to the relative safety of current practice.

Title: Gabapentin in Benzodiazepine Dependence and Detoxification: A Case Report

Authors: William D. White, MD, MSc
David Crockford, MD, FRCPC
Bill Campbell, MD, FRCPC

Presenter: William D. White, MD, MSc, Resident, Department of Psychiatry

Once patients become dependent on benzodiazepines, withdrawing them often proves to be a source of vexation. The detoxification process ends up being prolonged or unsuccessful due to withdrawal or reemergence of anxiety, as well as the need for an external source of control. Gabapentin is a novel anticonvulsant structurally related to gamma-aminobutyric acid (GABA), but whose mechanism of action remains essentially unknown. It was originally developed for the management of seizure disorders, but has since been reported to be of benefit in the management of pain syndromes, anxiety, and alcohol withdrawal. We present a case where detoxification from benzodiazepines was aided by the use of gabapentin, as there have been no previous similar reports.