

**The University of Calgary, Department of Psychiatry Presents
The Sebastian Littmann Research Day
Village Park Inn Friday, March 02, 2007 at 8:00 AM**

Title: "Are there other neurological "Brains" within the human body that control the cranial brain, particularly in the area of emotions?"

Author(s): Rickhi, Badri

Some of the latest scientific research in emotions and the functioning of neurological systems within the body will be presented. It will propose that the cranial brain responds to instructions and are controlled by other "brain systems".

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**Title: Sensori-Motor Reorientation for Hyperventilation Syndrome:
Paper-bag Re-breathing Re-conceived**

Author(s): Peter Roxburgh

The evolution of strategies that halt panic disorder where hyperventilation is prominent is a major achievement for empirically based clinical psychological science. Successful overall as these are, they depend on a mélange of cognitive-behavioral strategies that are not yet disentangled. Hence the variable results and often the lack of a prompt response.

Out of the recommended proven approaches three component treatment modalities will be identified: anxiety reduction from rationalizing the hyperventilation experience; somatic desensitization of hypocapnea sequelae by provoked exposure and optimizing breathing by some form of direct instruction.

The development of a novel paper-bag re-breathing technique conceived as sensori-motor retraining will be detailed. The approach simultaneously aims at exercising the second and third therapeutic elements. The sure impact of this approach will be illustrated by experience gained in treating co-morbidly phobic schizophrenia, where a third may be effected.

It will be argued that the ease of application and its effectiveness if borne out by systematic analysis would compress the necessary component items by one.

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Title: Feasibility pilot of an online client satisfaction survey

Author(s): Sherri Bouchard, Melissa Buckler, Chris Bonk, Selphee Tang, Shandi Petersen

Objective: Mental Health and Addictions Services is scheduled to roll-out the client satisfaction survey across inpatient and outpatient services in 2007. The purpose of the pilot was to assess the feasibility of an on-line survey with the client population, by determining if the mixed-mode methodology would ensure high response rates while minimizing the resources required to administer the survey, collect and analyze the data.

Method: Over a five week period, 125 clients at the Outpatient Mental Health Clinic were randomly selected to be invited to complete the Service Satisfaction Scale 10+ (SSS10+) questionnaire. Each week, a specific mode of survey delivery was offered. The modes were: paper survey, web-based survey on a computer provided on-site at the clinic, web-based survey off-site, or an option of paper or web.

Results: 78 (62%) clients completed the survey. Response rates were 97% for the paper survey mode, 83% for the online on-site computer mode, and 26% for the online off-site mode. Clients who chose the computer did not require assistance to complete the survey, however, given the option, clients in the outpatient setting preferred paper. There were no significant differences in satisfaction scores between modes.

Recommendations: Web-based surveys alone did not achieve an acceptable response rate in an outpatient clinic, but providing an on-site computer in a private setting and offering the option of paper, computer, or web can boost response rates without increasing staff burden.

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Title: The Effect on Treatment Outcomes of a Psychotherapy Group Intervention for Adolescents at the Adolescent Day Treatment Program

Author(s): Cherelyn Lakusta, David Cawthorpe, Chris Marcil, Luanne Nixon, Billie Orr

Introduction: The Adolescent Day Treatment Program (ADTP) has operated since spring of 2001. This program has an outcome measurement framework that is embedded into its clinical practice. The structure and format of the program has presented an ideal situation in which to test a particular model of measuring the effectiveness of specific treatment modalities. ADTP has undertaken to study the effect on treatment outcomes of a specific psychotherapy group intervention.

Methods: The study was naturalistic in that adolescents enrolled in the program were included in the psychotherapy group intervention (n = 43) or not, based on specific criteria. Adolescents included in the psychotherapy group intervention were required to identify and self-assess the severity of specified problems that they were going to work on over the course of the psychotherapy group intervention. Additionally, staff provided admission and discharge assessments of client problems severity independent of the clients self-assessment. In addition to an examination of the self-assessment, the outcomes of the patients participating in the psychotherapy group intervention were compared to the outcomes of those who did not participate in the psychotherapy group intervention. The results were compared using a repeated measures analysis. The model was tested specifically to determine whether or not those participating in the psychotherapy group intervention differed systematically from those not receiving the psychotherapy group intervention on any baseline measures, clinical or demographic variables. Furthermore, independent comparisons of the outcomes of those participating and not participating in the psychotherapy group intervention were also made in order to permit specific testing the effectiveness of the psychotherapy group intervention in comparison to treatment is usual.

Results: The method designed to test the effectiveness of a specific treatment intervention against the background of treatment is usual was successful in that the comparisons of independent staff evaluations of participants and non-participants permitted the assessment of the psychotherapy group intervention. Participants receiving the psychotherapy group intervention rated themselves as significantly improved (self rated problems severity beginning of group 3.9, and end of group 7.5; $t = 9.3$, $p < 0.00001$) at the end of their participation in the intervention, which usually coincided with their completion and discharge from the program. The ratings of problem severity on discharge were significantly improved for those in group compared to those not in group. This effect persisted even after taking into account increased total number of therapy hours for those in the psychotherapy group.

Discussion: Psychotherapy group is one treatment intervention offered at ADTP. The study undertaken has shown that group therapy treatment offers a positive treatment effect above and beyond "treatment as usual" at ADTP. In the ADTP program the presence of a clinically integrated outcome measurement framework permits the integration of specialized study assessment to the end of specifically determining the effectiveness of the treatment intervention in question. The design used to assess the effectiveness of the ADTP psychotherapy group intervention holds the potential to be generalized to other types of therapy interventions at the program. This will then provide the opportunity to develop a model for examining specifically the evidence-base of the treatment intervention.

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Title: The impact of adolescent chronic health problems and substance abuse on family functioning: A review of the literature

Author(s): Meyen Hertzprung, Shervin Vakili

This paper presents the results of a literature review comparing the impact on family functioning of chronic mental/physical illness and addiction problems in adolescents. Chronic health problems, be they physical, mental, or related to an addiction, place unique stresses on families. While the importance of including families in treatment of these three populations is growing acceptance, a systematic comparison of the similarities of the impact of these three populations on family functioning can provide new insights into the mechanisms of change, and have important implications for treatment. Similarities and differences between these populations are examined: e.g., conduct problems are often present in the addiction population, but are not as pronounced in the chronic mental/physical illness population. However, the literature shows that family functioning is compromised in all three populations, and this in turn can affect the well-being of the adolescent patient, resulting in a downward spiral of reciprocal negative impact between the adolescent and the family's functioning. Typical types of existing support for these populations comprise mainly the provision of information/education and parent support groups, with a seeming paucity of interventions focused on family relationship and communication patterns. While the effects of these supportive interventions have not been adequately evaluated, the literature suggests that for at least some populations, family therapy, rather than family involved (supportive) interventions may be more beneficial.

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Title: Studying the Relationship between Parasuicide, Sociodemographic Risk Determinants, and Contact with Health Services in the Calgary Health Region

Author(s): Colleen Lucas, Lindsay Guyn, David Strong, Scott Patten

Parasuicide has been identified as a significant risk factor for later suicide. Further, parasuicides present a significant public health problem and a cost burden on the health care system. Previous research has shown a link between parasuicide and specific sociodemographic variables, suggesting that this population is more likely to be female, younger (15 – 29 years), single, separated or divorced, and unemployed or low income. There is also substantial evidence showing a strong association between mental disorders, parasuicide, and suicide; therefore, understanding this population's clinical care pathways (i.e., contact with health care services) can potentially inform potential interventions for the population engaging in parasuicide and suicidal behaviours. The Alberta Mental Health Board reported that in the fiscal year 2004-05, the provincial rate of visits to Emergency Rooms for suicidal behaviours was 256 per 100,000; the rate in the Calgary Health Region was 179 per 100,000. This report of parasuicide incidence contained no analysis of this population's characteristics or sociodemographic risk determinants. Identifying the sociodemographic risk factors associated with parasuicides can inform service planning to ameliorate these factors. Studying parasuicides in relation to the utilization of health care services can inform areas in the continuum of health care services that have the potential to address these behaviours. This presentation will present preliminary results of efforts to begin developing the population profile (i.e., age, sex, mental illness diagnosis). The presentation will also include details of a proposed study to further develop a comprehensive profile of this population by investigating the association with sociodemographic characteristics and clinical care pathways (i.e., health care contact one year prior to and one year subsequent to a parasuicide episode).

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Title: Regional Surveillance of Depression, Anxiety and Attention Deficit Hyperactivity Disorder

Author(s): T.Chris R. Wilkes, David Cawthorpe

Introduction: This paper describes the use of data from a centralized regional intake and access system for regional child and adolescent mental health and psychiatry services and provincial data to describe clinical characteristics of those referred to and treated in tertiary services with attention deficit and hyperactivity disorder (ADHD), anxiety or depression and compare these groups in epidemiological terms to those treated in the community by primary care physicians (based on provincial surveillance rates¹).

Method: Annual data collected in the regional CAMHPP information system from 2002-2006 (n=21,107 referrals) was used to compare clinical characteristics and epidemiology of those with and without a provisional diagnosis of ADHD, anxiety or depression. Analyses included descriptive statistics, (e.g. population-based rates and frequencies), logistic regression and Chi Square analysis, with graphical representation.

Results: The annual rate of treatment of anxiety, depression and ADHD is much higher in the community than it is in tertiary care services, as expected. Anxiety, depression and ADHD have unique clinical profiles on admission. For example, these diagnostic categories differ in terms of comorbidity and Western Canada Wait List Children's Mental Health Priority Criteria Score item profiles (www.wcwl.ca).

Conclusions: Comparing provincial and regional diagnosis and treatment rates, it appears that many more children are seen by primary care physicians in the community than in regional publicly funded tertiary care services. The level of severity of those seen by physicians in community settings is unknown, whereas the urgency and severity of those seen in tertiary care is relatively well-documented. The level of fidelity to evidence-based treatment practices by practitioners in the community is also unknown. Assessment of community physician skills in relation to specified evidence-based treatment of these disorders is necessary, as is establishing the level of severity of those treated in the community which would help funders and providers to understand whether or not tertiary care services are treating the most severely affected children.

¹ Child Health Surveillance Project Data Group (2005). *Alberta Child Health Surveillance Report 2005*. Edmonton, AB: Alberta Health and Wellness.

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Title: Multi-site validation of a new disease-specific quality of life measure for eating disorders

Author(s): Adair CE, Marcoux G, Cram B, Ewashen C, Chafe J.

Background: In eating disorders treatment, outcome measurement has traditionally focused on symptom reduction rather than functioning or quality of life (QoL). Generic QoL measures lack sensitivity for some diagnoses and many not be responsive in ED patients. We report on the development and validation of a disease-specific QoL measure for eating disorders - the Eating Disorders Quality of Life Scale (EDQLS) suitable for adolescents and adults.

Methods: Multi-source and multi-stage methods, with extensive participation of patients with EDs, providers and family members were used to develop the EDQLS. Sources for domain and item development included 39 articles, 12 patient and 10 provider interviews, and 31 first person narratives from the internet. Four stages of validation and pre-testing involving 50 patients, providers and family members reduced 233 items to 40 in 12 domains, which were pilot tested in 41 patients with eating disorders.

Results: The final instrument was then validated in a 12 site sample of 171 individuals aged 14-60 with EDs. All items showed good dispersion. The total raw mean score was 110 out of 200 (SD 27.6). Internal consistency was excellent (Cronbach's alpha = .96) and subscale internal consistency ranged from alpha .36 to .79 providing evidence for a strong overall construct and some multi-dimensionality. Trends in EDQLS scores in predicted directions and correlations with item and total scores on the SF-12, QoLi and 16D support construct validity. EDQLS scores were positively associated with time in treatment (<3 months (110.3, SD 29); 3-12 months (100, SD 23.6) and over 12 months (116, SD 25.4); $F = 4.65$, $p = .01$) suggesting good responsiveness. This association was not linear, possibly due to egosyntonic reporting and was likely dampened by confounding by age and severity. Validity was also supported by a strong positive and linear association between EDQLS scores and stage of change ($F = 15.1$ $p = .000$). Exploratory factor and item response theory analyses identified only a few poor fitting items.

Conclusion: The EDQLS has promising psychometric characteristics and may be useful for the evaluating ED treatment effectiveness.

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Title: Research Capacity Building in the Mental Health and Addiction Services Portfolio

Author(s): Shawn Currie

The Calgary Health Region has long recognized the crucial roles that information management, evaluation, and performance measurement play in our efforts to continuously improve our mental health services. Clinicians need high quality, current evidence to adopt best practices; management needs the information to make informed, accountable decisions; and the mental health care system needs established benchmarks to which performance can be comparatively measured regionally, provincially, and nationally. Since 1996, the Calgary Health Region's Mental Health Services and Department of Psychiatry has had dedicated decision support resources. The Information Management and Program Evaluation Unit has developed an excellent reputation for producing high quality, clinically practical evaluations to inform program development activities. It also has an excellent reputation for its information and utilization data management functions, which have been used to justify ongoing funding, substantiate expansion of services, and support evaluation activities. Although the Unit has informally supported research for several years, its mandate has been broadened recently to adopt a more active role in both supporting and initiating research. A strategic research plan has been developed to inform and support research capacity building within the Unit, and to ensure research activities are consistent with the direction of mental health services in the region. The plan aligns its priorities with local academic, provincial, and, when appropriate, national developments. The Unit's focus will be on applied research that has direct implications for planning and improving mental health service delivery within the CHR. The Unit aims to support research activities within the priority research themes identified by the Alberta Mental Health Board: effectiveness of mental health services and system; child and adolescent mental health; mental illness and addictions and other comorbidities, and; mental health in the workplace. This presentation will provide an overview of the plan, capacity building endeavors that are occurring at Regional and provincial levels, and specific examples of current and future research projects

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Title: Developing Educational Objectives and Experiences in the Management of Addictions for Psychiatry Residents

Author(s): David Crockford

According to the Epidemiologic Catchment Area Survey, substance use disorders have the highest lifetime prevalence of any of the psychiatric disorders. Current estimates suggest that the annual cost of substance use in Canada to society is 40 billion dollars. 25-50% of individuals with psychiatric disorders in the community or those presenting for treatment meet criteria for a co-morbid alcohol or drug use disorder (excluding caffeine and nicotine) in their lifetime. The presence of substance use co-morbidity worsens the outcome for psychiatric disorders and vice versa unless both disorders are managed in an integrated fashion ideally by a single practitioner. However, despite the high prevalence of the substance use disorders, their impact on psychiatric care, and cost to society, training requirements in the management of substance use disorders for Canadian psychiatry residents are ill-defined and most psychiatry residents complete their training without clinical experience in the evidence-based management of patients with substance use disorders. The Royal College of Physicians & Surgeons of Canada have proposed that all psychiatry residents have supervised experience to assure competence in the treatment of patients with addictions in a variety of settings documented in a learning portfolio over their 60 months of residency training with further opportunity for a senior elective in addictions and knowledge of motivational interviewing. Core competencies, attitudes and experiences for psychiatry residents will be discussed with means to integrate these core educational features into their training.

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Title: Alcohol and Drug Abuse in Patients Accepted to the Psychiatric Assessment Service: Does it really matter?

Author: Don Angus

Patients with alcohol and /or drug abuse comorbidity are common in referrals to psychiatric treatment programs. The Psychiatric Assessment Service does attempt to screen out some of these patients in our triage process but in the Snapshot Project, which looked at patients referred to our service, it was not clear how many such patients were actually seen and treated. A follow up project was designed to see how serious an issue this was for our program. One hundred consecutive patients arriving for assessment were given the DAST and AUDIT questionnaires to screen for the presence and severity of drug and alcohol abuse/dependence. Surprisingly, 23% of patients had scores in the higher severity classes III and IV of the DAST scale measuring drug use while only 10 patients scored in severity classes III and IV of the AUDIT scale measuring alcohol abuse. Only 3 of the patients with high DAST scores were rejected, while 2 of the high scoring patients on the AUDIT scale were rejected. The implications of these findings will be discussed.

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Title: Non-remission of major depression in the general population

Author(s): Andrew Bulloch, Scott Patten

Objective: Remission from the symptoms of major depression is the optimal outcome for administration of antidepressant medications. However there are no studies that have estimated remission in the general population. We addressed this issue in the population of Alberta using a brief HAMD-7 scale recently validated against the HAMD-17 scale in a clinical setting and that has been proposed as a suitable indicator for remission in primary care. **Methods:** We used data from a survey conducted as part of the Alberta Depression Initiative (n=3345 adults). We produced a population based estimate of the number of respondents taking antidepressant medication for major depression. From this group we selected a sub-population that did not screen positive for major depression when the MINI module for major depression was administered. Non-remission in this sub-population was assessed with the HAMD-7. **Results:** The data show that 219 survey respondents were taking antidepressant medication for major depression. Of these, a sub-population of 115 did not screen positive for major depression when they were administered the MINI module for major depression. However 49% of this sub-population was in non-remission as evaluated by the HAMD-7, and non-remission was higher in older people. We estimate that 1.3% (95% CI, 0.9-2.0%) of the Alberta population is in treated non-remission for major depression. **Conclusion:** These data support the idea that routine clinical use of the HAMD-7 scale as a means of identifying non-remission may be justified.

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Title: A Spirituality Teaching Programme for Depression – a Randomized Controlled Trial

Author(s): Moritz S, Rickhi B, Urbanska, Xu TJ, Quan H, Reesal R, Ewing H, Toews J

Objective: This research aimed to assess the efficacy of a spirituality teaching programme for unipolar major depression. **Materials and Methods:** This is a parallel-group, randomized, controlled, assessor-blinded trial. A total of 84 individuals with unipolar major depression of mild to moderate severity were recruited in Calgary, Canada and randomized to two study arms: 1. Spirituality Group (eight week, home based spirituality teaching programme) and 2. Waitlist Control Group (no intervention followed by spirituality teaching programme starting at week 16). Participants were assessed at baseline, 8, 16 and 24 weeks. Outcome measures (depression severity, response rate, remission rate) were based on the Hamilton Depression Rating Scale (HAM-D). **Results:** Analysis showed a significant difference in depression severity change at 8 weeks between the two groups (Spirituality group HAM-D score: 8.5 points, Waitlist Control group HAM-D score 2.3, $p < 1e-05$). The depression response rate and remission rate also differed significantly ($p < 0.001$) between the two groups (Spirituality group: response rate: 36%, remission rate: 31%; Waitlist Control group: response rate: 4.4%, remission rate: 2.2%). Long-term follow up showed further improvement for the spirituality group participants with response rates rising to 56.4% at 16 weeks and 58.9% at 24 weeks. **Conclusion:** Results suggest that the tested spirituality programme can significantly reduce depression severity and mood disturbance and achieves response and remission rates in the range of those reported for pharmacotherapy. **Acknowledgement:** Funded by the Alberta Heritage Foundation for Medical Research, Max Bell Foundation and Norlien Foundation.

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Title: Is there an epidemic of Depression?

Author(s): Scott Patten

Background: Major depression is one of the most common mental disorders and is an important cause of disability. This condition is generally conceived as a lifelong, recurrent condition. For this reason, lifetime prevalence is commonly estimated in community studies in lieu of point prevalence. However, the lifetime prevalence of major depression has been observed to behave in unusual ways – for example, by failing to increase with age, or even decreasing with age in some studies. This phenomenon has been interpreted as possible evidence of a cohort effect (aka an “epidemic” of depression), but in theory could also be due to recall bias.

Method: A simulation model was used to examine the potential role of misclassification bias. The general format of the model was that of an incidence-prevalence-mortality model, modified to account for some unique features of major depression epidemiology. A discrete event modeling approach was taken, using the software *Arena*. The model was calibrated using estimates from Canadian national surveys and literature-based estimates, where necessary. Recall bias was introduced to the model by simulating a rate of failure to recall the most recent depressive episode.

Results: Introduction of recall failure altered the simulated pattern age-specific lifetime prevalence in ways resembling that previously reported in the literature. As the rate of forgetting past episodes increases, lifetime prevalence can fail to increase or even decline with age and the appearance of an earlier age of onset is created. Both phenomena are artifacts of recall bias.

Conclusions: Results from cross-sectional studies have raised concerns about increasing depression incidence or an earlier age of onset of major depression in recent birth cohorts. This study suggests that the cross-sectional results can also be explained by bias resulting from misclassification of lifetime prevalence.

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Title: Postpartum Depression and Psychiatric Discourse

Author: Rebecca Godderis

Over the past ten years, postpartum depression (PPD) has received a great deal of attention in the mental health literature and the popular media. Many academic studies have documented the negative impact of PPD and argued that maternal depression increases children's risk of experiencing mental health and social problems. Although there appears to be consensus about what PPD is, and the impact it has on mothers and families, the aetiological origins and standard characteristics of this diagnosis continue to be debated. My proposed research will study the emergence of psychiatric discourse about PPD by examining how the current diagnostic classification of PPD was established. The methods of the proposed research will include reviewing documents in the APA archives that relate to the inclusion of the specifier "depression with postpartum onset" to the *DSM-IV* and systematically searching the database *Medline* for PPD-related articles for 15 years prior to the inclusion of this specifier (1979-1994). Assembling these documents will serve to establish what professional debates were occurring about PPD prior to the publication of the *DSM-IV*. Analytic methods will be qualitative, employing critical discourse analysis to examine how PPD is being represented and talked about in psychiatric texts. This research is one of the first sociological attempts to systematically examine the development of psychiatric frameworks that have led to the current understanding of PPD, and will provide insight into the different conceptions of PPD that inform research, policy and practice.

This research is supported by a SSHRC Doctoral Fellowship, and in part by a Research in Addictions and Mental Health Policy and Services (RAMHPS) award, funded by CIHR.

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Title: Parents' Experiences with Respite Care Services for Children with Special Needs

Author(s): Jenna L. Doig, John D. McLennan

Background: Caring for a child with special needs can be both emotionally and physically exhausting as well as resource-demanding. Respite care services offer caregivers a period of temporary relief from the habitual demands of caring for a child with a physical and/or mental disability and may also help to improve family functioning, decrease stress, and offer opportunities for the child's development. Despite the recognized need for respite care services and their apparent benefits for both family and child, previous studies suggest that many caregivers are dissatisfied with the services and level of support being received. It remains unclear which aspects of respite care, including its potential benefits and the many barriers to its use, most influence people's perceptions of the overall respite experience.

Objective: To explore the perceptions of caregivers' of children with special needs regarding their experiences with respite care in order to develop a model of a successful respite experience.

Methods: Participants were parents of children with special needs who were currently utilizing respite care services through organizations in Calgary and Edmonton. Data were collected via one-on-one interviews using an open-ended interview guide. All interviews were transcribed verbatim and analyzed following a grounded theory approach emphasizing comparative methods in category development.

Results & Discussion: Participants had used or were currently using a variety of formal and informal respite supports. Despite this, many discussed their frustrations with the process of finding and obtaining respite care placements. Respite care was seen as a break for parent and child, as well as time for shifting parental attention and an opportunity for life skills development for the child. Other benefits of and barriers to respite care use will be discussed, in addition to implications for respite care services in Alberta.

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Title: Parenting and Children's Development in an Impoverished Latin American Society

Author(s): Darlene Foucault, Barry Schneider

This study investigated the effects of the Socioeconomic status (SES) on maternal psychology, parenting practices, and child development. It examined whether the effects of poverty as are noted in mostly North American research would be replicated in a collectivistic Latin society such as the Dominican Republic. The participants were 80 three year-olds, 154 six year-olds, 141 eight year-olds and their primary caregivers, with participants equally divided between the Campos (small agricultural villages) and higher SES San Cristobal. Campos mothers reported significantly more interpersonal support and less parental distress relative to their more affluent counterparts. These findings are contrary to those of present North-American research. We propose that belonging to a collectivistic culture may shield mothers from some of the pernicious effects of poverty. An examination of the SES/community effect demonstrated that San Cristobal parents provide a more stimulating and emotionally supportive home environment for their children than do Campos parents. Contrary to North-American findings, poverty did not introduce more tension in the parent-child relationship. Data also revealed some interesting differences between Campos and San Cristobal children's cognitive, emotional, and interpersonal development. In addition, results from regression analyses revealed that after considering age, gender, and maternal variables, the quality of the home environment and the quality of the parent-child relationship were the better predictors of children's optimal development. In turn, the quality of the parent-child relationship was best explained by parents' perceptions of their child. In sum, even in an impoverished environment, having a warm and emotionally supportive maternal relationship has a salutary effect on children's emotional and behavioural adjustment. Regardless of parents' values and skills taught their children, how parents interact with their offspring may contribute to how children view their lives and themselves, and influence their feelings and behaviours with others.

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Title: Remember your first time? Results from the Psychiatry on-call card pilot project

Author(s): Rory C Sellmer, Joann McIlwrick

Objective: Junior residents and medical students are exposed to anxiety-inducing situations while on-call for psychiatry; to our knowledge, there is currently no portable educational tool available to trainees. We developed a Psychiatry On-Call Card (POCC) for trainees to facilitate the assessment and management of on-call problems both on psychiatric wards and in psychiatric emergency services. Goals of the POCC were to alleviate trainee anxiety, improve diagnostic and decision-making skills and care for patients.

Method: A psychiatry resident and practicing ER psychiatrist developed the POCC by incorporating evidence-based sources as well as expert and consensus guidelines. The intended audience for the POCC included clinical clerks, psychiatry and family medicine residents. A needs assessment of targeted learners was arranged with five first-year psychiatry residents, and feedback was incorporated into the first draft of the POCC. It was piloted to 25 psychiatry residents who were invited to use and evaluate the POCC. Evaluations were conducted via an anonymous on-line survey over four weeks.

Results: The online response rate was 84%. The majority of respondents believed the POCC improved their ability to evaluate the patient, document the history, prepare a management plan, diagnose and manage common on-call issues, and reduced anxiety. 95.2% indicated they would use the card again.

Conclusions: To our knowledge, this is the first portable education tool for trainees' on-call for psychiatry. Respondents perceived an improvement in on-call skills and a reduced sense of on-call anxiety. Trainee perceptions need to be evaluated in further studies.

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Title: Virtual Reality and Psychotherapy

Author(s): Darcy Muir

A literature review on the topic of Virtual Reality (VR) and its possible applications in psychotherapy. Currently, VR is emerging as a novel treatment for anxiety disorders as well as having other applications in psychiatry. While still in its infancy, VR may one day be part of the future of clinical psychology. In his review, Riva outlines the current state of clinical research and possible applications of using virtual environments in psychotherapy as does Krijn et al more specifically with anxiety disorders. Their findings will be discussed and we will examine the challenges this new technology may have moving into mainstream clinical work.

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Title: Service utilization patterns of children in a school-health partnership program

Author(s): Susan Huculak, John D. McLennan

Objective: To evaluate service utilization patterns of a cohort of children presenting to a school-health partnership program pre and post contact with the program.

Methods: A sample of caregivers of children referred to a school-health partnership program (Community Outreach in Pediatrics/Psychiatry and Education Program [COPE]) were invited to participate in a structured phone interview approximately six months following their child's assessment by a COPE physician. The interview included a structured service utilization instrument (the Services for Children and Adolescents – Parent Interview [SCAPI]), covering periods six months prior and six months post assessment.

Results: 36 out of a potential total of 80 caregivers (45%) eligible for the study have been interviewed to date. The children were six to 13 years old at the time of assessment, most of whom were boys (81%). In the period six months prior to the assessment with COPE, 89% of the children had used at least 1 community/medical service with a mean of 2.1 services (SD = 1.5). The most common were school-based services (78%), parent-focused support such as respite and parent groups (22%), community based mental health services such as family therapy (17%), and medications (17%). Ninety-two percent started at least one new community/medical service in the period six months following the COPE assessment with a mean of 1.9 services each (SD= 0.8), the most common included a school-based service (53%), community based mental health services (44%), and medications (42%). Additionally, the percentage of children participating in at least one formal recreational activity increased from 44% to 72% following COPE's involvement.

Conclusions: Service utilization increased in several domains for children receiving an assessment through this school-health partnership program suggesting that this program is successful in increasing access or linkage to child and family services.

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The Sebastian Littmann Research Day
Village Park Inn Friday, March 02, 2007 at 8:00 AM**

Title: Patterns of mental health difficulties of children referred to a school-health partnership program

Author(s): Faith Ng, John McLennan

Objective: The objectives of the study were to determine (i) the reasons for teachers' referral of elementary school students to a school-health partnership program, (ii) the patterns of mental health difficulties in children referred to the program, (iii) the extent of mental health change found three months after referral, and (iv) the extent of agreement between parents and teachers on the mental health screening measure.

Method: Data were extracted from the clinical database of the Community Outreach in Pediatrics/Psychiatry and Education (COPE) program, a school-health partnership for all elementary schools in the Calgary and Rockyview school districts. The database contains data extracted from the referral form which includes open-ended questions as to the principal questions/concerns of the teacher and responses to the Strengths and Difficulties Questionnaire (SDQ) by teacher and parent. The database also includes three-month follow-up SDQs. The database includes all children referred to the program between Jan 1, 2005 and June 30, 2006.

Results and Discussion: Preliminary findings from ongoing analysis will be presented and the implications discussed.

**The University of Calgary, Department of Psychiatry Presents
The Sebastian Littmann Research Day
Village Park Inn Friday, March 02, 2007 at 8:00 AM**

Title: The Implementation of Safety and Priority Flags in the Child and Adolescent Mental Health Program Electronic Record and Relevance to Quality Improvement

Author(s): David Cawthorpe, Debbie Kunkel

Introduction: As a result of maintaining wait lists in developing protocols for wait list management for all areas in the child and adolescent mental health program continuum of care, it is become necessary to develop a scheme for managing priority and safety as a function of urgency (WCWL) and the level of functional impairment (CGAS). In this paper we examine aspects of the validity and level of compliance with the implementation and training in the use of safety and priority flags.

Method: Over last year a manual was developed with the express purpose of guiding and preparing staff use safety and priority flags. Safety flags permit staff to identify safety concerns and priority flags permit staff to move clients on wait lists in relation to the most recent clinical information available. Intake staff access mental health and within each of the service domains were formally trained over three sessions in the fall of 2006. It was extracted from the RAIS system and analyzed in November 2006 and January 2007.

Results: From implementation audit in October to audit in December, compliance increased from 12 to 33%, with the highest level (88%) being within the adolescent urgent services. The compliance goal is 100%. Priority flags have strong, statistically significant and theoretical meaningful relationships with The Western Canada Wait List Child Mental Health Priority Criteria Form Scores (WCWL-CMH_PCS: urgency) and The Child Assessment of Global Function Scale (CGAS: function). The relationship between safety flags and the two independent variables representing urgency and function are less strong and only one was significant.

Conclusions: The results indicate that priority flags and safety flags have acceptable levels of convergent, divergent, and discriminate validity. It is recommended that there used be ongoing and that efforts are made to enhance compliance.

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Title: Using child and adolescent mental health program Growth and Innovation Fund capacity increases to develop a population-based fiscal algorithm to model per capita program cost.

Author(s): David Cawthorpe, David, Wilkes, T. Chris

Introduction: Developing fiscal data that will permit us to efficiently cost filling identified gaps in service is highly desirable. Tracking per capita changes in service capacity within the child and adolescent mental health program (CAMHP) using the regional access and intake system (RAIS) has permitted development of a simple fiscal model to predict the cost of serving meeting the expected rate of debilitating mental health problems in the community.

Method: Annual data collected in the regional CAMHP information system from 2002-2006 (n = 21,107 referrals) was used to track innovation fund investments in the child and adolescent mental health program. Knowing where these investments to place permitted the identification of the per capita costs associated with capacity increases.

Results: The data indicates that specific increases in capacity related to innovation fund investments were observable within the continuum of care. For example, investment and the adolescent urgent team development has led to specific increases in capacity to serve adolescents. Similarly, similar increases were observed in the capacity to serve very young children through investment in the collaborative mental health care team. A large gap remains nevertheless between the observed capacity to serve the 0-18 -year-old population in the expected rate of debilitating mental health problems.

Discussion: Age-specific growth and innovation fund-specific increases in the capacity to serve children and tertiary ambulatory and inpatient mental health services in the Calgary Health Region appear as slope changes in the per capita treatment capacity rate within the age specific bandwidth. Generalized growth and innovation fund specific increases in capacity appeared as intercept changes when compared to increases in capacity to rise as a function of redesign (years in which no specific growth in funding were observed). These differences permit us to develop a fiscal costing model that may help us to plan future services.